

Unit Strategic Fire Plan Nevada-Yuba-Placer Unit



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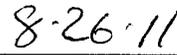
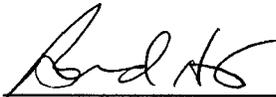
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SIGNATURES

Unit Strategic Fire Plan developed for Nevada Yuba Placer Unit

This Plan:

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



Unit Chief

Brad Harris

Date

EXECUTIVE SUMMARY

Executive Summary

The Nevada-Yuba-Placer Unit (NEU) Fire Management Plan is a product of the implementation of the State Fire Plan. The State Fire Plan provides an analysis procedure utilizing, in part, computer based geographical information data that is validated by experienced fire managers to assess fire fuel hazards and risks in order to design and implement mitigating activities. The NEU Fire Management Plan provides background information, fuels and fire data, proposed projects, and individual Battalion reports outlining mitigating activities commonly carried out each year. The NEU Fire Management Plan is our local road map to create and maintain defensible landscapes in order to protect those assets vital to the state.

NEU is one of 21 administrative Units within the California Department of Forestry and Fire Protection. NEU faces many challenges, not the least of which is two of its counties, Placer and Nevada, are two of the fastest growing counties within the state. Many of the people moving to these mid Sierra Nevada rural counties are coming from urban areas such as the San Francisco Bay, Los Angeles, and Sacramento. This leads to the urbanization of fire adapted vegetation types and ecosystems.

A big challenge facing NEU is one of education. Most of the new residents, and many of the existing ones realize what building houses in the middle of fire adapted ecosystems means. The fire adapted forest types where most of the population exists within NEU are Mixed Conifer, Ponderosa/Shrub, Montane Chaparral, and California Oak Woodlands. Research shows that prior to European settlement, fire return intervals ranged from 2 to 8 years in California Oak Woodlands and 5 to 16 years in the remaining forest types. This equated to low intensity fires at frequent intervals. As of 1900 to 1920, wildfires have been suppressed in these vegetation types. As a result, over the last 80 - 100 years vegetative fuels have increased significantly in tons per acre. Unnaturally high fuel loads have resulted. But, most of the public does not realize this, nor do they understand what this means in terms of fire intensity and their safety. They have come to believe what they see now is “natural.”

Wildfires in these unnatural fuel load conditions are very intense and more difficult to suppress. Overlay the mix of homes and personal property in these areas and suppression is even more difficult. The task at hand is to educate the citizens within these areas as to the dangers of living in these fuels and to induce the public into taking an active role in becoming an informed and appropriate land steward and taking it upon themselves to manage the fuels around their structures. Creating “defensible space” around these structures is the single best thing a resident can accomplish to protect their property. Secondary to the effort of creating the defensible space around their homes is a landowner’s responsibility to apply his or her stewardship responsibility across their entire ownership. The overall effect of each property owner properly managing wildland fuels results in a landscape level fuel reduction and a commensurate reduction in fire intensity. Once this is achieved, the goal of reducing costs and losses to human lives, property and natural resources will be reached.

Priorities and Goals

The State Board of Forestry and the California Department of Forestry and Fire Protection have drafted a comprehensive update of the Fire Plan for wildland fire protection in California. NEU has reviewed the 2010 Strategic Fire Plan (State) goals in order to develop and incorporate those goals into the Unit Fire Management Plan. The NEU priorities provide the foundation upon which our local goals and objects are built. The NEU priorities and Goals are as follows:

Priorities:

1. To Reduce the Risks to Citizens and emergency responders from Wildland Fire.
2. Develop a “land stewardship” ethic in the residents of the Unit

Goals:

1. Demonstrate methods that individuals and the community can use to properly manage their lands to improve forest health, and reduce the ignitability of structures in the Wildland Urban Interface.
2. Raise citizen and stakeholder awareness of fire risks and enlist their help and participation in risk reduction.
3. Assist local government in developing standards, policies, and plans, which will result in local, and landscape level fuel modifications.
4. Implement local and landscape level projects and programs that decrease fire risk and increase the potential for success on initial attack.

Current Pre-fire Management and Development

Since the implementation of the State Fire Plan in 1996 and its evolution into the current NEU Fire Management Plan, interest by stakeholders has resulted in broad support for community wildfire safety. These groups in cooperation with Cal Fire have taken the lead in promoting fire safe activities. Through these groups and our own personnel, we have initiated and completed a number of fuel reduction projects throughout the Unit. It is likely that one of these projects will help reduce the overall government costs and citizen losses resulting from a costly and damaging fire. We continuously encounter new obstacles in the project implementation stage: agency spending procedures, grant requirements, environmental documentation, etc... However, through the continued effort of our staff and the other stakeholders, fuel reduction and education projects will continue.

A: UNIT DESCRIPTION

The Nevada-Yuba-Placer Unit (NEU) is located in mid-California, along the east side of the state. The Administrative Unit boundary encompasses all of Nevada, Yuba, Placer, Sierra, and Sutter counties and extends from the Sacramento Valley floor over the crest of the Sierra Nevada to the Nevada state line. The total acreage in the Unit is 2,911,086. Of the total acres, approximately 65% is forested land. The balance of acres are divided nearly equally between grass and brush.

Cal Fire has direct responsibility for fire protection within portions of Nevada, Yuba, and Placer counties. Total state responsibility area (SRA) acreage within the unit is approximately 1,200,000 acres. Total direct protection area (DPA) is approximately 875,000 acres, leaving approximately 325,000 acres of state responsibility area serviced by the USFS through local operating agreements.

Historical Influences

There are four major historical influences that continue to impact fire planning in NEU. These influences also reflect **NEU's Assets at Risk**, which are referenced in a separate portion of this plan. The first historical influence is the installation of the Transcontinental Railroad (TCRR) circa 1860-1890 which has created a checkerboard of land ownership. The ownership is composed of public and private land, being managed with different objectives, and receiving fire protection by different fire agencies. The second influence is the installation of major hydroelectric infrastructure (HYDRO) circa 1912 to 1966, which has created an extensive ignition source and exposure problem in the Unit. There are three major hydroelectric systems in place, each owned by a different agency in partnership with Pacific Gas and Electric Company (PGE). The system provides electricity to over 500,000 homes and businesses in Northern California, and includes a power grid that transects multiple large river drainages. Installation of Interstate 80 (I-80) circa 1950-1960, is the third influence and has provided quick easy access for residents, recreationalists and commercial traffic. The Interstate has also allowed significant emigration from urban centers to rural communities from 1950-Present which has resulted in a Wildland Urban Interface (WUI) condition. The interstate is not only an ignition source but is also a major route requiring protection in the event of a wildland fire. The fourth and final influence on fire control and fuels management is a shift from agricultural land management to residential / open space. Historically, livestock were grazed over large ownerships, through the spring, resulting in a reduction of ground fuels. Grazers often used controlled fire as a means to cycle nutrients and eliminate unfavorable forage. The controlled fire also consumed ladder fuels thereby decreasing the intensity and impact from an uncontrolled fire. In the lower elevations, irrigation was used to extend the growing season and provided areas that were less susceptible to burning. Over time, these agricultural uses have changed to a residential and open space use, where homes are built amongst or adjacent to a wildland fire environment. Vegetative fuels require costly mechanical treatment, rather than relying on grazing animals to consume the vegetation. The focus on open spaces has also placed outdoor users deeper into the wildland where ignition can result in a wildland fire.

Each of these influences helped create the current fire problem in the NEU Unit. These influential factors are also clearly linked to **NEU's Assets at Risk**. Life and Property, watershed, open space / recreation, power generation and distribution infrastructure, railroad and highway infrastructure, timber and agricultural values with their related wildlife benefits, and quality of life and ecosystem values that all residents of the Unit benefit from including clean air, clean water

and a safe healthy environment in which to live. Each of the programs implemented by the Unit will act to mitigate the threat from wildfire to these resource values at risk.

Transcontinental Railroad (TCRR) Circa 1860-1890

To incentivize the installation of the TCRR the federal government passed the Pacific Railroad Act of 1862. The Act authorized the Government to grant a 400' right of way and ten square miles of land for each mile of track built. The lands were granted not in a 10 mile wide swath, rather in a checkerboard pattern. The intent of the land grant was to allow the railroad to sell the lands to finance the building of the railroad infrastructure. By creating a checkerboard pattern with an equal mix of federal and private lands, the federal lands became more valuable as the private lands were sold off. In modern times, the alternating square mile checkerboard of private and federal lands is a physical and visual remnant of the TCRR installation through NEU.

Over time, the private lands have changed hands and the highest best uses have evolved. Portions have been retained in large industrial timber or agricultural ownerships, other lands being split and developed to become the commercial centers and residential development that has allowed significant population growth. Due to zoning and development restrictions geared toward the retention of open space, and a Mediterranean climate with very fertile soils, the private lands are inherently managed toward a wildland fire environment. Even the smallest (1-5 acres) residential properties, typical of foothill development are left scattered amongst larger undeveloped parcels, often leaving significant wildland fire potential, and a true WUI condition.

The large federal ownerships continue to be managed under a multiple use regime. The three primary federal landholding agencies are the USFS (Tahoe N.F., Plumas N.F., and Eldorado N.F., Tahoe Management Unit), the Bureau of Land Management (BLM), and the Bureau of Reclamation (BOR). Other federal agencies hold lands as well, including the US Air Force (Beale AFB). Portions of SRA within the larger Federal DPA are provided fire protection through a local operating agreement which requires the acreage of SRA to be provided like protection compared to the SRA within the States DPA. Topographic and administrative constraints can lead to significant impacts to private lands where these SRA acres are adjoined by Federal lands.

Currently, Union Pacific Railroad owns and operates the rail system through NEU. Recent information from Union Pacific reveals that the current rail traffic will increase 3 times (45-50 trains per day) over the next year. This increase is due to grinding of tunnels which will allow double stack freight trains a quick route over the Sierra Nevada compared to alternate routes. The increase in rail traffic could cause an increase of ignitions along the rail right of way. UP is currently installing a fuelbreak along the rail to attempt to mitigate the threat from railroad caused fires.

Hydroelectric Infrastructure (HYDRO) Circa 1912 to 1966

Hydroelectric power generation in NEU dates back to the Gold Rush. It was in 1864 when Lester A. Pelton patented his new and improved water wheel which converted pressurized water into mechanical power. This new innovation, which was devised and constructed in Yuba and Nevada Counties, fed the ever increasing demand for energy as communities grew and industry flourished. During the 1890's the first ever water patent specifically for the production of power was sought in Nevada County effectively birthing Pacific Gas and Electric Company. By the late 1890's much of the water delivery system was converted from mining water delivery to delivery for agricultural uses. The early 1900-1966 were a time of major expansion of water storage, delivery, and power generation that remains today as critical infrastructure.

Nevada, Yuba and Placer counties are now major producers of water and hydroelectric power. Approximately 1,623,000 Acre Feet of water are stored in 21 reservoirs throughout the region.

Of that amount, 472,000 Acre Feet are delivered directly for domestic and agricultural uses annually. The total generative capacity of electricity in the region is 703 Megawatts (MW) from 16 separate powerhouses, providing 3,014,000 Megawatt Hours (MWh) per year, a quantity of electricity sufficient to service 502,330 homes.

Placer County Water Agency (PCWA)

The Middle Fork American River Project (MFP) consists of two major storage reservoirs, five smaller regulating reservoirs and diversion pools, and five powerhouses that began operation in 1967. The MFP supplies water for homes, industry, and agriculture within western Placer County and clean renewable energy to the California electric grid.

The Project's major storage reservoirs, French Meadows and Hell Hole, have a combined capacity of 342,583 acre-feet (ac-ft). The Project has a generation capacity of approximately 224 MW and has produced an average of about 1,030,000 MWh per year. The Project includes recreation facilities near its storage reservoirs. In addition, its operations accommodate popular whitewater rafting opportunities in the Middle Fork American River below Oxbow Powerhouse.

Placer County Water Agency (PCWA) owns and operates the MFP. The MFP system is operated under a 50-year license (Project No. 2079), which was issued by the Federal Power Commission, predecessor of the current Federal Energy Regulatory Commission (FERC). The current license expires on March 1, 2013. PCWA is seeking the renewal of its license to continue operations of the MFP.

Nevada Irrigation District (NID)

Through the early 1900s, many of Nevada County's old reservoir and canal systems built during the California Gold Rush had become under-utilized and were falling into disrepair. Nevada County Community leaders were determined to acquire these invaluable assets, make improvements, and recreate them as the backbone of a new public water system. From 1917-1921, engineering studies were completed, new water rights were negotiated and a local campaign was mounted to build support for this dream of a new irrigation district. On August 15, 1921, NID was officially formed.

In 1962, NID voters supported a \$65 million bond issue to construct the Yuba-Bear River Power Project. The major project was completed from 1963-66. The district began producing power in 1966 with the completion of the \$65 million Yuba-Bear Power Project. The project included the Chicago Park and Dutch Flat powerhouses. It brought not only power generation capability, but new reservoirs and canal systems and, most importantly created an additional 145,000 acre-feet of water storage. The Rollins Reservoir powerhouse was added in 1980. NID's reservoir system provides a combined 280,380 acre-feet of water. The district has ten dams and seven power plants with a generation capacity of 82.2 MW and produces an average of 375,000 MWh of energy each year.

NID is now pursuing a renewed federal license for operation of the Yuba-Bear Project. The project is operated under an original 50-year federal license granted in 1963 and scheduled to expire in 2013.

Yuba County Water Agency (YCWA)

When bid in 1966, the \$180 million Yuba River Development Project was the largest single non federal, non state construction contract of its kind. Today, YCWA owns and operates 4 dams with a storage capacity of roughly 1 million acre-feet of water and associated powerhouses capable of generating approximately 397 MW of energy with an annual productive capacity of 1,609,000 MWh. Additionally, New Bullard's Bar Reservoir provides a multitude of recreational

activities. The Agency delivers about 310,000 acre-feet of water to local irrigation districts annually.

Installation of Interstate 80 (I-80) circa 1950-1960

The Lincoln Highway inspired the National Interstate and Defense Highways Act of 1956, which was championed by President Dwight D. Eisenhower, influenced by his experiences as a young soldier crossing the country in the 1919 Army Convoy on the Lincoln Highway. Construction of Interstate 80 was authorized by the Federal-Aid Highway Act of 1956 which was signed into law by President Eisenhower. I-80 is recognized as the Dwight D. Eisenhower Highway and a Blue Star Memorial Highway for its entire length. It was part of the Lincoln Highway from Sacramento to Reno (except in vicinity of Donner Summit). I-80 is also known as the Alan S. Hart Freeway from the Sacramento/Placer County line to the Nevada state line, and the Dutch Flat and Donner Lake Wagon Road from Emigrant Gap to Donner Lake (except in vicinity of Donner Summit).

Interstate 80 is the main travel route from Reno to San Francisco. At speeds of 70 mph, the travel time from Downtown Sacramento to the heart of NEU is under 1 hour, a distance that many consider acceptable for commuting. In turn, the significant population growth that has occurred since 1960 is due in large part to the Interstate. Established population centers such as Roseville, Rocklin, Loomis, Newcastle, Auburn, Colfax and Truckee are connected to the Central Valley by Interstate 80. Freight is of prime importance. It is said that closure of Interstate 80 has an economic impact equal to \$1 Million for each minute of closure. Although no statistics could be found to verify this claim, it is well understood that the economic impact of closure justifies one of the most expensive snow removal programs in the entire United States. Closure for any reason is seen as a situation to avoid if possible.

Interstate 80 drops from 7239 feet at Donner Summit to 531 feet at Loomis, an elevation change of 6708 feet over 67 miles. This steep grade creates significant friction for commercial vehicles travelling down slope towards the Sacramento Valley. During the summer, when temperatures rise and fuels become dry, the potential of a wild fire from hot brakes or vehicles that catch fire due to friction increases. Alternatively, vehicles traveling up slope can overheat resulting in an ignition of roadside vegetation. NEU works diligently to prevent roadside ignitions from becoming major fires. This effort includes significant crew time with NEU Washington Ridge Crews working with federal grant funds, partnering with the Placer County RCD Chipping Program, removing ground and ladder fuels within 30' of the road edge from Auburn to Baxter, a distance of 29 miles.

Demographics

Current Census 2010 data and growth projections are discussed in this section to describe the state of population growth in the Unit. Other non-economic factors are described which have a potential to impact the location of population growth as development pressures and available lands push the population further up into the higher elevations of the Unit. The summary will describe the methods that the Unit will utilize with current programs to address this issue into the future.

Generally, population growth in the region has constantly increased since the 1960's, following a period of post-depression malaise. The proximity to the Sacramento metropolitan area and improvements to highway infrastructure, coupled with decreased costs for developable lands in Nevada, Yuba, and Placer Counties, dictates that growth will continue. In many instances, projections of growth have not met expectations, possibly due to the recent economic downturn,

but the population growth rates in the region remain noteworthy compared to other regions of the State.

Nevada County

In 2010, the total population in Nevada County was reported to be 98,764 people, a 7.3% increase over the previous decade. The population was composed primarily of permanent adult residents with 80% of the population over 18 years of age and an 80% home ownership rate. As of 2009, a total of 50,313 housing units were reported. With a land area of 612,870 acres, the population density averages 103 persons per square mile. Higher population densities correlate to the transportation corridors including Highway 49, Highway 174, Highway 20, as well as Highway 89 and Interstate 80 on the eastside of the County. Population density also correlates to the State Responsibility Areas within the County.

In 2006, Nevada County growth projections through 2020 ranged from 20.7% to 38%. Current census data do not bear this statistic with actual growth rates of 7.3% for the period 2000 to 2010. Assuming the range of potential growth through 2020, using the current average rate (7.3%) and the low projected rate (20.7%) from Nevada County sources, the 2020 population in Nevada County will range from 106,000 to 121,000 people. Growth policies within Nevada County are defined in the Nevada County 1995 General Plan as allowing, "...for a moderate growth in the County. A moderate annual growth rate...so that provisions of public services keep pace with new developments." Future long term projections place maximum available growth at a capacity not exceeding 210,000 persons, the maximum estimated "buildout" projection.

Due to the checkerboard matrix of land ownership in Nevada County, portions of SRA within the Unit receive fire protection from the USFS.

Yuba County

In 2010, the total population in Yuba County was reported to be 72,155 people, a 19.8% increase over the previous decade. The population was composed primarily of permanent adult residents with 70% of the population over 18 years of age and a 60% home ownership rate. As of 2009, a total of 28,738 housing units were reported. With a land area of 403,641 acres, the population density averages 114 persons per square mile. Higher population densities correlate to city centers and transportation corridors including Highway 20, Highway 99, Highway 65, and Highway 70. Population density correlates with Local Responsibility Areas within the County; however growth continues to extend into the SRA in the eastern portions of the County.

In 2000, Yuba County growth projections through 2020 ranged from 10% to 23%. Current census data tends to agree with these projections with actual growth rates of 19.8% for the period 2000 to 2010. Assuming the range of potential growth through 2020, using the current average rate (19.8%) and the low projected rate (10%) from Yuba County sources, the 2020 population in Yuba County will range from 79,700 to 87,800 people. A unique characteristic of Yuba County that is noteworthy in terms of fire planning is the high percentage of SRA/LRA relative to FRA. The vast majority of land in Yuba County is privately owned. A portion of the County along the eastern border is currently SRA under protection by the USFS. As development pressures push development into the upper reaches of the watershed, more population will be located in the SRA areas of the County, including these SRA areas receiving fire protection from the Federal Government. Also noteworthy is the fact that Marysville City, the largest City in Yuba County receives fire protection services from Cal Fire by contract.

Placer County

Placer County is the second fastest growing county in California with a population growth of 40.3 percent since 2000, second only to Riverside County which grew by 41.7%, a margin of just under 1.5%. In 2010, the total population in Placer County was reported to be 348,432 people, a 40.3% increase over the previous decade. The population was composed primarily of permanent adult residents with 76% of the population over 18 years of age and a 74% home ownership rate. As of 2009, a total of 148,518 housing units were reported. With a land area of 898,787 acres, the population density averages 248 persons per square mile. Higher population densities correlate to the transportation corridors including Interstate 80, Highway 65, Highway 49, Highway 193, Highway 174, and Highway 89 and on the eastside of the County. Population density also correlates to the State and Local Responsibility Areas within the County.

Based on current economic forecasts, Placer County growth projections through 2020 are expected to be 23%. The 2010 census data shows an actual growth rate of 40.7% for the period 2000 to 2010. Assuming the range of potential growth through 2020, using the current average rate (40.3%) and the projected rate (23%) from Placer County sources, the 2020 population in Placer County will range from 437,000 to 517,000 people. Growth policies within Placer County are geared toward development while preserving open space for maintenance of resource values. Current proposals include instituting the Placer County Conservation Plan (PCCP), a plan that is intended to place 50,000 acres of developable lands in the foothill areas of the County into permanent conservation to ensure the preservation of agriculture, open space and wildlife habitat. As development continues into the future, added pressure will be placed on the upper elevations of Placer County to offset the acres removed from development through implementation of the PCCP. Zoning restrictions on forested lands in Placer County generally restrict development to parcel sizes from 2.3 acres to 80 acres, leaving a large wildland component despite the development. Current conditions in the County are indicative of development in the wildland where larger parcels and open space retention have created a true WUI condition. These practices are expected to continue into the future.

Sierra County

Sierra County is a truly rural County. In 2010, the total population in Sierra County was reported to be 3,240 people, an 8.9% decrease over the previous decade. The population was composed primarily of permanent adult residents with 82% of the population over 18 years of age and a 74% home ownership rate. As of 2009, a total of 2,295 housing units were reported. With a land area of 610,163 acres, the population density averages less than 4 persons per square mile. Population densities correlate nearly exclusively to the transportation corridors including Highway 49, and 89 and also the vast Sierra Valley which has long been a population and economic center with deep roots in agriculture. Population density also correlates to Local Responsibility Areas within the County. SRA acres are exclusively interspersed among Federal lands and are Federal DPA with some LRA around Downieville and in the Sierra Valley.

Based on current economic forecasts, Sierra County growth projections through 2020 are expected to decrease by up to -1%. The 2010 census data shows an actual population shrink rate of 8.9% for the period 2000 to 2010. Assuming the range of potential growth through 2020, using the current average rate (-8.9 %) and the projected rate (-1%) from State sources, the 2020 population in Sierra County will range from 2,952 to 3,208 people. Based on this decrease in growth and the current state of responsibility for fire protection, Sierra County is not expected to be a significant influence on NEU Fire Planning, however, citizens within the County have expressed an interest in assistance to develop and implement a CWPP for the County. NEU will continue to provide guidance and support to fulfill this need.

Sutter County

Sutter County is a strong agricultural community and is very rural. In 2010, the total population in Sutter County was reported to be 94,737 people, a 20% increase over the previous decade.

The population was composed primarily of permanent adult residents with 72% of the population over 18 years of age and a 64% home ownership rate. As of 2009, a total of 33,480 housing units were reported. With a land area of 385,625 acres, the population density averages less than 157 persons per square mile. Population densities correlate nearly exclusively to the transportation corridors including Highway 20, Highway 70 and 99. Primary population centers include Yuba City, Live Oak, and Sutter; the agricultural areas of the County are easily accessed by an extensive transportation system and therefore the population is scattered throughout the County. Sutter County is comprised nearly entirely of privately owned land, however due to the lack of elements required to be classified as SRA, the entire County is LRA.

Based on current economic forecasts, Sutter County growth projections through 2020 are expected to increase by up to 50%. The 2010 census data shows an actual population growth rate of 20% for the period 2000 to 2010. Assuming the range of potential growth through 2020, using the current average rate (20%) and the projected rate (50%) from County sources, the 2020 population in Sutter County will range from 141,159 to 134,226 people. Based on the current state of responsibility for fire protection, Sutter County is not expected to be a significant influence on NEU Fire Planning. As population and development increases there is a potential that State resources may be requested to assist if a fire exceeds the capability of local resources.

Demographic Summary

NEU's primary service area encompasses 2992.6 square miles and includes Nevada, Yuba, and Placer Counties. Population will continue to increase over the next decade in this area. Population projections range from 622,700 up to 725,800 people by 2020, an increase of 17% to 28% over the 10 year period. SRA areas and LRA areas where NEU has responsibility for fire protection will experience this population growth. Development pressures, economics and political / zoning influences will push growth into SRA areas where development will be scattered within the wildland, creating more occurrences and increased density of Wildland Urban Interface.

Current Population by County, Projection Estimates (Low and High), and Acreage

	Population			Acreage
	2010	2020 Low	2020 High	
Nevada	98,764	106,000	121,000	612,870
Yuba	72,155	79,700	87,800	403,641
Placer	348,432	437,000	517,000	898,787
	519,351	622,700	725,800	1,915,298
Sierra	3,240	2,952	3,208	610,163
Sutter	94,737	134,226	141,159	385,625
	97,977	137,178	144,367	995,788
Total	617,328	759,878	870,167	2,911,086

The balance of NEU is comprised of 1,556 square miles and includes Sutter and Sierra Counties. Population in Sutter County will increase and Sierra County will decrease over the next decade. The influence of this population change is unknown and may yield little effect on NEU's ability to provide fire protection to its responsibility areas.

Physical Description of Environmental Conditions

The physical variability of this portion of California is broad and is a function of geologic and meteorological factors. The elevation range extends from the floor of the Sacramento Valley

(<500') to the high points along the crest of the Sierra Nevada (>9000'). Topographic influences and aspect coupled with the elevation changes provide NEU with some of the most diverse landscapes in the State. The Mediterranean climate provides sufficient precipitation and growing season and the highly productive soils sustain significant plant growth. Annually, and over time, the total biomass production is significant.

The agricultural grassland of the Sacramento Valley and the oak woodlands of the foothills are dominated by grass fuels. The density of grassland fuel is largely dependant on the quantity and timing of annual rainfall. Grass fuels are an annually critical fire concern. Fires in these potentially dense, light flashy fuels commonly result in rapid rates of spread and normally consume a large number of acres.

The oak woodlands include a significant mixed brush component on east and south facing slopes. The oak woodlands at the lower elevations develop into montane hardwood-conifer. The primary dividing element is elevation change. Areas above 1200' elevation typically sustain forest cover; areas below typically sustain oak woodlands with brush and grass. Topographic influences and soil variations provide a mosaic where cover types are mixed and extend beyond the typical elevation dividing line. Locations above 3000' transition to sierra mixed conifer. Annual biomass production from these timber fuel types is impressive ranging from 40 to 50 ft³/ac/year. Much of this volume occurs in the form of light fuels, needles and bark. Fuel loading of available fuels is largely a function of winter storm and pest damage. Fuels reach critical moisture levels under normal weather conditions and any ignition can result in large, costly and damaging fires. Above 5500' elevation timber types transition to true fir and sub-alpine conifer where environmental factors generally limit biomass production. Juniper and sage brush types dominate the higher elevations and eastside rain-shadow lying east of the crest

Weather and Topography

The topography within NEU changes drastically from the flat lands of the Sacramento Valley below the 500' elevation to the steep upper slopes of the Sierra Nevada above 7,000'. The landscape aspect trend is generally west facing but interior and lateral slopes are common in all direction. Flat lands of the valley give way to rolling hills that eventually become steep inner-gorge in mid to higher elevation watersheds.

Predominant weather patters in NEU are characterized by hot dry summers and mild to cool winters. The precipitation in lower elevations is generally in the form of rain with accumulations approximating 17 to 20 inches annually. Higher elevations commonly receive annual snow accumulations of 10 to 15 feet. Predominate winds are southwest but commonly becomes north to northeast following weather systems.

Annually fire weather conditions become critical in late July through October. Red Flag warnings are common throughout the summer and largely attributed to low relative humilities and high north winds. An average summer day is 85-95 degrees, winds southwest 0-7 with RH of 20-25 percent. Under these common conditions the ignition potential and likelihood of a fire growing into a significant event is high.

Fire History

Cal Fire strives to extinguish 95% of all wildland fires at 10 acres or less. For those few fires that exceed 10 acres, costs of suppression and value losses grow exponentially.

The Nevada-Yuba-Placer Unit's (State) resources are allocated throughout the 3-county area in a way that is expected to keep State wildland fires small, providing maximum protection for life, property, and the environment.

Fire history for the last decade (2000's) show that most "failures", that is fires that are greater than 10 acres, occur on brush and grass covered lands west of Highway 49 – and to a much lesser extent – in the Truckee and Tahoe basins. Factors that contribute to these failures include:

- Limited State & Local resources – long response times
- High incidence of arson and negligent acts
- Fires that burn for a longer period of time before being detected / reported.
- Fires in fuel types that support a more rapid rate of spread
- Multiple jurisdictions from different dispatching facilities (PSAP's)
- Longer aircraft flight times.

The fire-threat is significant along the 20-49-80 corridor, and there are many factors that contribute to a high success rate in containing wildfires:

- Quick detection – Many people, cell phones, lookout towers...
- Numerous State & Local fire suppression resources
- A single dispatch center (Grass Valley ECC) for most agencies
- Rapid response & turn-around times for air resources (tankers)

It must be reinforced, however, that a wildfire occurring on a severe fire weather day (hot, dry and windy) will spread with such speed and intensity, that even the most prompt response from emergency resources and most aggressive fire control tactics may be ineffective. There are many local examples of this type of fire – here are some recent ones:

49 Fire	2009	(Auburn)	343 acres	64 structures
Gladding	2008	(Lincoln)	1,090 acres	4 structures
Williams	1999	(Dobbins)	5,837 acres	91 structures
Pendola	1997	(Dobbins)	11,725 acres	76 structures
Trauner	1994	(Rough & Ready)	536 acres	12 structures
Fawn	1992	(Ophir)	350 acres	13 structures
49er	1988	(Lake Wildwood)	36,343 acres	200 structures

Priority Landscapes

2010 California Forest and Rangeland Assessment

Public Resource Code 4789 requires Cal Fire to periodically assess California's forest and rangeland resources. Cal Fire's Fire and Resource Assessment Program (FRAP) completes this assessment. The analysis is designed to identify key issues and define the status and trends effecting California forestlands and resources. The 2010 assessment identifies priority landscapes and associated forest and rangeland impacts. These priority landscapes are developed based on three primary themes and related subthemes. The three general themes of the recent assessment are:

- 1- Conserve working forest and range landscapes.
- 2- Protect forests and rangelands from harm.
- 3- Enhance public benefits from trees, forests and rangelands.

These themes are followed by eleven subthemes that provide more detail for a priority landscape rating. Strategies to help mitigate these issues are developed by the Unit in consideration of existing programs and projects. The 2010 assessment identifies the following priority landscapes in NEU:

Population Growth and Development Impacts

This priority landscape is identified due to high ecosystem value and the potential for those ecosystems to be impacted by development. Annual grasslands, Montane Hardwoods, Blue Oak Woodlands and Montane Hardwood-Conifer are some of the habitat types at risk identified under this priority landscape in NEU.

Strategies to offset impacts from growth and development include local planning, land acquisition, zoning policies and policies to promote in-filling of existing developed areas. Current proposals include the adoption of the Placer County Conservation Plan, a plan that will place 50 thousand acres of developable land below 1000' elevation into permanent conservation. Adoption of such plans does minimize impacts to these acres, but other acres in other portions of the Unit would presumably receive the pressure from development to replace the demand on the conserved acres.

Sustainable Working Forests and Rangelands

This priority landscape includes land with timber volume and forest biomass having economic values that are threatened by wildfire and forest pests. Rangeland productivity combined with wildfire threat develops the rangeland risk reduction priority landscape.

Within the boundaries of NEU, in those areas bearing commercial timber, estimates of current standing volume range from 2.4 to 3 Billion Board Feet, with a value from \$960 Million to \$1.2 Billion. Strategies to reduce identified threats and promote working forests and rangelands include Cal Fire's existing resource management programs designed to reduce fuels, protect water quality and promote landowner stewardship. In NEU, rangelands are considered in two forms. Grassland range is typically in the lower elevations and incorporates dry land and irrigated land grazing and includes cattle, sheep, goats, horses and other livestock. Open-range cattle grazing includes cattle and goats relying upon wild forage as feed. Control of herd size will effect the quantity of forage consumed and thereby impacts the available fuel loading, also with potentially negative impacts to soil and water quality. Following fire, feed quality and quantity has a short term negative impact and long term positive impact. Nutrient cycling and decrease of undesirable species is a positive benefit. Open range grazing increases as desirable forage germinates and grows with less competition from canopy cover. The ultimate goal is to maintain the viability of livestock grazing on all available cover types to provide biological fuel loading control and provide for economic stimulus from agriculture. Use of controlled fire will be utilized to achieve this goal.

Wildfire Threats to Ecosystem Health and Community Safety

The priority landscape for preventing wildfire threats to maintain ecosystem health is based on unique ecosystems that have a high threat of damage that result from future fire. Managing these ecosystems requires understanding the natural fire regimes that once formed the ecological stability of the ecosystems and determining actions that best mimic or restore these natural processes.

The priority landscape for restoring wildfire impacted areas to maintain ecosystem health includes restoring fire damaged lands recently burned in wildfires, especially where entire ecosystems are damaged. Activities are designed to facilitate the restoration of key ecosystem functions and components.

The priority landscape for preventing wildfire threats for community safety combines areas of high wildfire threat with areas of human infrastructure. Areas of high risk are provided focus for planning and mitigation.

Strategies to reduce threats to ecosystem health and community safety involve collaborative planning due to the large number of individual landowners and post fire ecological rehabilitation tactics. Past efforts have included Burned Area Rehabilitation techniques, cooperative efforts with soil and conservation organizations, and forestry assistance to landowners with burned lands. Individual homeowner vegetation management can have a large impact to reducing threats within these landscapes. Public education specific to PRC 4291 compliance and treatment techniques, inspiring a landscape level fuel modification and land stewardship ethic, and public service forestry are mechanisms that will assist in protection of these priority landscapes.

Forest Pests and Other Threats to Ecosystem Health and Community Safety

The priority landscape for restoring forest pest impacted areas to maintain ecosystem health identifies areas where restoration activities are going to have the greatest impact of forest pest impacted ecosystems. In NEU the Sierra Mixed Conifer, Eastside Pine, Red Fir and White Fir are the habitat types with the most priority acres. These forest types correspond to the highest timber value and best use as timber production.

The priority landscape for restoring forest pest impacted communities for public safety identifies tree mortality coincident with human infrastructure. Restoration activities and hazard tree removal are a necessity in these areas.

The priority landscape for preventing forest pest outbreaks to maintain ecosystem health identifies ecosystems most at risk from tree mortality potentially caused by future pest outbreaks.

The priority landscape for preventing forest pest outbreaks for community safety identifies communities most at risk for damage from future outbreaks. In NEU Truckee is one of the largest communities identified as a priority for forest pest prevention activities.

Strategies to reduce forest pest impacts and other threats to ecosystem health and community safety utilize a variety of forest management tools. These tools are available to land managers and public agencies and address forest pest damage to ecosystem health. These tools include 1) Education and outreach regarding impacts from forest pest killed trees, 2) Early detection and monitoring of forest conditions and pest activity, 3) Forestry assistance programs, grant funded programs geared toward pest management and privately funded forest management activities, and 4) State and federal forest policies and declared Zones of Infestation.

Water Quality and Quantity Protection and Enhancement

The priority landscape for water supply identifies areas where high value water supply coincides with high threat. These areas are then targeted for stewardship projects that protect and promote water supply. The annual snowpack in the Sierra Nevada is a major water supply to the state. Forested watersheds in NEU supporting this snowpack are high priority areas. All of the water that drains from the Unit is used in some form as irrigation, power generation, domestic supply, recreation, or wildlife habitat. This is among the highest of value resources targeted for protection.

The priority landscape for water quality involves high value water assets in watershed that support a broad range of beneficial uses and threats to water quality. Lake Tahoe is one of the highest priority watersheds in the region.

Strategies to protect water quality and quantity include programs designed to promote land stewardship and improve water use. Involvement in FERC relicensing, fire prevention,

promotion of grant programs aimed at water quality protection, and review of CEQA documents with Cal Fire objectives in mind are aimed at protecting these priority landscapes.

Urban Forestry for Energy Conservation and Air Quality

The priority landscape for urban forestry tree planting involves dense populations with considerable air pollution which also represent urban heat sinks. Tree planting in these areas can reduce energy consumption due to cooling and filter air pollutants.

The priority landscape for urban forestry maintenance identifies dense populations of people and trees, with many days over 90 degrees and poor air quality. Protecting the existing trees in these areas will provide a public benefit.

Strategies to protect urban forestry for energy conservation and air quality involve various program designed to create and maintain sustainable urban forests. Common urban forestry tools involve expansion/ reforestation, maintenance/management and public outreach and support.

Planning for and Reducing Wildfire Risks to Communities

The priority landscape for community wildfire planning identifies where wildfire threat coincided with human infrastructure such as houses, transmission lines and major roads. The priority landscape was summarized to identify priority communities. The analysis then examined which priority communities are currently covered by a Community Wildfire Protection Plan (CWPP).

Current strategies involve the recruitment of groups that desire to create new CWPP's and encouraging the updating of existing plans. Cooperation with Fire Safe Councils, Conservation Groups and agencies with wildfire prevention in mind will aid in protecting this priority landscape. The Unit is currently involved in development of two new CWPP's, Lincoln area and Truckee Area.

Emerging Markets for Forest and Rangeland Products and Services

The priority landscape for biomass energy-ecosystem health was developed based on existing and proposed biomass facilities and the potential for those facilities to support fuel reduction and restoration projects that will promote forest and ecosystem health.

Strategies for emerging markets for forest and rangeland products are largely geared toward biomass facilities and fuel reduction projects designed to improve ecosystem health. Strategies also involve carbon sequestration.

Plant, Wildlife, and Fish habitat Protection, Conservation and Enhancement

The priority landscape for wildfire threat to areas protected for habitat involves fire threat and the potential for impacts on protected habitat. Lands managed by public agencies dominate this priority landscape

Strategies to protect plants, wildlife and fish habitat include purchasing of land and conservation easements, development planning, zoning, habitat mitigation banking, habitat restoration, and policies, regulations and funding that support these efforts.

Green Infrastructure for Connecting People to the Natural Environment

The priority landscape for conserving green infrastructure (development threat) emphasizes green infrastructure that serves larger communities and faces significant development threat, to

characterize the overall magnitude of the threat by county and bioregion. In NEU the significant threat is in the foothill areas.

The priority landscape for managing green infrastructure (wildfire/forest pest threat) identifies that emphasize green infrastructure that serves larger communities or has recreation value, and faces significant threat from wildfire or forest pests (insects and disease). Management tools include fuels reduction projects, prescribed fire and thinning.

Strategies for protecting green infrastructure for connecting people to the environment involve establishing reserves, developing conservation easements, community planning and fuels reduction/vegetation management projects.

Climate Change: Threats and Opportunities

The Priority Landscape for Threats from Wildfire, Insects and Disease and Development involves locations where high value forest carbon assets coincide with wildfire, insects and disease. The expected loss from wildfire, insects and disease is much more extensive than loss from development.

The priority landscape for threats to forest carbon from development involves locations where high value forest carbon assets coincide with high risks of development that threaten the sustainability of carbon sequestration. In the Sierra Foothills oak woodlands are a primary threat of development.

Strategies to preserve and enhance forest carbon management involve policy development that increases carbon sequestration where possible, promote actions that reduce losses from wildfire, increase forest health and discourage or mitigate land use conversion from forest and watershed uses to other non compatible uses.

NEU Priorities and Goals

The State Board of Forestry and the Cal Fire have drafted a comprehensive update of the State Fire Plan for wildland fire protection in California. NEU has reviewed the 2010 Strategic Fire Plan (State) goals in order to develop and incorporate those goals into the Unit Fire Management Plan. The NEU priorities provide the foundation upon which our local goals and objects are built. The NEU priorities and Goals are as follows:

Priorities:

3. To Reduce the Risks to Citizens and emergency responders from Wildland Fire.
4. Develop a “land stewardship” ethic in the residents of the Unit

Goals:

1. Demonstrate methods that individuals and the community can use to properly manage their lands to improve forest health, and reduce the ignitability of structures in the Wildland Urban Interface.
2. Raise citizen and stakeholder awareness of fire risks and enlist their help and participation in risk reduction.

3. Assist local government in developing standards, policies, and plans, which will result in local, and landscape level fuel modifications.
4. Implement local and landscape level projects and programs that decrease fire risk and increase the potential for success on initial attack.

B: UNIT PREPAREDNESS AND FIREFIGHTING CAPABILITIES

NEU Facilities

NEU Headquarters is located along Interstate 80 near Auburn. At peak season, the Unit staffs 26 fire stations, an air attack base, a conservation camp with 5 year-round hand crews, fire-prevention bureau, a pre-fire planning office with fully integrated GIS resource mapping capabilities, and 7 Registered Professional Foresters skilled in forest management and CEQA compliance. NEU also maintains three bulldozer / transport combinations, road grader, front-loader and dump truck with numerous operators skilled in all aspects of equipment operations from bulldozer firefighting operations to road repair.

Facilities are spread from Marysville, in the valley grasslands of Yuba County, through the gold country of Placer and Nevada Counties, eastward to Truckee and the Tahoe Basin. The Unit also provides various levels of fire protection service through cooperative agreements with three counties and six fire districts.

Resources are dispatched and managed through the Grass Valley Emergency Command Center, which is co-located with the Grass Valley Air Attack Base. Peak season air resources include one fixed wing air attack and two air tankers.

Cal Fire NEU supports the use of four lookouts located on State lands in Nevada, Yuba, and Placer Counties and one lookout on contract with the USFS. The lookouts remain the backbone of Cal Fire's wildland fire detection system. Fixed lookouts are generally staffed in areas of high risk and high fire danger where reliable local reporting is not available.

The following is a list of NEU's facilities, equipment, and overhead personnel locations (listed by county):

Placer County

Auburn Headquarters:	3 – Battalion Chiefs (Training, Prevention, Relief) 1 – Fire Equipment Manager 1 - Heavy Equipment Mechanic (Sched. A) 1 – Unit Service Center 3 - Foresters
Auburn (Station10)	2 – State Owned Fire Engines 1 - Battalion Chief 1 – Bulldozer / Transport 2 - Heavy Fire Equipment Operators
Foresthill (Station 11)	2 – State Owned Fire Engines
Dry Creek (Station 100)	1 – Type II Schedule A Engine 1 – Battalion Chief
Atwood (Station 180)	1 – Schedule A Type III Engine 2 – Type II Schedule A Engines 1 – Type I Schedule A Engine 1 – Schedule A Water Tender
Ophir (Station 182)	1 – Type II Schedule A Engine

Colfax (Station 30)	1 – State Owned Fire Engine 1 – Battalion Chief
Alta (Station 33)	2 – State Owned Fire Engines
Truckee (Station 50)	3 - State Owned Fire Engine 1 - Battalion Chief 1 - Forester
Carnelian Bay (Station 55)	1 – State Owned Fire Engine
Lincoln (Station 70)	1 – Type II Schedule A Engine
Sunset (Station 77)	1 – Type III Schedule A Engine 1 – Type II Schedule A Engine 1 – Type I Schedule A Engine 1 – Battalion Chief
Fowler (Station 73)	Placer County Volunteers 1 – Water Tender 1 – Type III Engine 1 – Type I Engine
Thermolands (Station 74)	Placer County Volunteers 1 – Type III Engine 1 – Type I Engine 1 – Water Tender
Paige (Station 75)	Placer County Volunteers 1 – Water Tender 1 – Type III Engine
Sheridan (Station 78)	Placer County Volunteers 1 – Water Tender

Nevada County

Grass Valley	1 - Interagency Emergency Command Center 1 - Air Attack Base 2 – Battalion Chiefs 2 – Type 3 Air Tankers 1 – Air Tactical Platform
Nevada City (Station 20)	2 – State Owned Fire Engines 1 – Battalion Chief 3 – Foresters (2 Area + Unit Forester) 1 – Bulldozer / Transport 2 – Heavy Fire Equipment Operators
Columbia Hill (Station 42)	2 – State Owned Fire Engines
Higgins Corner (Station 21)	2 – State Owned Fire Engines

	1 – Type III Schedule A Engine
	1 – Type II Schedule A Engine
Smartsville (Station 40)	2 – State owned fire engines
	1 – Battalion Chief
Washington Ridge CC	5 – Inmate Crews
	1 – Division Chief (Northern)

Yuba County

Marysville (Station 95)	1 – Battalion Chief
Dobbins (Station 60)	2 – State Owned Fire Engines
	1 – Bulldozer / Transport
	1 – Heavy Fire Equipment Operator
Loma Rica (Station 61)	1 – State Owned Fire Engine
	1 – Battalion Chief

Washington Ridge Conservation Camp

Washington Ridge (WAR) is a cooperative program with the California Department of Corrections and Rehabilitation (CDCR). Through these cooperative efforts, Cal Fire NEU is able to house approximately 100 inmates that form 5 crews available to respond to all types of emergencies including wildfires, floods, search and rescue and earthquakes. When not responding to emergencies, the crews are busy with conservation and community service work projects for state, federal, and local government agencies. Hazardous vegetation abatement, forest management and controlled burning are regular activities WAR crews are engaged in.

NEU maintains and monitors three NFDRS (National Fire Danger Rating System) RAWS stations. These include Lincoln, Secret Town and Reader Ranch. Data posts daily to allow calculation of fire weather indices and determine staffing levels. Monthly fuel sampling at multiple locations throughout the Unit, coupled with weather observations allows accurate prediction of fire behavior and preparation for increased fire activity

Forest Fire Lookouts

Mt Howell Lookout (Placer County)

Mount Howell is located two miles south of Colfax above Interstate 80 and along the Union Pacific Railroad. The lookout was initially constructed in 1930 and has been reconstructed several times. The Lookout is unstaffed unless significant fire weather is projected. Areas serviced by Mount Howell Lookout are visible from other lookouts in the Unit and numerous residents and travelers provide reports of fires in the area. The lookout provides for other communications and



maintenance of the lookout is expected to continue.

<http://www.mounthowelllookout.org/>

Banner Mountain Lookout (Nevada County)

Banner Mountain Lookout is located four miles east of Nevada City near Scott's Flat Reservoir. The Lookout was built in 1926 and is located amongst an extensive community of mountain homes. The lookout is staffed annually through fire season by volunteer staff. The lookout site collocated with various other communication facilities.



Wolf Mountain Lookout (Nevada County)

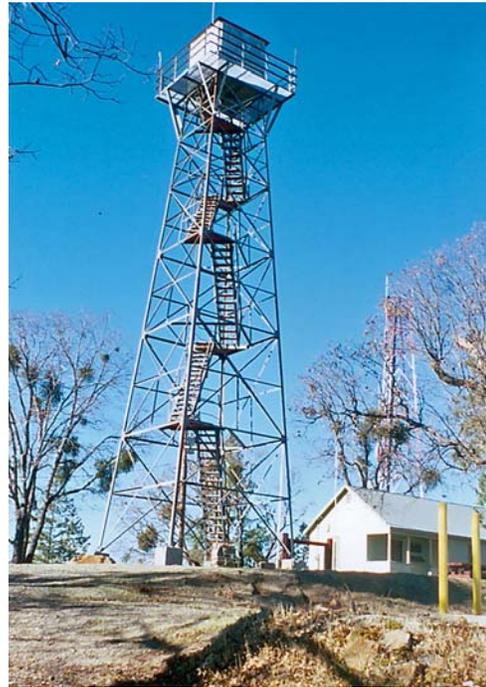
Wolf Mountain is a broad, flat north tending ridge located in Nevada County west of Wolf Creek. The lookout was built in 1981 and is staffed annually with volunteers during fire season. Ponderosa pine, digger pine, black oak and brush predominate. The site has radio and microwave facilities.

<http://www.wolfmountainlookout.org/>



Oregon Peak Lookout (Yuba County)

Oregon Peak Lookout is located two miles north east of Dobbins. The lookout was built in 1935 and was completely constructed with CCC labor. The lookout provides a panoramic view of the Sacramento Valley, points south towards the heart of NEU, and the Sierra Buttes in Sierra County. The lookout is staffed annually during fire season with volunteers.



Martis Peak Lookout (Placer County)

Martis Peak Lookout is located 8 miles east of Truckee near the Nevada State Line. The lookout is staffed by Cal Fire through an agreement with the lookout owner, the USFS. The lookout was built in 1935 and is staffed annually during fire season.



Remote Automated Weather Stations (RAWS)

Secret Town RAWS (Placer County)



Location	Secret Town California		
Latitude	39° 11' 01"	NESS ID	CA21815A
Longitude	120° 53' 05"	NWS ID	041808
Elevation	2826 ft.	Agency	S&PF

Reader Ranch RAWS (Nevada County)



Location	Reader Ranch California		
Latitude	39° 18' 13"	NESS ID	CA2171DE
Longitude	121° 07' 02"	NWS ID	041809
Elevation	1968 ft.	Agency	S&PF

Lincoln RAWS (Placer County)



Location	Lincoln California		
Latitude	38° 52' 57"	NESS ID	CA21922C
Longitude	121° 16' 06"	NWS ID	041907
Elevation	200 ft.	Agency	S&PF

Local Agreements and Contracts

Cooperative Fire Protection

The Cal Fire Nevada-Yuba-Placer Unit provides various emergency services to local cities, counties and districts. These cooperative agreements range from full service fire protection services to dispatch only agreements.

In Nevada County, CAL FIRE dispatches for all local fire departments and districts in the county including Nevada County Consolidated Fire District, Grass Valley City Fire Department and Penn Valley Fire Protection District, as well as Sierra Nevada Ambulance. In the Lake of the Pines area, the [Higgins Fire Protection District](#) contracts with CAL FIRE to provide 24-hour year-round fire protection services (known as an [Amador Contract](#)). The County of Nevada also contracts with CAL FIRE for a Fire Captain to serve as the county's Fire Planner.

In Yuba County, CAL FIRE is contracted to provide year-round fire protection (known as an Amador Contract) to the communities of Loma Rica and Browns Valley. In the City of Marysville, CAL FIRE is contracted to run the [Marysville Fire Department](#), under a full fire protection agreement (known as [Schedule A](#)).

In Placer County, CAL FIRE has a full fire protection agreement (known as [Schedule A](#)) with the Placer County Fire Department. Placer County Fire has 5 stations staffed by CAL FIRE firefighters and another 5 stations staffed by volunteers. The areas served by the CAL FIRE / Placer County Fire Department include North Auburn, Ophir, Dutch Flat, unincorporated Lincoln, Dry Creek, Sheridan, and Camp Far West. In addition, CAL FIRE provides year-round fire protection ([Amador Contract](#)) to the communities of Auburn (Bowman), Colfax and Alta. CAL FIRE provides dispatch only services for several local fire departments and districts in Placer County including Auburn City Fire Department, Truckee Fire Protection District, North Tahoe Fire Protection District, as well as CalSTAR Air Ambulance in Auburn.

Automatic Aid Agreements

No formal automatic aid agreements are in place in NEU. However, in order for NEU to meet the objective of keeping 95% of all wildland fires to 10 acres or less (as defined by Cal Fire), the application of closest resource concept is critical. This process allows the nearest fire suppression resource to respond to the scene of a wildland fire and begin suppression activities without focusing on responsibility areas or jurisdiction. The collocation with the USFS dispatch, and local government dispatch responsibilities being a Grass Valley ECC function assists in the application of closest resource concept.

Local Wildland Contracts - Placer County

Rocklin Fire Contract – 1,327 acres
Auburn Fire Contract – 900 acres
Truckee Fire Contract – 10,285 acres

Mutual Threat Zones

Mutual aid may also be provided to areas determined to be within a mutual threat zone, wherein any fire is judged to be a threat to agencies having a common boundary. Mutual threat zones will be delineated on maps maintained by both agencies. Mutual threat zones will exist primarily

along SRA-LRA boundaries. Normally a negotiated automatic response is made into a mutual threat zone, thereby reducing duplication. NEU is currently developing a number of mutual threat zones within the unit.

Dispatch Agreements

NEVADA COUNTY

Grass Valley FD
Nevada City FD
North San Juan FPD
Peardale Chicago Park FPD
Rough and Ready FPD

Higgins FPD
Nevada County Consolidated FD
Ophir Hill FPD
Penn Valley FPD
Washington FD

YUBA COUNTY

Camptonville FPD
Foothill FPD
Smartsville FPD

Dobbins-Oregon House FPD
Loma Rica-Browns Valley FPD
La Porte FD (Plumas County)

PLACER COUNTY

Alta FPD
Colfax City FD

Auburn City FD
Placer County Fire

EASTSIDE

Meeks Bay FD (El Dorado County)
Northstar FD
Truckee FPD

North Tahoe FD
Squaw Valley FD

ADDITIONAL CONTRACTS / SERVICES

Sierra Nevada Memorial Hospital Ambulance Service
California Shock/Trauma Air Rescue (CALSTAR) - Auburn Base
Sierra Sacramento Valley EMS Agency - Air Ambulance Coordination Center
CAL EMA Region IV - Fire and Rescue Branch
Emergency Medical Dispatch - Pre-arrival instructions for Yuba County agencies not dispatched by GVECC

SECTION II:**COLLABORATION****A: 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	Representative (title)
Cal Fire	Matthew Reischman
Cal Fire	Steve Garcia
Cal Fire	Elsa Hucks
Cal Fire	Jack Harvey
Cal Fire	Ed Crans
Auburn City Fire	Mark D'Ambrogi
Placer County OES	Rui Chuna/Rod Rodrigues
Placer Fire Alliance	George Alves
Placer County RCD	Rick Gruen
Foresthill Fire Dept.	Luana Dowling
Placer Hills Fire District	Ian Gow
Northstar Fire Dept.	Mark Shadowens/Joe Barron
North Tahoe FPD	Stuart McMorrow
Truckee FPD	Chuck Thomas
FSCNC	Joanne Drummond
High Sierra RCD	Kay Joy-Barg
UC Davis	Art Craigrill
Yuba County FSC	Glenn Nader

Fire Safe Councils within the Unit

Placer County

Placer Fire Alliance (<http://www.placerfirealliance.org/>)

Composed of:

- Foresthill Fire Safe Council
- Greater Auburn Area Fire Safe Council
- Placer Sierra Fire Safe Council
- Greater Lincoln Area Fire Safe Council (new – 2010)

Placer County CWPP:

Currently under rewrite, Cal Fire represented on planning committee
<http://www.placerfirealliance.org/Documents/CWPP%20Final.pdf>

Lake Tahoe CWPP:

Currently updated
<http://www.placerfirealliance.org/Documents/Lake%20Tahoe%20CWPP%202004.pdf>

Northstar Fire CWPP:

Currently updated.

Nevada County

Fire Safe Council of Nevada County (<http://www.areyoufiresafe.com/>)

Yuba County

Yuba County Fire Safe Council (<http://www.co.yuba.ca.us/firesafe/>)

Sierra County

Sierra Fire Safe Council (<http://www.scfswc.com/>)

A: NEU's ASSETS AT RISK

The Unit description contained in this Fire Management Plan provides the background for identifying **NEU's Assets at Risk**. The 2010 California Forest and Rangeland Assessment Priority Landscape discussion also reinforces the subthemes that associate with the assets at risk. Each of NEU's programs is geared to protect or enhance the assets. The following list provides a summary of **NEU's Assets at Risk**:

- Life Safety of Residents
- Fixed Property and Real Estate
- Watershed Values and Water Quality / Quantity
- Power Distribution Infrastructure
- Railroad and Highway Infrastructure
- Timber and Agricultural Values
- Wildlife and Ecosystem
- Clean Air

B: NEU's COMMUNITIES AT RISK

On January 4, 2001, for the purposes of the National Fire Plan, the Department of Interior (DOI) published in the *Federal Register* a "notice of Wildland Urban Interface (WUI) Communities within the Vicinity of Federal Lands That Are at High Risk from Wildfire."

After the 2000 fire season Cal Fire, working with the California Fire Alliance, developed a list and associated map of communities at risk from wildfire using 1990 Census and USGS Geographic Names Information System data to identify populated places, and Cal Fire's Fire and Resource Assessment Program (FRAP) [<http://frap.cdf.ca.gov/>] fuel hazard data.

Communities at Risk in Placer County

Community at Risk	Federal Threat	Source of Designation
Alpine Meadows	Yes	2001
Alta	Yes	2001
Auburn	Yes	2001
Baxter	Yes	2001
Bowman	Yes	2001
Cape Horn	Yes	2001
Carnelian Bay	Yes	2001
Casa Loma	Yes	2001
Christian Valley (Nielsburg)	Federally Regulated	2001
Colfax	Yes	2001

Dollar Point	Yes	2001
Dutch Flat	Yes	2001
Emigrant Gap	Yes	2001
Foresthill	Yes	2001
Gold Hill	Federally Regulated	2001
Gold Run	Yes	2001
Heather Glen – Applegate	Yes	2001
Homewod	Yes	2001
Iowa Hill	Yes	2001
Kings Beach	Yes	2001
Lincoln		2001
Loomis		2001
Magra	Yes	2001
Meadow Vista		2001
Michigan Bluff	Yes	2001
Newcastle	Federally Regulated	2001
North Auburn	Yes	2001
Ophir	Yes	2001
Penryn		2001
Rocklin		2001
Roseville		2001
Secret Town	Yes	2001
Shady Glen	Yes	2001
Sunnyside – Tahoe City	Yes	2001
Tahoe Pines	Yes	2001
Tahoe Vista	Yes	2001
Twin Pines – Weimar	Federally Regulated	2001
Virginiatown		2001

Communities at Risk in Nevada County

Community at Risk	Federal Threat	Source of Designation
Alta Hill	Yes	2001
Alta Sierra	Yes	2001
Cedar Ridge	Federally Regulated	2001
Cherokee	Yes	2001
Cherry Creek Acres	Yes	2001
Chicago Park (Pinecrest)	Yes	2001
Donner	Yes	2001
Floriston	Yes	2001
Forest Knolls – Banner Mountain	Yes	2001
French Corral	Yes	2001
Glenbrook	Yes	2001
Glenshire – Devonshire	Yes	2001
Gold Flat	Yes	2001
Grass Valley	Yes	2001
Higgins Corner (Wolf)	Yes	2001
Hirschdale	Yes	2001
Hobart Mills	Yes	2001
Kingvale	Yes	2001
La Barr Meadows	Yes	2001
Lake City	Yes	2001
Lake of the Pines		2001

Lake Wildwood	Federally Regulated	2001
Mooney flat	Yes	2001
Nevada City	Yes	2001
Newtown	Yes	2001
Norden	Yes	2001
North Bloomfield	Yes	2001
North Columbia	Yes	2001
North San Juan		2001
Peardale	Federally Regulated	2001
Penn Valley	Federally Regulated	2001
Prosser Lakeview Estates	Yes	2001
Red Dog	Yes	2001
Rough and Ready (Bitney Corner)	Yes	2001
Shewood Forest	Yes	2001
Soda Springs	Yes	2001
Sweetland	Yes	2001
Truckee	Yes	2001
Union Hill	Federally Regulated	2001
Washington	Yes	2001
Wilaura Estates	Yes	2001
Willow Valley – Cascade Shores	Yes	2001
You Bet	Yes	2001

Communities at Risk in Yuba County

Community at Risk	Federal Threat	Source of Designation
Beale Air Force Base East	Yes	2001
Browns Valley	Federally Regulated	2001
Brownsville	Yes	2001
Camptonville	Yes	2001
Challenge	Yes	2001
Challenge – Brownsville	Yes	2001
Dobbins	Yes	2001
Iowa City		2001
Linda		2001
Loma Rica		2001
Marysville		2001
Oregon House	Federally Regulated	2001
Rackerby	Yes	2001
Sicard Flat	Yes	2001
Smartville	Yes	2001
Strawberry Valley	Yes	2001
Timbuctoo	Yes	2001

Communities at Risk in Sierra County

Community at Risk	Threat Level	Federal Threat	Source of Designation
Alleghany		Yes	2001
Bassets		Yes	2001
Cal-Ida		Yes	2001
Downieville		Yes	2001

Forest		Yes	2001
Goodyears Bar		Yes	2001
Loyalton		Yes	2001
Pike		Yes	2001
Randolph		Yes	2001
Sattley – Calpine		Yes	2001
Sierra City		Yes	2001
Sierraville		Yes	2001

Communities at Risk in Sutter County

Community at Risk	Threat Level	Federal Threat	Source of Designation
Live Oak			2001
Yuba City			2001

FIREWISE Communities

The national Firewise Communities program is a multi-agency effort designed to reach beyond the fire service by involving homeowners, community leaders, planners, developers, and other in the effort to protect people, property, and natural resources from the risk of wildland fire – before a fire starts. Firewise Communities emphasize community responsibility for planning in the design of a safe community as well as effective emergency response, and individual responsibility for safer home construction and design, landscaping, and maintenance. (<http://www.firewise.org/>)

Firewise Community Designation

Placer County

Walden Woods, Granite Bay 2008
Northstar 2010

Alpine Meadows 2007

Nevada County

Lake Wildwood Association, Penn Valley 2007
Lake of the Pines 2009

Banner Mountain 2010
Mountain Lake Estates, Nevada City 2010

A. Nevada-Yuba-Placer Unit Fire Prevention Program

NEU's fire prevention program accomplishes Unit fire management goals through implementation of four primary components. These fire prevention components are law enforcement, engineering, information/education and volunteerism. Law enforcement includes fire investigation and cause determination, enforcement of California's Forestry and Fire Laws and PRC 4291 inspections throughout the Unit. Engineering occurs through local building department functions where Cal Fire personnel are assigned to assist in planning fire safe projects. Information and education occurs through direct contact with the public, partnerships with local boards and councils, communication with professional organizations and employee involvement in the local community. Volunteerism occurs through support of the Volunteers in Prevention (VIP) program, which uses local volunteers to staff fire lookouts, appear at public events, meet with residents, and correspond with the public with Cal Fire goals in mind. The balance of each of these components allows the prevention program to address statewide, regional and local fire issues.

Annually, NEU's Fire Prevention Bureau evaluates fire cause for all fires that occurred the previous year. The ignition information is made available to the Unit staff in order to assist Battalion staff in local fire prevention efforts.

Structure Ignitability

NEU contains a mosaic of land use types ranging from rural agriculture and forested parcels, WUI with small clusters of development, and dense development near commercial centers and along main thoroughfares. Commercial and residential structures are present throughout all of these land use types. Also prevalent is pervasive hazardous vegetation typical of the Mediterranean climate with fertile soils. Projections of population growth and a desirable standard of living in the Sierra Nevada foothills dictates that development in NEU's WUI will persist.

Construction types, ignitability of materials and proper engineering are all critical when wildland fires encounter structures. State law establishes certain requirements for building in the WUI that effect structure placement and decrease structure ignitability. Local NEU staff, co-located with the county building departments, provides a state perspective in evaluation of development for both single residential, commercial, and large scale development. Measures which are employed by developers, building officials and Cal Fire staff include:

- Planning to properly locate development with minimum exposure to wildfire.
- Construction methods and materials that prevent structure ignition.

- Reduction of flammable vegetation around structures and along evacuation routes.

Planning and Engineering

Placer County is the second fastest growing county in California with a population growth of 40.3 percent since 2000, second only to Riverside County which grew by 41.7%, a margin of just under 1.5%. Adjacent counties are also impacted by the tide of rural development. As rural development continues, parcel sizes remain large enough to leave a significant threat of wildfire. NEU fire prevention planners, assigned to the NEU Fire Prevention Bureau work diligently with county officials to ensure that development in the SRA is in compliance with state law. Development plans are reviewed in light of past, present and future projects, fire fighting and communications infrastructure, and staffing requirements.

Fire Hazard Severity Zone Mapping – During the years 2007 through 2008, CAL FIRE updated the existing Fire Hazard Severity Zone maps to coincide with the adoption of the new wildland-urban interface building standards. The updated maps incorporate improved wildland fire behavior science, data sets, and understanding of structure ignition mechanisms during conflagrations. These fire hazard severity zones are used by building officials to determine appropriate construction materials for new buildings in the WUI. The updated zones are also used by property owners to comply with natural hazards disclosure requirements at time of property sale. It is expected that the fire hazard severity zones will be used by local government to update the safety element of general plans. The Fire Hazard Severity Zone maps and new building standards for each county can be obtained from the Cal Fire website, www.fire.ca.gov.

Construction

Intrusion of burning embers into a structure is the primary cause of structure ignition during a wildland fire. NEU fire prevention planners promote the strict requirements of the California Building Code Chapter 7A. The objective of these 7A Standards is to provide a reasonable level of exterior wildfire exposure protection for buildings in the WUI. The 7A Standards will help to reduce the number of burning embers that enter a building and ignite fires.

Defensible Space Inspection Program

Proper clearance and treatment of vegetative fuels enhances the protection of structures in the wildland. Public Resource Code 4291(PRC 4291), establishes standards for the clearance of vegetative fuels within 100' of structures in the wildland. NEU Defensible space inspectors visit over 5000 residences each year to verify compliance with PRC 4291. Landowners are provided an inspection document showing whether their structure is in compliance. Non-compliant landowners are provided an

opportunity to perform necessary fuel treatment. Second and third inspections are performed to determine the need for law enforcement action.

Landscape Level Fuel Modification

A majority of landowners respond to the defensible space inspection program prior to LE action. Generally, a fire safe zone of 100' is familiar to the public and our efforts with the inspection program are continually educating the residents that are unaware. However, in order to accomplish a broader application of fuel treatments beyond the mandated 100' fire safe zone, NEU promotes a stewardship ethic for landowners with property that extends beyond the 100' zone. Landscape level fuel modifications are promoted through cooperative efforts with local government partners, Resource Conservation Districts, Fire Safe Councils, and through efforts of the NEU Resource Management staff providing assistance to landowners throughout the unit. NEU will continue to assist local government in developing standards, policies, and plans, which will result in a stewardship ethic and landscape level fuel modification.

Information and Education

The information and education programs in the Nevada-Yuba-Placer Unit focus on promoting fire and life safety messages in the communities we serve. We focus on providing information and education to people of all ages, in public forums and through the media, and displaying and distributing educational material.

Through NEU's Ignition Management Program, high target areas have been identified for specific outreach campaigns. These campaigns may include increased publicity through the media and local channels, school programs, fairs and other public events.

School Programs

NEU personnel participate in school programs throughout the year to provide fire prevention, life safety, and natural resource protection education. It is our goal to target schools that have been identified in areas with high PWF (Playing With Fire) incidents in the unit's Ignition Management Plan.

Juvenile Firesetter Intervention Program

Juveniles identified as playing with fire or intentionally starting a fire are referred to NEU's Juvenile Firesetter Intervention Program. The goal of the program is to reduce the number of fires started by juveniles within the communities we serve. The program is designed to assist parents and their children in understanding the dangers of playing with fire, how to prevent repeat incidents and other consequences of firesetting behavior.

Fairs and Public Events

Fairs continue to be the best way to convey fire prevention messages to the public. NEU personnel participate in the Nevada County Fair in Grass Valley and the Gold Country Fair in Auburn. We choose one fire prevention message to highlight each year (2010: responsible equipment use). We also encourage local agencies to participate in our booths in order to provide a broader means to promote fire safety.

Fire Information Center

The NEU Fire Information Center is activated for incidents that generate public interest. Volunteers in Prevention staff the phones and give incident information to local residents and the media. The volunteers are trained to provide safety messages and education when appropriate.

Media Outreach

NEU distributes many news releases and informational messages through the media each year. These messages range from responsible equipment use to holiday safety.

Printed Materials

Printed educational materials are available to the public in every facility. Defensible Space Inspectors distribute these materials and emphasize their importance. We encourage staff to hand out pertinent materials when writing burn permits or simply answering questions.

B. Nevada-Yuba-Placer Unit Vegetation Management Program

Fuel Management

Vegetation Management Program

NEU's vegetation management program (VMP) and California Forestry Improvement Program / Proposition 40 (CFIP) program assist private landowners and non-federal agencies in addressing the common problems associated with hazardous flammable vegetation. The VMP goal is to reduce the chance of large, damaging wildfires by reducing fire hazards on wildlands in California. The intent is to encouraging a range of natural resource benefits consistent with environmental protection requirements and landowner objectives. The three broad purposes of the VMP program include:

- Reduction of conflagration fires
- Optimization of soil and water productivity
- Protection and improvement of resource / ecosystem values.

Cal Fire's prescribed burns under the VMP are conducted for many reasons. Most burns have hazard-reduction as a major objective coordinated under the Unit Fire Plan. However, many burns have important secondary objectives that could include:

- Fuel Reduction
- Community Defensible Space
- Range Improvement
- Weed Management
- Wildlife Habitat Enhancement

VMP projects use various techniques to accomplish program goals:

- Broadcast Burning
- Mosaic Burning in Chaparral
- Pile & Burn using Hand Crews
- Chipping and Commercial Biomass

NEU VMP Projects

Richards Ranch II VMP (Yuba County)

Location: Approximately one mile south of the town of Oregon House and ½ mile north of Englebright Lake and the Yuba River.

Purpose: The project area encompasses the cooperators' total land ownership (6,045 acres), of which 3,375 acres are included in the burn units. The project objective is to reduce the potential of a costly and damaging fire within the treated and surrounding area. The location of the proposed burn is within a high priority target area for prefire projects as identified in the Nevada-Yuba-Placer Unit's pre-fire management plan.

A series of future VMP prescribed burn projects adjacent to this area, from the Yuba River on the south side to the Dobbins and Oregon House communities to the north, are being planned.

Together, these projects will create a strategic location where fuels have been modified to effectively create a fuel break. This will provide a tactical position to attempt to stop large fires, such as the Williams fire which burned through the Dobbins/ Oregon House community in 1997.

The project area has been treated by the landowner over the last few years. The land owner has constructed control lines over that same period of time.

The overall objective is to remove the standing manzanita and live oak stands which have taken over the project area, reduced the grazing capabilities of the land, and created a heavy fuel load for firefighting efforts. Reducing the fuel load will improve wildlife habitat, improve grazing use and allow for better fire protection to the communities of Oregon House and Dobbins from wildfires that may originate in the Englebright recreation area. Prescribed fire will be the treatment method for the entire project.

CEQA: PEIR

Reader Ranch 08 (Nevada County)

Location: 5 miles North West of the town of Nevada City.

Purpose: This project extends the portion of VMP projects Reader Ranch Rx2-029-NEU and Reader Ranch II Rx2-037-NEU-01. Approximately 400 acres of this project have been treated over the past twenty-five years. The other 378 acres have not been treated previously; however, in 1988 the 49'er fire burned much of this area in the first few hours.

This project is within the South Yuba River Watershed. Shady Creek splits the project diagonally from the north-eastern most corner. Little Shady Creek passes through the northern end near Birchville Rd.

The project objective is to reduce the potential of a costly and damaging fire within the treated and surrounding area. The location of the proposed burn is within a high priority target area for prefire projects as identified in the Nevada-Yuba-Placer Unit's Prefire Management Plan. CDF's Fire Plan process was utilized to identify these locations that have high fire hazards and numerous assets that are most at risk to costly and damaging fires.

A series of prefire projects have been planned to create a contiguous area of hazardous fuel reduction to effectively create a shaded fuel break from Bridgeport extending east up the San Juan Ridge to North Bloomfield. These projects include the completed Bridgeport State Park prescribed VMP burns, the completed VMP prescribed burn at French Corral, Browning property, the completed and proposed Reader Ranch VMP projects, this proposed project, the proposed Bunker Hill VMP project east of this project, the completed Malakoff Diggins VMP, and the completed Montezuma fuel break. These projects have been developed to create a strategic location where fire fighting resources may more effectively attempt fire suppression activities to stop a costly and damaging fire such as the 49'er fire of 1988.

This proposed project will entail the pre-treatment of the brush fuel by creating hand piles with crews and/or piling and crushing with a track type dozer. Control lines will also be established by dozers and/or hand crews. Burn piles are to be treated in spring and early fall, however, other conditions may occur that will allow burn treatment at another time of the year. Some areas may be broadcast burned.

CEQA: PEIR

Bunker Hill (Nevada County)

Location: Approximately 5 miles northwest of the town of Nevada City. The proposed project consists of approximately 1,000 acres of mixed brush, primarily on west, north and east facing slopes.

Purpose: This project is within the South Yuba River Watershed. Shady Creek runs through the north end of the project and discharges into the South Fork of the Yuba River.

The project objective is to reduce the potential of a costly and damaging fire within the treated and surrounding area. The location of the proposed burn is within a high priority target area for prefire projects as identified in the Nevada-Yuba-Placer Unit's Prefire Management Plan. CDF's Fire Plan process was utilized to identify these locations that have high fire hazards and numerous assets that are most at risk to costly and damaging fires.

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This proposed project will entail the pre-treatment of the brush fuel by creating hand piles with crews and/or piling and crushing with a track type dozer. Control lines will also be re-established by dozers and/or hand crews. Burn piles are to be treated in spring and early fall, however, other conditions may occur that will allow burn treatment at another time of the year. Some areas may be broadcast burned.

CEQA: PEIR

UC Research Station (Yuba County)

Location: The VMP area encompasses treating approximately 1,040 acres in 7 units of the UC field station, approximately 12 miles west of Grass Valley, 7 miles southeast of Loma Rica, and 9 miles southwest of Dobbins.

The UC Research Station VMP is an ongoing project to help manage and study means of managing and controlling noxious weeds and fire impacts on water quality. The weeds that are attempting to be controlled are yellow starthistle, barbed goatgrass, and medusahead. These burns allow the field station to scientifically evaluate the effectiveness of burning in a control program. The affect of a controlled, cool to moderate temperature burn on blue oaks will also be studied.

CEQA: PEIR

Chinquapin-North Tahoe Fire VMP (Placer County)

Location: Approximately 20 acres between the Dollar Point subdivision and the Chinquapin Condominiums within the North Tahoe Fire Protection District near Tahoe City and Kings Beach. An additional 50 acres will be treated south of the Kingswood West subdivision. The

burn will be conducted by CALFIRE, North Tahoe Fire Protection District and other local fire agencies.

Purpose: The primary objectives of the project are for fuel hazard reduction, fuel modification and wildlife habitat improvement. The project area consists of Sierra mixed-conifer timber type.

CEQA: Cal Fire Mitigated Negative Declaration

Donner State Park VMP(Placer County)

Location: Approximately 23 acres within the Donner State Park boundary. The project area is located south and west of the town of Truckee. Donner Lake is north of the project area.

Purpose: The primary objectives of the projects are fuel hazard reduction and wildlife habitat improvement. The project area is strategically located to protect State Park facilities and the Town of Truckee, CA from a summer wildfire burning in Coldstream Valley or on Schallenberger Ridge. The project shall reduce the threat of catastrophic wildfire and improve native forest composition and structure.

CEQA: PEIR

Waddle Ranch VMP (Placer County)

Location: Approximately 60 acres within the Truckee Tahoe Airport District Property in the Martis Valley. The project area is located east of the town of Truckee. Martis Lake is adjacent to the project area.

Purpose: The primary objectives of the projects are fuel hazard reduction. The project shall reduce the threat of catastrophic wildfire and improve native forest composition and structure.

CEQA: PEIR

Foresthill Bridge VMP (Placer County)

Location: Approximately 16 acres within the Auburn State Recreation Area boundary. The project area is located north and east of the town of Auburn. The Foresthill Bridge runs through the project area.

Purpose: The primary objectives of the projects are fuel hazard reduction in preparation for a bridge retrofit project involving grinding and welding. The project shall reduce the threat of catastrophic wildfire and improve native vegetation composition and structure.

CEQA: PEIR

NEU Forest Practice

The primary role of the Forest Practice Program is to enforce California's Forestry and Fire Laws on privately-owned lands in California. These laws are found in the Public Resource Code

and the California Forest Practice Rules. Additional rules enacted by the State Board of Forestry and Fire Protection are also enforced to protect these resources.

NEU Forest Practice Inspectors ensure that private landowners abide by these laws when harvesting trees. Although there are specific exemptions in some cases, compliance with the Forest Practice Act and Board rules apply to all commercial harvesting operations for landowners of small parcels, to ranchers owning hundreds of acres, and large timber companies with thousands of acres.

The Timber Harvesting Plan (THP) is the environmental review documents submitted by landowners to CAL FIRE outlining what timber he or she wants to harvest, how it will be harvested, and the steps that will be taken to prevent damage to the environment. THPs are prepared by Registered Professional Foresters (RPFs) who are licensed to prepare these comprehensive, detailed plans. THPs can range from about 100 pages to more than 500 pages.

NEU Forest Practice Inspectors follow-up on approved THPs with site inspections and can shutdown operations, cite or fine Registered Professional Foresters, Licensed Timber Operators (LTOs), and landowners if illegal operations are found. Under this program, law enforcement and prevention work together to ensure environmental compliance.

Forestry and Landowner Assistance

NEU Foresters administer several state and federal forestry assistance programs with the goal of reducing wildland fuel loads and improving the health and productivity of private forest lands. California's Forest Improvement Program (CFIP) and other state and federal programs that NEU Foresters administer, offer cost-share opportunities to assist individual landowners with land management planning, conservation practices to enhance wildlife habitat, and practices to enhance the productivity of the land.

The NEU CFIP program directs grant funds to prioritized fuel treatments and forestry improvement projects on the ground. The aim is to improve the economic and environmental value and watershed quality of private forestlands. The cost share program encourages landowner participation and requires land uses to remain consistent with the goals of the program following implementation.

2006 CFIP COST-SHARE CAP RATES

PRACTICE	CFIP CAP RATE	90% COST-SHARE ¹	75% COST SHARE
Management Plan High (New)	\$3500 + \$3.00/acre 1 st 160 acres \$2.50/acre each additional acre to 1000	\$3150 + \$2.70/acre 1 st 160 acres \$2.25/acre each additional acre to 1000	\$2625+ \$2.25/acre 1 st 160 acres \$1.88/acre each additional acre to 1000
<i>Rates for plans larger than 1000 acres are negotiated w/CDF forester</i>			
Management Plan Revised/Low (Mini)	\$1750 + \$1.40/acre	\$1575 + \$1.26/acre	\$1313 + \$1.05/acre
RPF Supervision	\$75/acre 1 st 5 acres \$40/acre each additional acre	\$68/acre 1 st 5 acres \$36/acre each additional acre	\$56/acre 1 st 5 acres \$30/acre each additional acre
Site Prep			
Light	\$220/acre	\$198/acre	\$165/acre
Moderate	\$300/acre	\$270/acre	\$225/acre
Heavy	\$400/acre	\$360/acre	\$300/acre
Trees & Planting			
Average	\$160/acre	\$144/acre	\$120/acre
Moderate	\$200/acre	\$180/acre	\$150/acre
Difficult	\$240/acre	\$216/acre	\$180/acre
Tree Shelters	\$260/acre	\$234/acre	\$195/acre
Pre-commercial Thinning²			
Light	\$200/acre	\$180/acre	\$150/acre
Moderate	\$300/acre	\$270/acre	\$225/acre
Heavy	\$400/acre	\$360/acre	\$300/acre
Pruning²	\$125 for 50 trees/acre \$200 for 100 trees/acre \$275 for 150 trees/acre	\$112.50 for 50 trees/acre \$180 for 100 trees/acre \$247.50 for 150 trees/acre	\$93.75 for 50 trees/acre \$150 for 100 trees/acre \$206.25 for 150 trees/acre
Release²			
Light	\$200/acre	\$180/acre	\$150/acre
Moderate	\$300/acre	\$270/acre	\$225/acre
Heavy	\$400/acre	\$360/acre	\$300/acre
Follow-up/Slash Disposal			
Light	\$200/acre	\$180/acre	\$150/acre
Moderate	\$350/acre	\$315/acre	\$262.50/acre
Heavy	\$600/acre	\$540/acre	\$450/acre
Land Conservation /Wildlife/Fisheries Projects ³	Cost based on problem. Use SIP or EQIP rates as a guide		

¹ The 90% rate will cover all projects on substantially damaged timberland by wildfire, insects, diseases, wind, floods, landslides or earthquakes.

² Disposal of slash must meet minimum Fire Hazard Reduction Standards per Forest Practices Act.

³ Maximum allowable costs do not appear for land conservation or habitat improvement. In these categories activity is variable and will depend on site condition, acreage, and/or type of project. However, costs will be evaluated based on rates used for SIP or EQIP.

Other Forestry Duties and Unit Projects

NEU Foresters continue to provide Unit support on various levels including Fire Prevention, Pre-Fire Planning, GIS support, state facility maintenance and construction, hired equipment coordination, environmental regulation and County project review and California Environmental Quality Act compliance.

NEU Pre-Fire Fuels Reduction Projects

Placer County

Northstar Forest Enhancement Project

The project area is heavily used for recreation, wildlife viewing and outdoor education. The goal of the project is to reduce hazardous fuels and restore the forestland as best as possible to pre-western migration conditions. The dense brush fields and white fir stands are outcompeting the historical pine overstory and riparian vegetation. The area is a high priority for treatment due its proximity to residential and commercial areas. Completing this project will meet the objectives already outlined in the Northstar Community Wildfire Protection Plan and will help reduce the potential for catastrophic wildfires such as the Martis Fire in 2001 and the Angora Fire of 2007. Additional funds will expand these treatments to other areas within the Northstar ownership to achieve similar objectives. Cal Fire Conservation Crews and private Licensed Timber Operators have been selected to perform this work.

CEQA: Cal Fire CEQA-NOE to be completed

North Tahoe Shaded Fuel Break

The cooperative project included private, state and federal lands within and adjacent to the community of North Tahoe. Shaded Fuels breaks will be designed and constructed through a cooperative effort with local and state fire personnel. The target areas will enhance fire suppression efforts and provide community wildfire protection.

CEQA: Cal Fire will complete NEO in cooperation with local fire districts.

Auburn Shaded Fuel Break

The Auburn Shaded Fuel Break is located along the American River Canyon in Auburn, CA. This 300 foot wide shaded fuel break encompasses both public and private lands. Between three previously awarded grants, the Auburn Shaded Fuel Break has been effectively completed providing protection for approximately 100 homes with either initial treatment or maintenance. Additional funds will be used to maintain and enhance the project area on private lands, specifically targeting larger parcels within the fuel break conducive to using Cal Fire hand crews. All work on the private lands will be performed using the prescription specified in the Auburn City Fire Department's "American River Canyon Shaded Fuel Break Project Implementation Program June 2002". The fuel break is a component of the "2002 Greater Auburn Area Fire Safe Council Community Fire Safe Plan," which was developed using a 2001 CWPP Grant to the GAAFSC (administered by Sierra Economic Development District (SEDD)). Future efforts will expand the fuel break north along the ridge toward Colfax.

CEQA: Future expansion outside the City of Auburn will require CEQA compliance. A NOE will be filled for additional private lands through Cal Fire.

Colfax Shaded Fuel Break

This cooperative project combines community pre-fire planning and fuels reduction to benefit the communities of Colfax, Weimar, Iowa Hill and Meadow Vista. The project included a series of fuels reduction efforts of private lands involving mastication and hand crews. Treated areas

will be target that enhance fire suppression efforts, improve and provide for safe evacuation routes and promote land stewardship.

CEQA: Cal Fire in cooperation with local fire districts will complete a NOE for project treatment areas.

Ralston Ridge Shaded Fuel Break

This cooperative shaded fuel break involves both private and federal lands. Located in an area know for historical costly and damaging fire, the Ralston Ridge Shaded Fuel Break is designed to support and enhance fire suppression efforts and provide community wildfire protection. A combination of masticators and hand crews will be used to treat vegetation. The project will focus on promoting healthy productive forests and land steward through fuel reduction.

CEQA: Cal Fire Forest Practice, Federal NEPA

Nevada County

Columbia Hill Shaded Fuel Break Maintenance and Expansion

The Fire Safe Council of Nevada County (FSCNC) has identified additional parcels for inclusion into the Columbia Hill Fuel Break as well as current parcels in need of maintenance. The project will further extend the Columbia Hill Fuel Break along Columbia Hill Road providing protection for the Community of North San Juan. Fuels will be treated on either side of Columbia Hill Road to a distance of 200 feet. CDCR crews will be used to complete the work as necessary, existing contracts (A-19s) allow for the crew use.

CEQA: Cal Fire CEQA-NOE

Alder Hill Community Fuel Break

This project would encompass the creation of two community fuel breaks near Alder Hill in the Truckee area of Nevada County. One fuel break is adjacent to the Tahoe Donner and Alder Hill Estates subdivisions while the second is adjacent to the Pine Forest subdivision. Both sections of the shaded fuel break would be approximately one mile in length and 300 feet wide in strategically placed areas around the communities. Total acres 75. Additionally, the project involves development and construction of community shaded fuel breaks throughout the Truckee area through cooperation with local and state fire personnel.

CEQA: Cal Fire CEQA-NOE

The Land Stewardship Assistance Program (LSAP)

The Land Stewardship Assistance Program (LSAP) (administered by the FSCNC) will provide an effective service with a cost-share by the landowner for hazardous fire fuels reductions on properties larger than two acres who do not otherwise qualify for existing cost-share programs such as the federal Environmental Quality Incentives Program (EQIP). LSAP is designed to provide a contracted service for mastication of hazardous fire fuels to qualified landowners who desire landscape fuels reduction. LSAP will provide a mastication contractor at a reduced contracted rate to private landowners working to reduce the fire hazard on their property. LSAP will fill a need for those who do not have land suitable for timber production, but have a need to reduce vegetation to mitigate the risk of wildfire with a land stewardship and watershed protection objective, but cannot fund the entire cost of the work. No work would be conducted within the defensible space surrounding structures as required by law under Public Resources Code 4291. The objective of this program is to provide assistance to landowners to undertake land stewardship measures on their property, but cost is the obstacle to implement. LSAP will treat acres throughout Nevada County where private landowners are willing to cost share their project for a cost effective treatment of approximately \$850 per acre.

CEQA: Cal Fire CEQA-NOE may need to be completed

Nevada County Defensible Space Community Drop Offs Program

The Defensible Space Community Drop Offs is a cooperative effort between the Fire Safe Council of Nevada County (FSCNC) and residents and homeowner's associations throughout the County. FSCNC staff and volunteers will notify residents in the vicinity of the drop off locations through advertising and community outreach. Residents will then cut and transport vegetative material to the centrally located drop off location where it will be piled and processed by a horizontal grinder or self-loading transport unit. Grindings will be trucked off-site to regional co-generation facilities for utilization. FSCNC staff and volunteers will facilitate program coordination, advertisement, community outreach, staffing and monitoring the drop off locations. Project will treat an estimated 1,400 acres, throughout Nevada County

CEQA: Cal Fire CEQA-NOE

Yuba County

Pendola Road Fuel Reduction Project

Administered by the High Sierra Resource Conservation and Development Area, this is one of a series of coordinated fuel break projects in Yuba County with private timber landowners and the Tahoe National Forest. It is designed to provide protection for the community of Comptonville from a north wind driven fire. A 300' shaded fuel break will be constructed encompassing both sides of Pendola Road along the dominate ridge just north of Comptonville. The project proposes to treat a total of 58 acres thru mastication but the use of CDCR crews and the VMP program may also be an option. The property is entirely with the ownership of Sierra Pacific Industries and will provide connectivity to the existing USFS fuel break.

CEQA: Will need NOE via Cal Fire and SPI

Oregon Ridge Fuel Reduction Project

Administered by the High Sierra Resource Conservation and Development Area, this project would maintain and extend the Oregon Ridge Fuel Break. Maintenance will be conducted as necessary on the current project with the intent to complete future expansion south toward Marysville Road and north through private, state and federal lands. The project will treat and maintain acres through mastication and hand crews.

CEQA: Will need NOE via Cal Fire, RPF for arch. provided by landowners

Fuel Reduction on County Roads

In accordance with the Yuba County Roadway Fuel Reduction Plan the county proposes to treat along county roadside easements creating a shaded fuel break for evacuation and community protection.

CEQA: Yuba County will complete CEQA-NOE

SECTION V: PRE FIRE MANAGEMENT TACTICS

A: DIVISION / BATTALION / PROGRAM PLANS

**NEVADA-YUBA-PLACER UNIT (NEU)
2010 IGNITION MANAGEMENT PLAN**

*Battalion Chief Bill Mendonca
Fire Captain Specialist Bill McKenzie
Fire Captain Specialist Mike Gallagher
Fire Prevention Specialist 2 Chelsea Fox*

FIRE PREVENTION

NEU’s fire prevention program accomplishes Unit fire management goals through implementation of four primary components. These fire prevention components are information/education, engineering, law enforcement, and volunteerism. Information and education occurs through direct contact with the public, partnerships with local boards and councils, communication with professional organizations and employee involvement in the local community. Engineering occurs through local building department functions where Cal Fire personnel are assigned to assist in developing fire safe projects and planning. Law enforcement includes enforcement of California’s Forestry and Fire Laws in the industrial forestry arena to reduce fuel loading and prevent fires as well as the fire investigative arena once structure or wildland fires have occurred and the cause determination is necessary. Volunteerism occurs through support of the Volunteers in Prevention (VIP) program, which uses local volunteers to appear at public events, meet with residents, and correspond with the public with Cal Fire goals in mind. The balance of each of these components allows the prevention program to address statewide, regional and local fire issues.

NEU has found that the most effective method of spreading fire prevention information to educate the public is to make personal “one-on one” contact with the public. It is the Unit’s view that the single most effective method to protect personal and real property from wildland fires is for each individual landowner or resident to meet the mandates of Public Resources Code 4291 (defensible space standards). NEU encourages the public to extend hazardous fuel reduction beyond the PRC 4291 mandated defensible zone into the adjacent “Defensible Landscape” zone (area beyond the required 100’). This is the area where landowners can apply stewardship ethic, improve forest health and add to the protection of the property.

2010 Fire Season Ignition Statistics

<u>DPA</u>	<u>Number</u>	<u>Percent of Total</u>
LRA fires	144	(30%)
SRA fires	288	(61%)
Unknown DPA	<u>45</u>	(9%)
Total 2010 NEU fires -	477	

2010 Summary by cause

<u>Cause</u>	<u>Number</u>	<u>Percent of Total</u>
Undetermined	92	(20%)
Equipment	93	(20%)
Vehicle	71	(15%)
Debris	74	(15%)
Arson	67	(14%)
Powerline*	<u>27</u>	(5%)
Total-	477	

* Bird on powerline caused fires are increasing in number.

Largest 5 Fires in NEU 2010

Bullard - CANEU 00001579 (August 2010)

Cause: Arson

Acres: 1,307

Grand - CA NEU 00021786 (October 2010)

Cause: Unknown

Acres: 493

Baseline

Cause: Unknown

Acres: 441

Morrison - CANEU 00021791

Cause: Vehicle

Acres: 82

Twin Bridges – CANEU 00013161

Cause: Arson

Acres: 68

2010 Leading 5 Fire Causes

<u>Rank</u>	<u>Cause</u>	<u>Number</u>	<u>Percent</u>
1	Equipment *	48	20%
2	Vehicle	44	15%
3	Debris	27	15%
4	Arson	23	14%
5	Powerline	<u>23</u>	<u>6%</u>
Total-		165	70%

* Equipment caused fires increased over the 3 year average by 5%.

Ignition management

In order to better address ignition management for the Unit, a more detailed analysis of the fires in each major cause classification was conducted.

1) Control Burning (debris burning) - The number one cause of escaped control burns was lack of clearance followed by wind, and old control burns re-igniting (coming back to life). Unattended control burns also contributed to the totals.

2) Vehicles - This category has been one of the leading causes of fires in the Unit for the past several years. The majority of these fires occurred along the major traffic corridors of Interstate 80, hwy 49 and hwy 20. Brake fires, catalytic converter failure and other maintenance issues remains to be the leading cause of fires caused by vehicles. With the current economic conditions there appears to be less maintenance done on vehicles.

3) Electrical power - Most electrical fires resulted from trees, branches or birds into the power lines. Bird Causes are on the increase.

4) Equipment - Historically, this classification has been one of the top causes of wildfire starts in the Unit. Through continuing displays and education programs (handouts and the 4291 Program), we hope to continue a downward trend. The main cause of equipment fires continues to be mower fires. These fires were due to mower blades striking rocks and friction belts igniting chaff collected around the belt. Ironically, most of the mower caused fires occurred as a result of residents trying to clear their property for fire safety but they were clearing during the hottest part of the day, usually between the hours of 10:00 AM and 6:00 PM.

5) Miscellaneous causes - This classification includes causes such as spontaneous combustion, fireplace ashes deposited in the wildland, barbequing, cooking fires, and fireworks.

6) Playing with Fire - Several juveniles were caught and went through either a Juvenile Fire Setter Class and others were sent to the Juvenile Justice System and sentenced to probation.

7) Undetermined - Continued hard work and dedication of the Unit's Fire Prevention Staff and the company officers who conduct thorough origin and cause investigations aid in the declining number in this cause class. Thorough origin and cause investigations also assist in determining fire patterns which may be reduced by public education and or enforcement.

8) Arson - The continued working relationships between all fire and law enforcement agencies is high priority for the Unit.

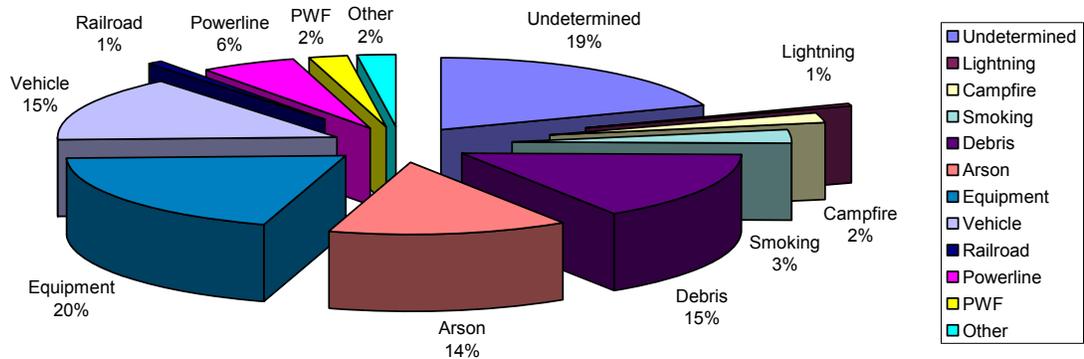
9) Lightning - Not much can be done to prevent or alter this category.

10) Smoking - The majority of these fires were carelessly discarded cigarettes along our roadways. However, several bark and planter box fires were directly attributed to smoking.

11) Illegal campfires and campfire escapes - Public education and campfire permit requirements help to keep the number of fires from the category low.

12) Railroad - The Unit has a major east/west rail line operated by Union Pacific railroad, yearly fire prevention meeting's along with work site inspection, work to reduce the fires started by the railroad.

2010 Unit Fire Causes



Ignition Management Plan

Battalion 10

SECTION V: PRE FIRE MANAGEMENT TACTICS

Battalion Description

The Dry Creek Battalion serves a 41 square mile area with a population of approximately 7000 residents. The Battalion is located almost entirely in the LRA but has significant wildland fire potential. Fuel types range from grassland typical of an oak savannah with denser drainages to a dense live oak component containing brush. The land is primarily flat with some rolling hills. The area is populated with rural residential properties varying in size from 5-100 acres with some larger ownerships remaining. Located amongst these rural residential parcels are pockets of densely populated subdivisions where parcel size and spacing between homes is more indicative of rural development. The make up of development and fuel types creates a true WUI problem. The Battalion lies adjacent to multiple cities and population centers. Elements from these populated areas have caused some ignition problems related to burning abandon vehicles, fireworks discharge, and carelessness.

Agency cooperators include South Placer Fire District, Dry Creek Fire Advisory Committee, Placer County Fire Alliance, Western Placer Municipal Advisory Committee, Roseville City Fire, Rocklin Fire, Sac Metro Fire Department, Dry Creek Fire Protection District.

Battalion Fire History and Occurrence

A vast majority (near 90%) of fires in the Battalion occur as roadside starts. These fires are classified as arson, equipment, vehicle, smoking, or are undetermined as to specific ignition source. A majority of these fires are contained at less than 20 acres. Large costly and damaging fires are not a regular occurrence in the Battalion, although structure loss does occur. In order to mitigate the hazard from roadside starts, a fence line disc program is managed by Battalion staff to provide a first line of defense.

Arson fires account for 40% of the fires in the Battalion. These fires are intentionally set fires with a determined cause. These fires are the most difficult to reduce due to their nefarious nature. The Unit's Prevention Bureau and Battalion Chief / LEO is charged with investigation and pursuit of arson as felonious activity. The Unit Prevention Bureau assists Battalion staff with cause determination if a fire problem persists. The result is, over time, a reduction in arson fires due to arrest and conviction. In order to address the arson problem, the Battalion will continue a high profile prevention program.

Fires with an undetermined cause account for 16% of fires in the Battalion. These fires are the most difficult to reduce due to their difficulty in assessing the cause. The Unit Prevention Bureau assists Battalion staff with cause determination if a fire problem persists with no apparent cause. Over time, causes are determined and the appropriate mitigations are applied.

Equipment caused fires account for 14% of fires in the Battalion. Much of the weed abatement occurring in the Battalion, including mowing and disking, involves the use of equipment. Also,

construction and other land management activities often require the use of equipment. This equipment use takes place in the wildland areas where vegetative fuels are available and susceptible to burning.

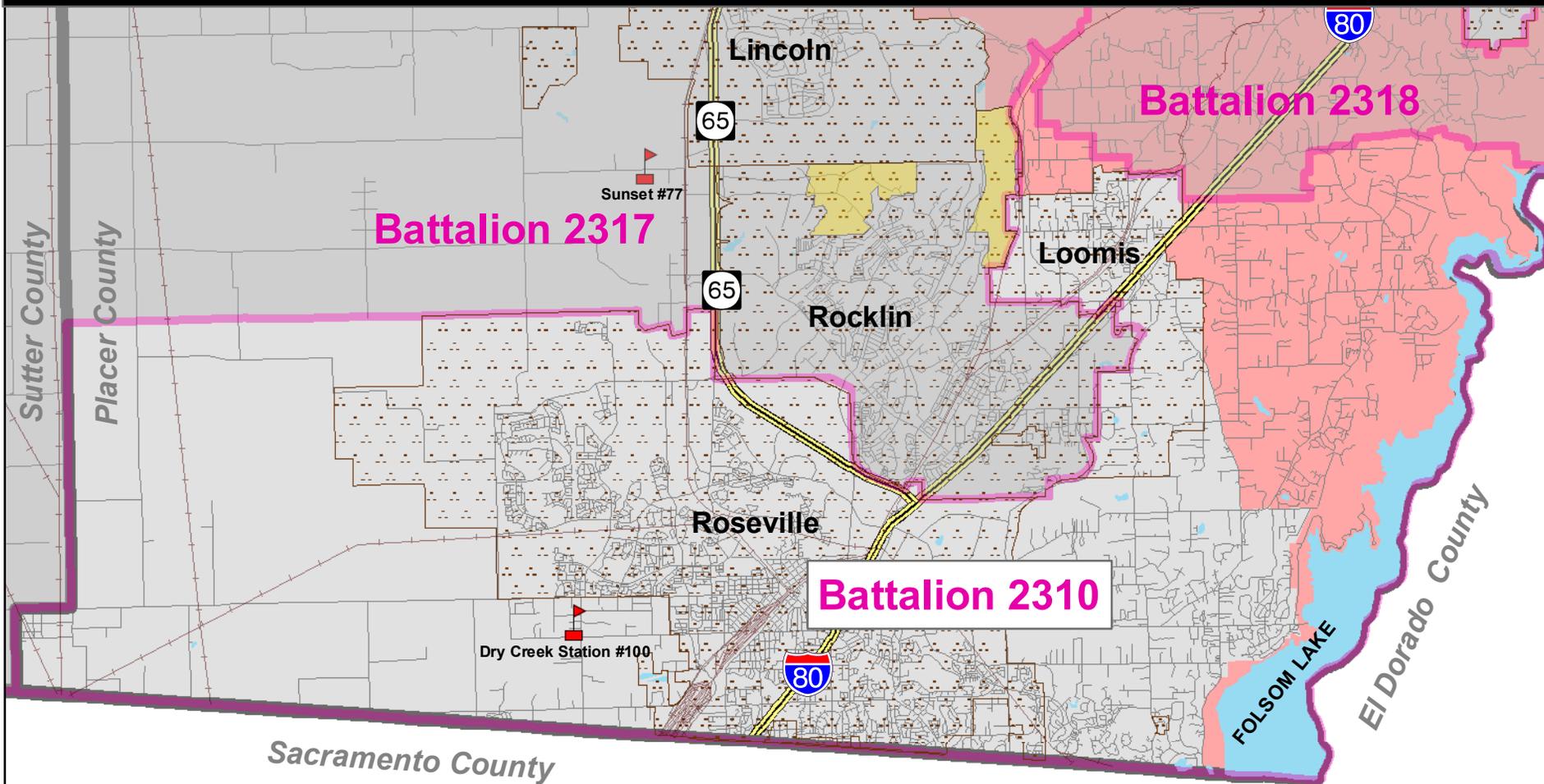
The statistics show that escaped debris burns account for 9% of wildfires in the Battalion. The residents realize that the fuel treatments near their residences must be done and often delay burning until the final weeks prior to burn bans being instituted. The result is a greater number of burn piles being burned later in the season, when control of the fires is more difficult due to weather and fuel conditions. Public education at the time of burn permit issuance is used to reduce the number of escapes.

The balance of the fires is split between various factors which are considered normal accidental fires. Powerline fires account for 5% and Vehicle causes account for 5%. State and Federal law requires the treatment of fuels within certain distances of regulated power distribution infrastructure.



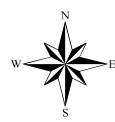
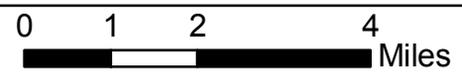
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Battalion 10 - Administrative Boundaries



	Railroad		County	DPA PROVIDER	
	Incorporated Cities		Highways		CAL FIRE
	Battalion		County Roads		Local Wildland Contract
	Fire Station		Rivers		Local Government

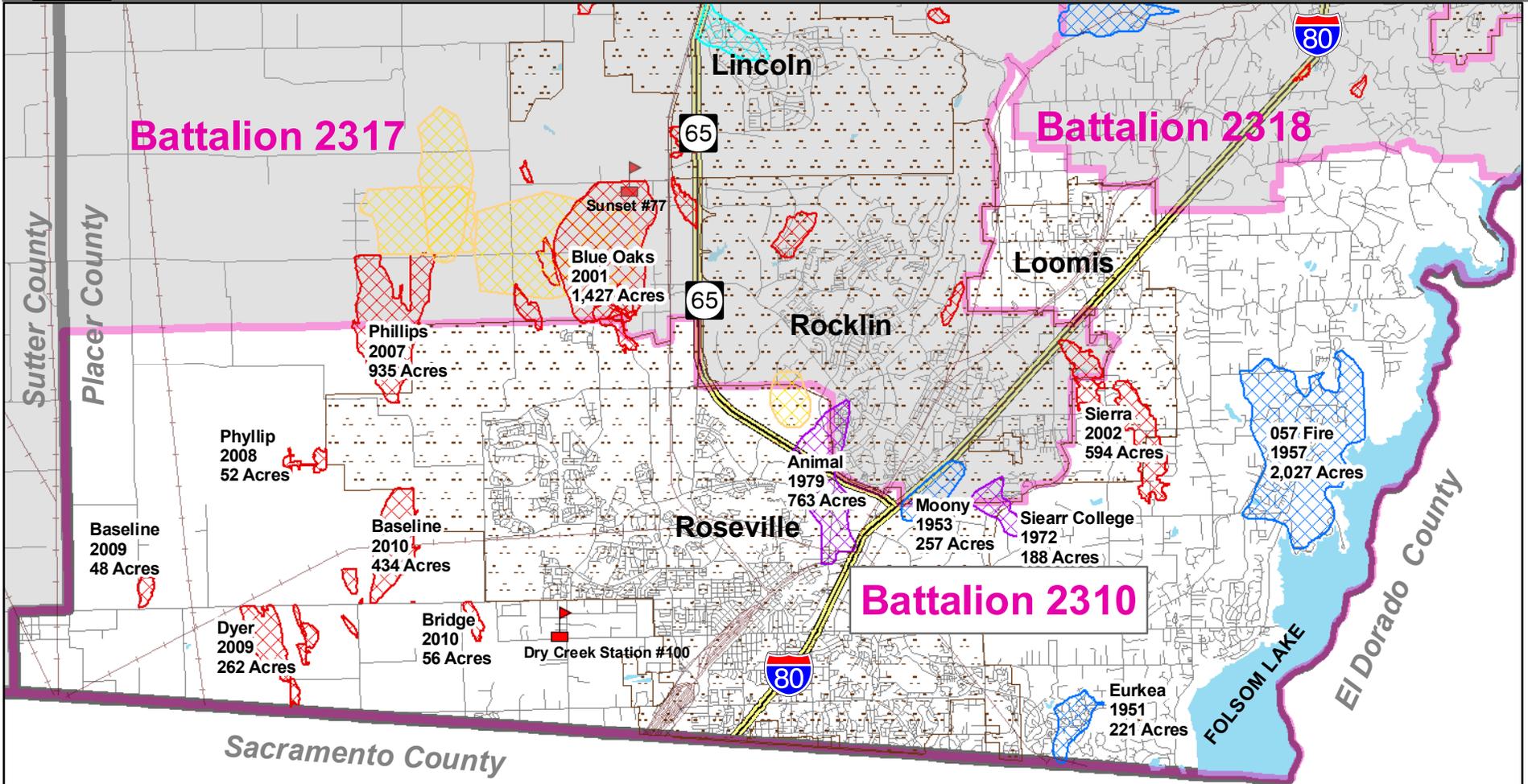
1 in = 2 miles





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Battalion 10 - Fire History



	Railroad		County
	Incorporated Cities		Highways
	Battalion		County Roads
	Fire Station		Rivers

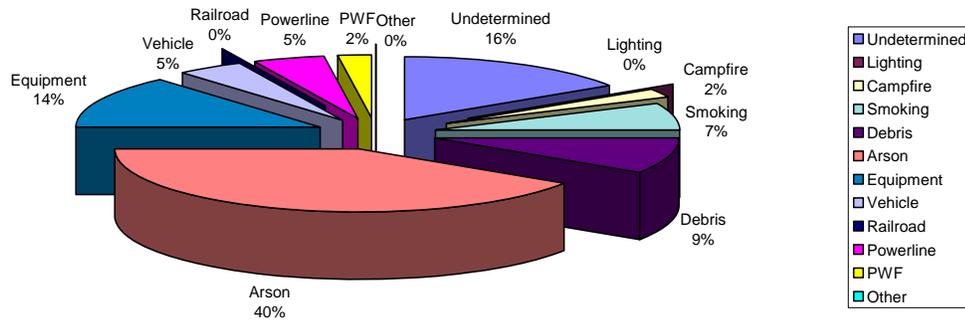
Fire History	
	1950 - 1959
	1960 - 1969
	1970 - 1979
	1980 - 1989
	2000 - 2010

1 in = 2 miles

0 1 2 4 Miles

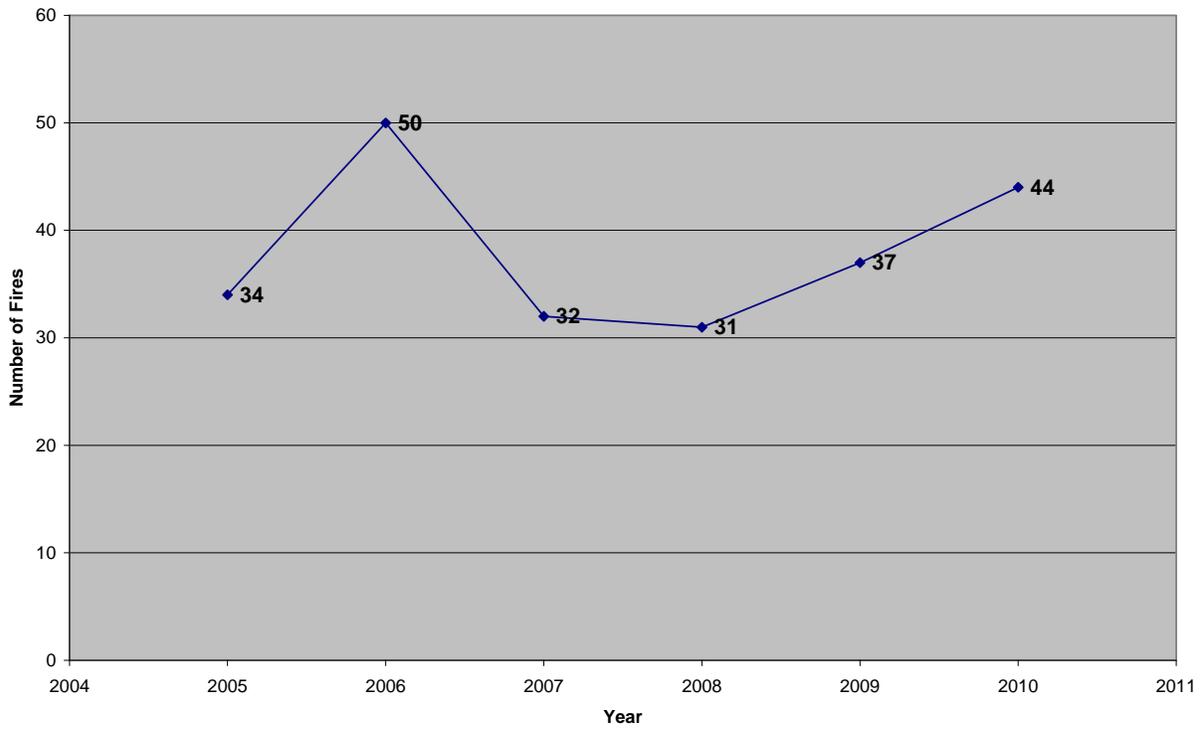
J. Harvey
August, 2011

2010 Battalion 10 Fire Causes



Undet.	Lighting	Campfire	Smoking	Debris	Arson	Equip.	Vehicle	Railroad	Powerline	PWF	Other
7	0	1	3	4	18	6	2	0	2	1	0

Battalion 10 Ignitions (2005-2010)



Mitigation Strategies

1. Public Education:

Public education continues to be a priority within Battalion 10 to reduce the number of fire starts. The action plan for public contact and education is as follows:

A. Burn Permit Administration

Approximately 9% of the total fire incidents in the battalion are identified as escape debris burns. This indicates there is a need to educate the public on proper debris burning techniques. One effect may be that residents are new to the community and are unaware of the proper methods and timing for debris burning.

LE-62s (Residential Burn Permit – Burn Pile) will be issued at CAL FIRE /Placer County Fire Station 100. The local pollution control district determines burn hours. Pre-inspections will be provided on a requested or as needed basis. A copy of the permit will be filed at Station 100. With each permit written, a Placer County Air Pollution Control District's Residential Open Burning informational sheet will be included.

LE-5 (California Inter-Agency Burning Permit) and LE-7 (Project Type Burning Permit) are issued on SRA lands after an inspection by an authorized employee of CAL FIRE. These project burn permits are typically used to dispose of larger piles of material and typically require an inspection by CAL FIRE prior to authorization to burn.

B. Public Education Forums

Battalion staff remain involved in numerous public education programs. Many programs are cooperative efforts with other fire agencies. The Nevada County Fair is an example of agency cooperation that provides information and education to the public. This venue provides a receptive and captive audience.

On going events through out the year:

- Business Fire Safety programs / Fire Extinguisher Training
- School Programs
- Fire Prevention Signage
- Station 100 Message Board
- Placer County Fair
- Parades
- Community Barbeque and Pancake Breakfasts

C. Fire Prevention:

News Releases - CAL FIRE will continue to utilize a local radio station, the local news paper, as well as the Lake of the Pines & Alta Sierra monthly publications and the Nevada County Fire Safe Council's newsletter to educate the public on fire safe issues.

Equipment Use Information - In addition CAL FIRE will work with local equipment rental yards and dealers with prevention material and to ensure compliance with spark

arrestor laws. The focus will be trying to mitigate the rising occurrence of equipment caused ignitions.

Fire Safe Programs - The Placer County Fire Planner will continue to provide building plan fire and life safety reviews for PRC 4290 and uniform fire code regulations.

D. PRC 4291 inspection:

PRC 4291 inspections serve a dual purpose. One is as a vegetation management motivator. The other is as a public education tool. The Battalion 10 goal will be to target areas within the Battalion that have a significant wildland fire threat and inspect 100 homes using the PRC 4291 program, although all areas within the Battalion are LRA. Station 100 personnel will concentrate on the Central Ave., Vineyard Rd. PFE Rd. and Walerga Rd. South Brewer Road from West Sunset to Baseline. A five-year cycle through the significant wildland fire threat area will provide education and prevention information to the affected homeowners. Inspection of power lines will occur during the PRC 4291 inspections. Staff will advise the battalion chief of a violation, the battalion chief will coordinate an inspection by the Unit Prevention Bureau.

2. Vegetation Management: The vegetation management programs are directed at reducing the potential of a large fire and reducing the damage from a large fire.

A. Hazard Reduction Programs:

Battalion personnel manage a fence line disc project to provide a first line defense if an ignition occurs and to prevent roadside ignitions. The program is a voluntary effort by residents with their own equipment to assist in protecting their properties. Battalion staff endeavor to educate residents on the value of discing along fence lines and encourage their participation.

High Priority Target Areas

- Areas near Baseline, Dyer, Watt and Palladay.
- Central Ave.
- Vineyard Rd.
- PFE Rd.
- Walerga Rd.
- South Brewer Road from West Sunset to Baseline
- Areas of medium to light density housing where backyards have little clearances

Table. 1 – Battalion 10 Fuel Modification Projects, Community Outreach and Education Programs

Project Name	Status	Estimated Completion Year	Project Type	Net Acres
Battalion Disc Line Project	O	N/A	Fuel reduction, Weed abatement	

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

Success Stories

4th of July flier - 2007 was the busiest year for fireworks violations. In 2008 the area was flooded with 4th of July “no fireworks” fliers. The 4th of July, 2008 resulted in no fireworks calls in the Battalion.

Disc Line program- Given 90% of Battalion 10 ignitions are along the roadside, parcels 5 acres + were sent letters requesting they disc an 8-10 ft band along the road. This program has dramatically decreased the number of ignitions.

2011 Action Plan:

- Continue promoting the disc program with more press releases and public education
- Work with public information to educate beekeepers from Sacramento County on safe practices.
- Continue to focus on prevention surveillance and reduce the number of arson events.
- Investigate discing around towers to reduce the number of bird strike caused fires along power lines.
- Continue to focus on compiling structural / commercial pre-plans
- Work to improve database of historical fire perimeters.

Ignition Management Plan

Battalion 11

SECTION V: PRE FIRE MANAGEMENT TACTICS

Battalion Description

The Foresthill and Auburn Battalion covers an area 354,581 acres in size within Placer County along Foresthill Divide Road and Interstate 80. The area is densely populated and interlaced with an extensive road system. The elevation ranges from 510 feet in the drainage of the American River Canyon to 3,800 feet around Foresthill. The North Fork American River and Middle Fork American River form two distinct drainage systems with steep inner gorges and often dense heavy fuels. The fuels within the Battalion vary as widely as the elevations, spanning an area that contains blue oak woodland where annual grasses and oaks are mixed with brush and landscape plantings to the prime timber bearing soils of the Foresthill Divide which are covered with large pine and fir timber typical of the Sierra Nevada mixed conifer zone. In between these fuel types is a range of chaparral, conifer / oak forest, and grass meadows, all containing light flashy fuels and mixed with residential development.

The population centers are Auburn and Foresthill, surrounded by a densely scattered urban interface where parcels range from a half to 20 acres in size, much of which is developed with commercial, residential, and heavy industrial. This mix creates a true WUI problem where even the smallest fires with the most prompt emergency response can have a catastrophic result and result in burned structures.

Cooperators include Auburn Fire, Bureau of Reclamation, CA State Parks, Placer Hills Fire District, CAL TRANS, Foresthill Fire Department, Placer Fire Alliance, Placer County RCD, Placer County Land Trust, and USFS.

Battalion Fire History and Occurrence

Historically, large fires are known to occur within and adjacent to the Battalion. Notable in terms of size are the Volcano Fire (1960 – 44,386), Roadside #51 (1964 – 3,545 acres), Ralston Fire (2006 – 8,300 acres), and American River Complex (2008 - 19,580 acres). Each of these fires consumed significant SRA acreage within the Federal DPA. Other significant fires include the Auburn Fire (1961 – 672 acres) and Mammoth Fire (2009, 643 acres).

Equipment and vehicle caused fires are combined in this discussion and rank as the highest cause (44%) of wildfire in the Battalion. Much of the fuel work which occurs in the Battalion involves the use of equipment. Construction and land management activities often require the use of equipment. This equipment use takes place in the wildland areas where vegetative fuels are available and susceptible to burning. Portions of Interstate 80 within the Battalion lie in an area where commercial vehicle traffic often encounters problems as a result of the long downhill run off of Donner Summit. During fire season, as temperatures and vehicle traffic increases on Interstate 80, vehicles with overheating brakes can become an ignition source for roadside vegetation. Conversely, overheating and friction can affect vehicles climbing grades within the Battalion causing vehicles to ignite. Exclusive of Interstate 80, many of the roads in the Battalion are rural roads with vegetation growing very close to the road edge, or on the road surface. The exposure of these fuels to hot exhaust, exhaust discharge, or flame impingement from fires originating within the vehicle is a problem typical of the rural community.

Arson and undetermined fires are considered equally and account for 30% of the fires in the Battalion. These fires are intentionally set fire or fires which the ignition could not be determined due to various factors. These fires are the most difficult to reduce due to their nefarious nature and difficulty in assessing. The Unit's prevention program is charged with investigation and pursuit of arson as felonious activity. The Unit prevention also assists Battalion staff with cause determination if a fire problem persists with no apparent cause. The result is, over time, a reduction in arson fires and determination of cause on undetermined fires allowing fire prevention education to address the actual cause.

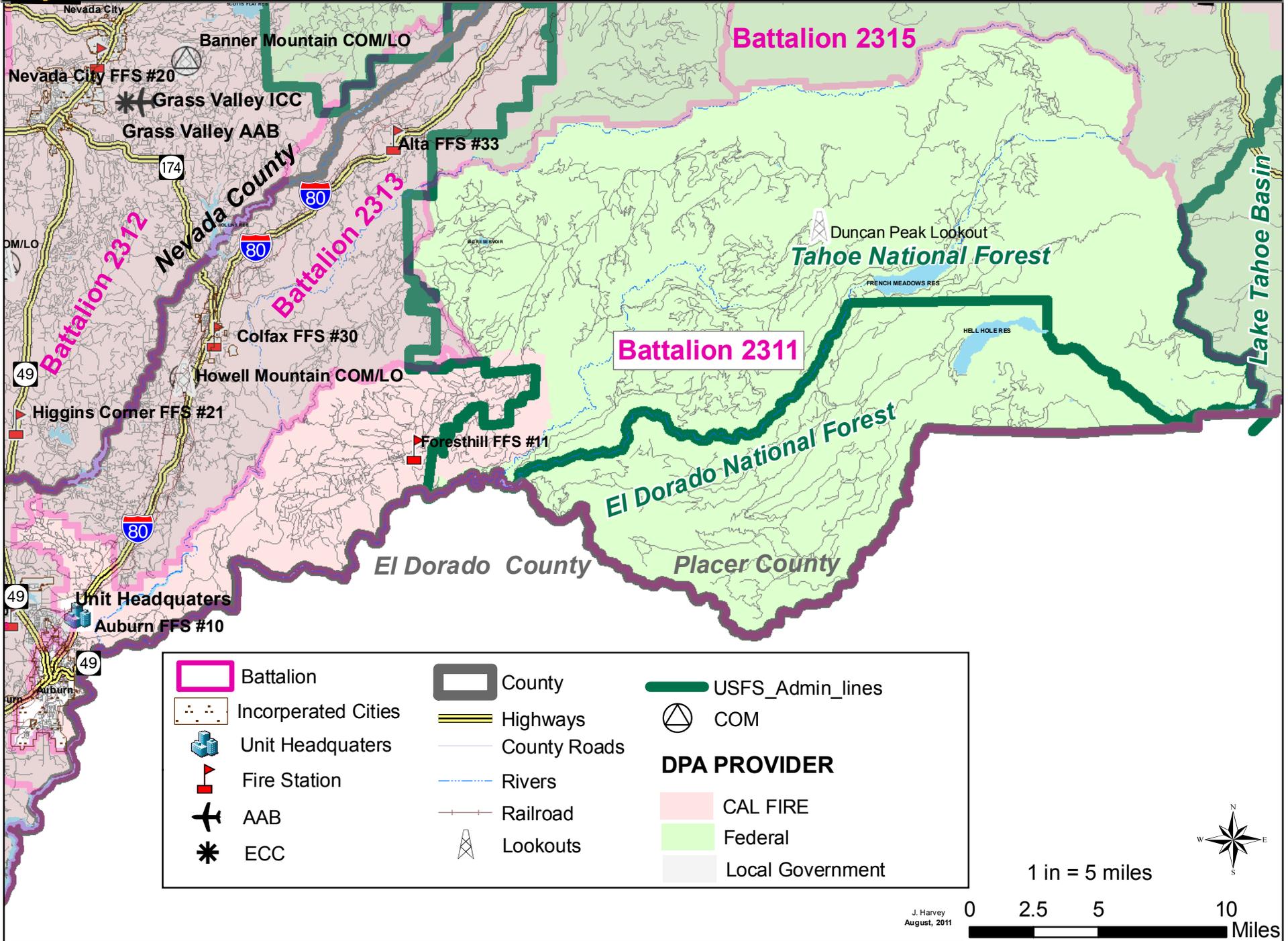
The balance of the fires is split between various causes which are considered normal accidental fires.

Fire occurrences overall in the Unit has dropped from its high of 740 in 2006 to 472 fires in 2010 with a low of 371 during the year 2007. After 2007, the Battalion fire occurrence has followed the Units fire occurrence pattern. Analysis of fire causes from 2005-2010 reveal that the fire occurrence is following normal patterns and that the primary cause has shifted between equipment use, vehicle use and debris burning over that time period. One fact is that prior to 2006, Battalion 11 was reduced in acreage during the creation of Battalion 18 concurrent with the incorporation of Placer County Fire personnel into Cal Fire.



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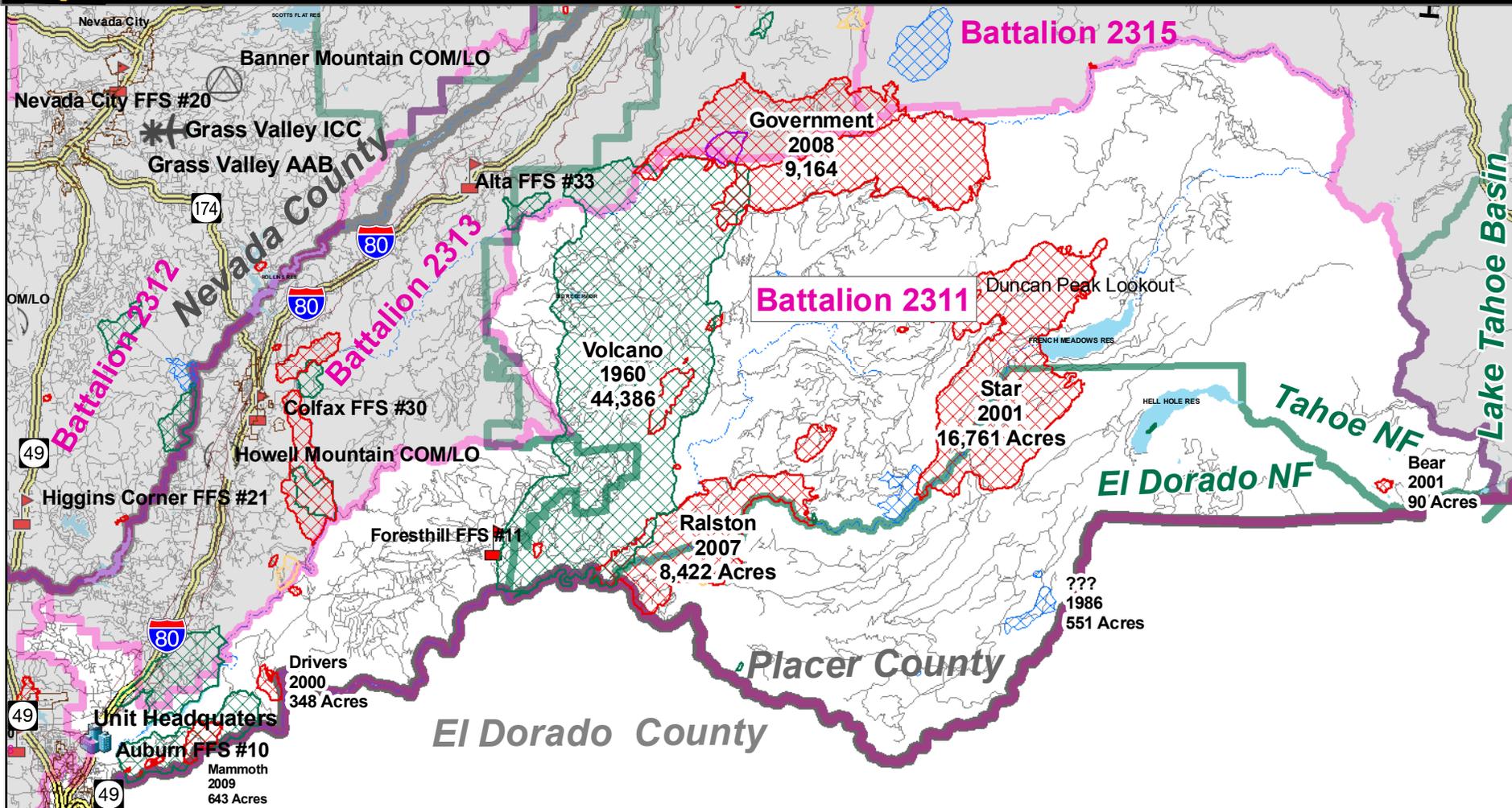
Battalion 11 - Administrative Boundaries





NEVADA - YUBA - PLACER UNIT (NEU)

Battalion 11 - Fire History



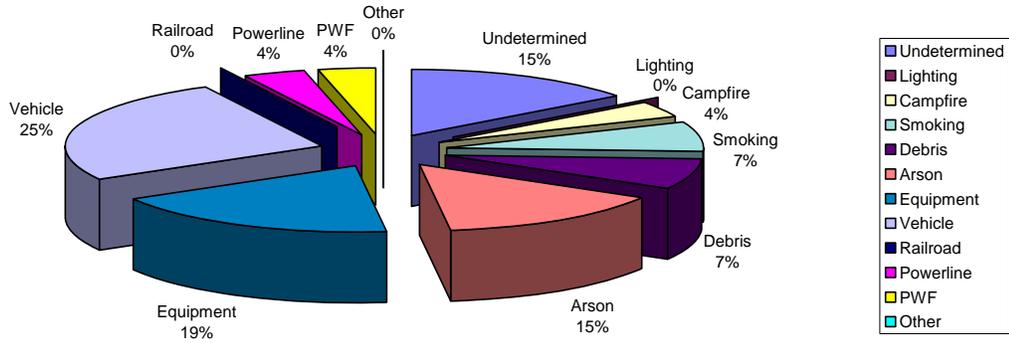
	Battalion		County		COM		1960 - 1969
	Incorporated Cities		Highways		Lookouts		1970-1979
	Unit Headquarters		County Roads		Rivers		1980 - 1989
	Fire Station		Railroad		USFS_Admin_lines		1990 - 1999
	AAB						2000 - 2010
	ECC						

J. Harvey
August, 2011

1 in = 5 miles

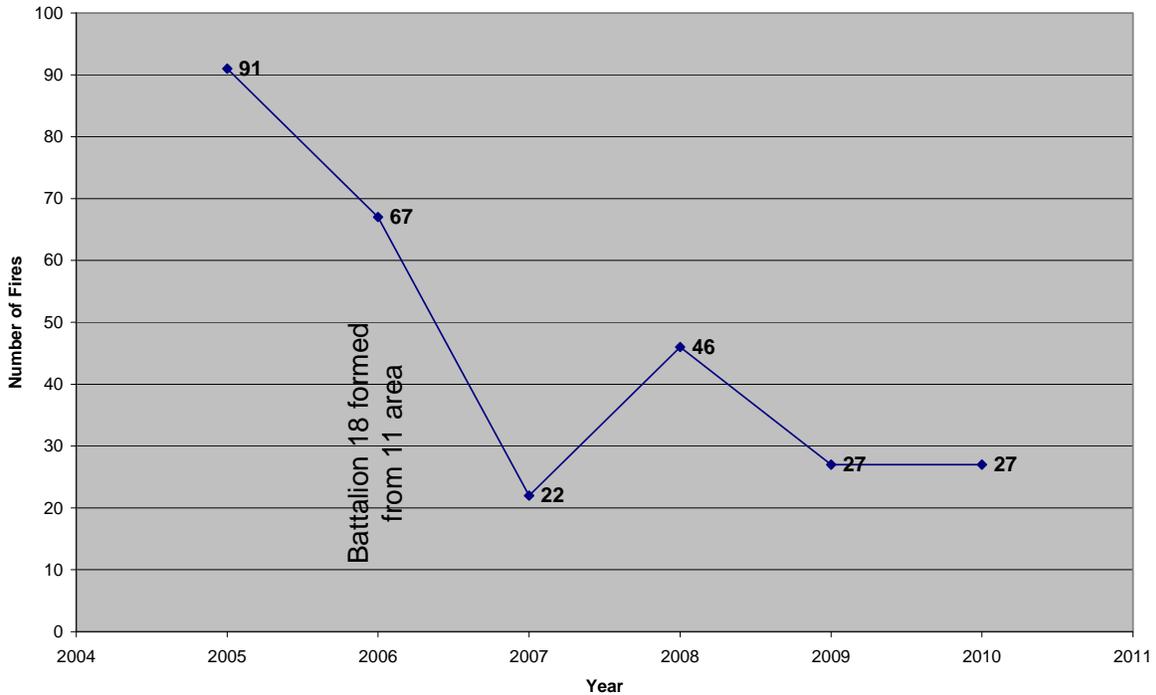
0 2 4 8 Miles

2010 Battalion 11 Fire Causes



Undet.	Lighting	Campfire	Smoking	Debris	Arson	Equipment	Vehicle	Railroad	Powerline	PWF	Other
4	0	1	2	2	4	5	7	0	1	1	0

Battalion 11 Ignitions (2005-2010)



Mitigation Strategies

1. Public Education:

Battalion 11 will work to reduce fire ignitions and reduce damage by fire occurrences by actively participating in public education programs, fuel reduction programs, and homeowner education programs. These efforts will center in the communities of Auburn, Foresthill, Newcastle, and Christian Valley. The components to meet these goals are as follows:

A. Burn Permit Administration

Only 7% of the total fire incidents in the battalion were identified as escape debris burns. Despite this success, there is always a need to educate the public on proper debris burning techniques. There is also a potential that new residents are unaware of the proper methods and timing for debris burning. Therefore, an effective program of issuing burn permits is critical to prevention of wildland fires.

LE-62s (Residential Burn Permit – Burn Pile) will be issued by authorized CAL FIRE personnel and cooperators. Headquarter staff, station staff, and VIP staff will administer dooryard burn permits to the public. Issuing points will be CAL FIRE Stations 10 and 11 and Placer County Fire Stations. The process will ensure that homeowners can easily acquire a permit. Burn hours will be determined by CDF outside the city limits and the individual cities within their boundaries. The emphasis will be placed on the terms of the permit, the responsibilities of the permit holder, and alternative methods of vegetation disposal.

LE-5 (California Inter-Agency Burning Permit) and LE-7 (Project Type Burning Permit) are issued on SRA lands after an inspection by an authorized employee of CAL FIRE or USFS. These project burn permits are typically used to dispose of larger piles of material and typically require an inspection by agency personnel prior to authorization to burn.

B. Public Education Forums

CAL FIRE staff is involved in numerous public education programs. The target audience is quite large and has proven to be receptive to various programs. On going events through out the year include:

- Meadow Vista Pioneer Day Parade
- Foresthill Fourth of July Parade
- Auburn Fourth of July Parade
- Auburn Air fest: Attend and assist fire prevention staff with static display during the Air Fest.
- Gold Country Fair: Construct and staff the fair booth display.
- Fire Prevention week open house: Conduct open house tours of the CDF / Placer County Fire Facility, Auburn Headquarters.
- Fireworks Patrols: With use of engines, paid staff, and VIP's conduct high visibility neighborhood patrols.
- Battalion Wide Fuel Reduction and VMP's

C. PRC 4291 inspection:

PRC 4291 inspections serve a dual purpose. One is as a vegetation management motivator. The other is as a public education tool. The intent is to support grant funded

inspectors conducting residential inspections for compliance for PRC 4291. Inspections will occur in the general vicinity of Auburn and Newcastle as well as the Christian Valley area. Correspondence with landowners will include information on reducing equipment use and debris fire ignitions.

2. Vegetation Management: The vegetation management programs are directed at reducing the potential of a large fire and reducing the damage from a large fire.

A. Chipper Program / Residential Fuel Treatment

The Battalion receives great benefit from support of the Placer County Chipping program. The program provides chipping services to landowners to abate hazardous vegetation with reduced costs to the landowner and fewer opportunities of an escaped control burn with the added benefit of reduced impacts to air quality. The Battalion encourages landowners to keep their properties free from flammable vegetation through support of the local Fire Safe and Resource Conservation District Fuel reduction efforts.

B. Installation and Maintenance of Roads and Fuel Breaks

The Battalion will continue to support the acquisition of project funds and cooperators that will achieve the installation and maintenance of roads and fuel breaks within the Battalion. The following roads and fuel breaks are deemed critical to provide fire equipment access and reduce the potential of a large costly and damaging fire which may originate in the American River Canyon:

- 1) New Auburn Foresthill Road to Clipper Gap Fuel Break, North Fork American West Rim
- 2) New Drivers Flat to Long Point Fuel Break, North Fork American East Rim
- 3) Existing McKeon-Ponderosa Fuel Break Improvement and Maintenance
- 4) Existing Lower Lake Clementine Fuel Break, North Fork American, East Rim
- 5) Existing Auburn to Robie Point Fuel Break Maintenance, North Fork American, West Rim
- 6) Maintenance of Stagecoach Road below the City of Auburn
- 7) Maintenance of Lower Lake Clementine River Access Road

C. VMP Projects

The purpose of these projects is to eliminate the potential for a large and damaging wildfire by eliminating the fuel, with fire, in a controlled fashion. The current VMP schedule includes the Foresthill Bridge VMP which has traditionally been instituted under agreement with the US BOR for fire prevention purposes. The project involved burning of the site prior to July 4th each year to eliminate the risk of an intentionally set fire. In contrast, the current project involves the abatement of flammable vegetation below the Foresthill Bridge in preparation for a retrofit project involving grinding and welding. The tertiary benefit of the project is the abatement of the flammable vegetation to achieve traditional goals. The Foresthill bridge VMP is a 3 year project to expire Fall 2012.

High Priority Target Areas

- Foresthill,
- Todd Valley
- Populated areas along canyon rim
- LRA areas during red flag warnings

Table. 2 – Battalion 11 Fuel Modification Projects, Community Outreach and Education Programs

Project Name	Status	Estimated Completion Year	Project Type	Net Acres
Foresthill Bridge VMP	O		Prescribed Fire	
I-80 Highway Chipping	A	2012	Fuel Treatment	
Placer County Chipper	O		Fuel Treatment	
Shockley Trails	O			

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

2011 Action Plan

- The Battalion will continue to implement the public education forums identified in the plan.
- The Battalion will work with Caltrans to reduce ignitions while mowing.
- The Battalion will encourage and support vegetation management programs within the Unit, plus roadside chipping and community chipping programs provided by agency cooperators.
- The Battalion will continue to implement a defensible space enforcement program in conjunction with the Unit Prevention Bureau and encourage landowners to remove hazardous vegetation adjacent to their structures.
- The Battalion will continue to maintain an excellent working relationship with various community fire agencies, public service groups, and Fire Safe Councils. This will ensure a rapid and effective response in order to protect the members of the community the Battalion serves.

Ignition Management Plan

Battalion 12

SECTION V: PRE FIRE MANAGEMENT TACTICS

Battalion Description

Battalion 12 covers approximately 209,657 acres of Nevada County. It is occupied by an estimated 71,000 people living in roughly 24,000 residential structures. Fuel types range from oak woodland to timber, and the topography ranges from rolling hills to mountains. The battalion has a significant urban interface problem.

Because of the significant urban interface problem, much of the fire prevention effort has been spent on reducing the potential for large damaging fires. This has been accomplished through the efforts of a seasonal fire prevention inspector who last year conducted PRC 4291 inspections on 2,772 residents within the battalion, along with a schedule 'A' Fire Protection Planner whose focus has been placed on land use review, concentrating on fuel modification, adequate access and egress and water storage for fire protection. Cal Fire is also involved with the Nevada County Fire Safe Council which oversees the Nevada County chipping program.

Battalion Fire History and Occurrence

The statistics show that escaped debris burns are the primary cause (25%) of wildfire in the Battalion. The residents realize that the fuel treatments near their residences must be done and often delay burning until the final weeks prior to burn bans being instituted. The result is a greater number of burn piles being burned later in the season, when control of the fires is more difficult due to weather and fuel conditions. Public education at the time of burn permit issuance is used to reduce the number of escapes.

Equipment and vehicle caused fires are the second highest cause (24%) of wildfire in the Battalion. Much of the fuel work which occurs in the Battalion involves the use of equipment. Construction and land management activities often require the use of equipment. This equipment use takes place in the wildland areas where vegetative fuels are available and susceptible to burning. Many of the roads in the Battalion are rural roads with vegetation growing very close to the road edge, or on the road surface. The exposure of these fuels to hot exhaust, exhaust discharge, or flame impingement from fires originating within the vehicle is a problem typical of any rural community.

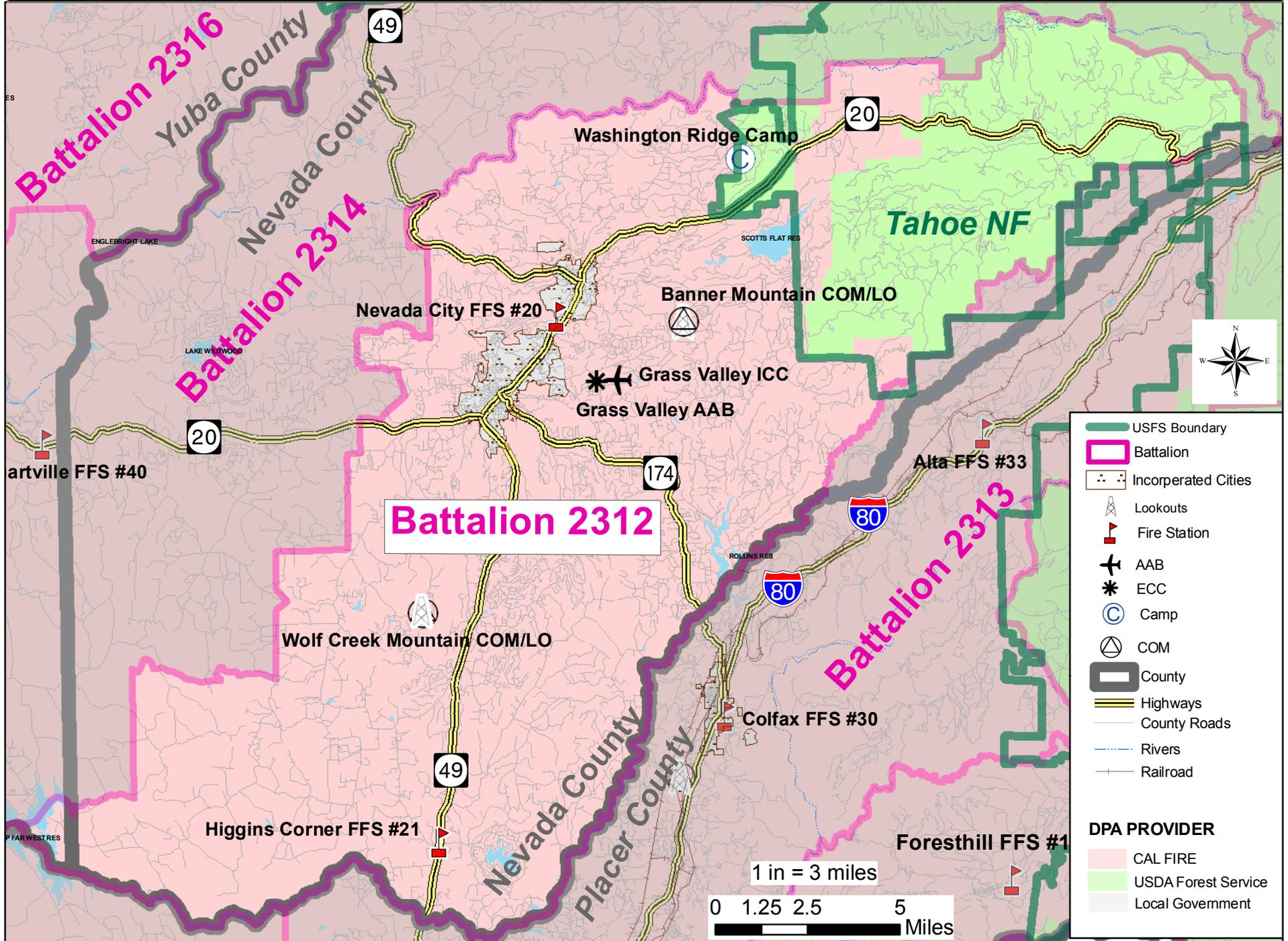
Arson and undetermined fires are considered equally and account for 24% of the fires in the Battalion. These fires are intentionally set fire or fires which the ignition could not be determined due to various factors. These fires are the most difficult to reduce due to their nefarious nature and difficulty in assessing. The Unit's prevention program is charged with investigation and pursuit of arson as felonious activity. The Unit prevention also assists Battalion staff with cause determination if a fire problem persists with no apparent cause. The result is, over time, a reduction in arson fires and determination of cause on undetermined fires allowing fire prevention education to address the actual cause.

The balance of the fires is split between various causes which are considered normal accidental fires.



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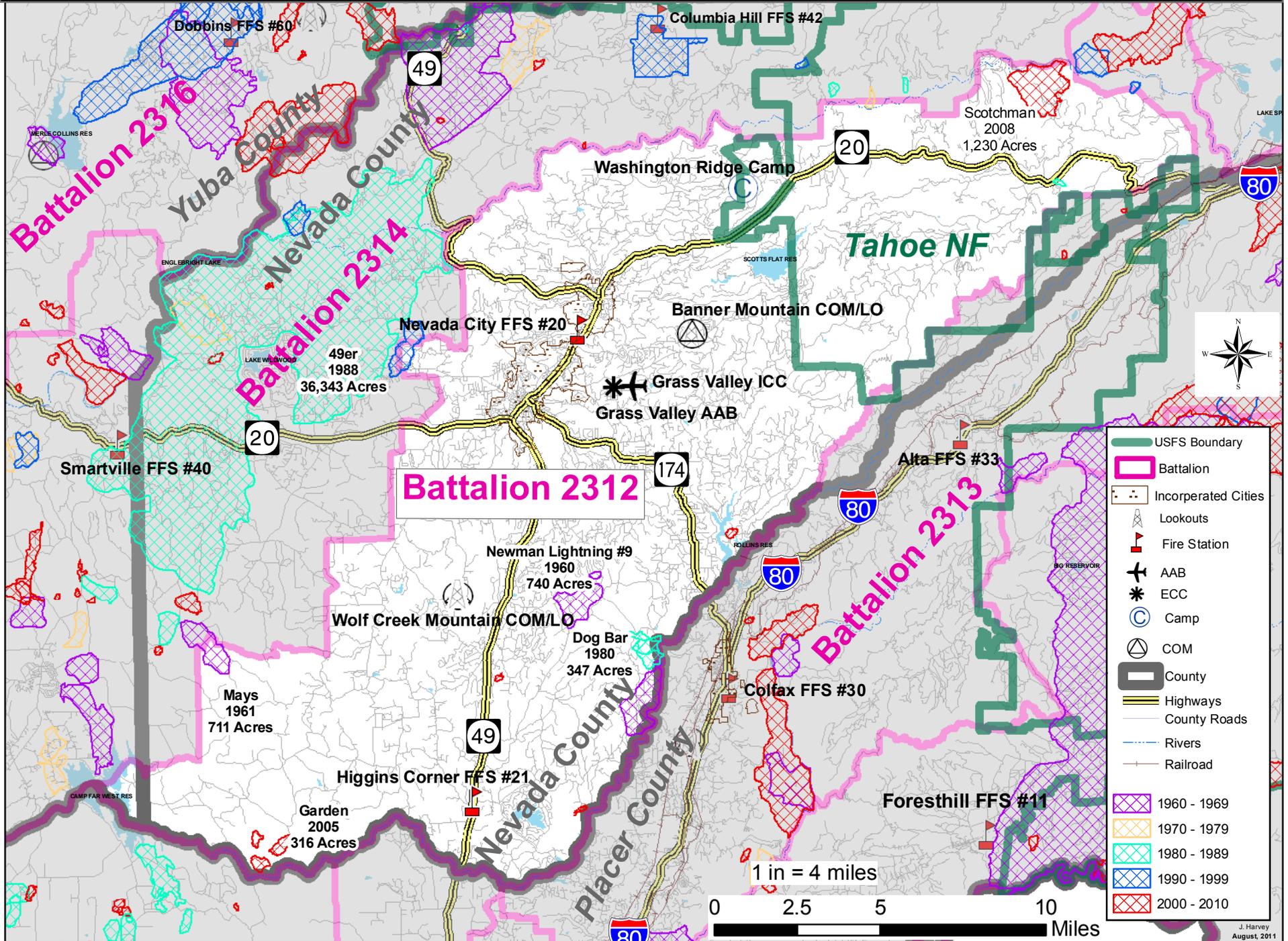
Battalion 12 - Administrative Boundaries



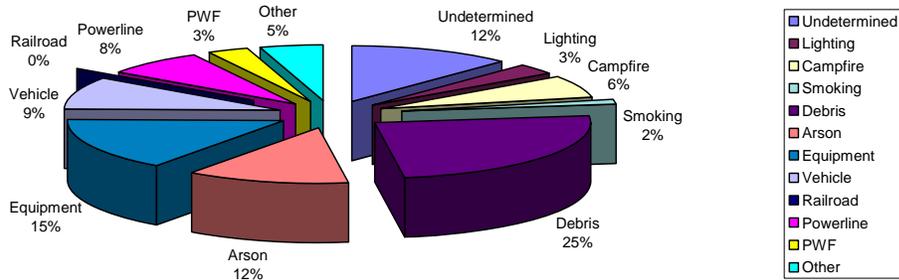


NEVADA - YUBA - PLACER UNIT (NEU)

Battalion 12 - Fire History

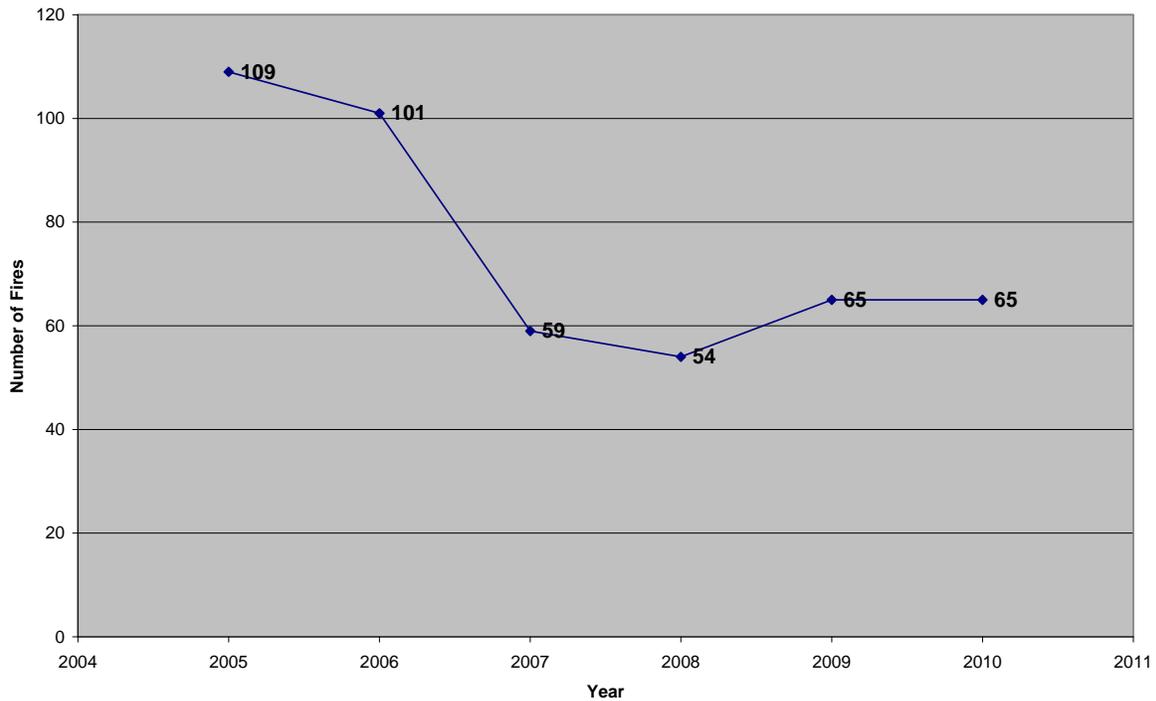


2010 Battalion 12 Fire Causes



Undet.	Lighting	Campfire	Smoking	Debris	Arson	Equip.	Vehicle	Railroad	Powerline	PWF	Other
8	2	4	1	16	8	10	6	0	5	2	3

Battalion 12 Ignitions (2005-2010)



Mitigation Strategies

1. Public Education:

Public education continues to be a priority within Battalion 12 to reduce the number of fire starts. The action plan for public contact and education is as follows:

A. Burn Permit Administration

25% of the total fire incidents in the battalion were identified as escape debris burns. This indicates there is an increasing need to educate the public on proper debris burning technique. One effect may be that residents are new to the community and are unaware of the proper methods and timing for debris burning.

LE-62s (Residential Burn Permit – Burn Pile) will be issued by authorized CAL FIRE personnel and cooperators. Issuing points will be CAL FIRE Stations 20 and 21, Nevada County Consolidated FPD, Peardale/Chicago Park FPD Stations, Higgins FPD Stations and Ophir Hill FPD. Only those personnel trained and authorized by the CAL FIRE Battalion Chief will be allowed to issue a LE-62. The emphasis will be placed on the terms of the permit, the responsibilities of the permit holder, and alternative methods of vegetation disposal.

LE-5 (California Inter-Agency Burning Permit) and LE-7 (Project Type Burning Permit) are issued on SRA lands after an inspection by an authorized employee of CAL FIRE. These project burn permits are typically used to dispose of larger piles of material and typically require an inspection by CAL FIRE prior to authorization to burn.

B. Public Education Forums

Battalion staff remains involved in numerous public education programs. Many programs are cooperative efforts with other fire agencies. The Nevada County Fair is an example of agency cooperation that provides information and education to the public. This venue provides a receptive and captive audience.

On going events through out the year:

- Fire Safe Council & Community Groups
- School Programs
- Career Days (Bear River & Nevada Union High Schools)
- Home & Garden Shows
- Fire Safe Work Shops / Fire Prevention Week
- Lake Vera Camp Grounds
- Nevada County Air Fest
- Nevada County Fair
- Higgins FPD Open House

C. Fire Prevention/News Releases:

CAL FIRE will continue to utilize a local radio station, the local news paper, as well as the Lake of the Pines & Alta Sierra monthly publications and the Nevada County Fire Safe Council's newsletter to educate the public on fire safe issues.

In addition CAL FIRE will work with local equipment rental yards and dealers with prevention material and to ensure compliance with spark arrestor laws. The focus will be trying to mitigate the rising occurrence of equipment caused ignitions.

A Schedule 'A' Fire Protection Planner works with developers and the Planning Department on land use and PRC 4290 issues, ensuring that adequate access/egress, fuel modification and other fire protection standards are met.

D. PRC 4291 inspection:

PRC 4291 inspections serve a dual purpose. One is as a vegetation management motivator. The other is as a public education tool. Two seasonal fire prevention inspectors, CDF engine companies, or a local government fire prevention officer within the battalion will conduct the 4291 inspections, dependent on funding availability. The focus of the inspections is defensible space compliance and public education.

2. Vegetation Management: The vegetation management programs are directed at reducing the potential of a large fire and reducing the damage from a large fire.

A. PRC 4291 inspections:

PRC 4291 inspections are completed annually by Nevada County seasonal fire prevention inspectors, CAL FIRE engine crews and Nevada County Consolidate F.P.D. personnel.

B. Hazard Reduction Programs:

CAL FIRE has worked in past years with the Nevada Firesafe Council to support a residential chipping program. Last year the program treated 340 parcels within the project area. The projection for this year is to treat around 350 to 400 parcels. This spring we will be starting work on the shaded fuel break portion of the project, the plan is to treat approximately sixteen (16) miles of road ways in the project area.

CDF, USFS and BLM are working together to complete a shaded fuel break in the Harmony Ridge Scott's Flat area. Work should begin late spring and will tie in with a shaded fuel break that BLM completed a few years ago. This will provide a shaded fuel break along the ridge above the South Yuba River from North Bloomfield Rd. to Scott's Flat Cascade Shores subdivision.

High Priority Target Areas

- Nevada City (high structure loss potential)
- Grass Valley (historical value, high population)
- Banner Mountain Community
- Cascade Shores.

Table. 3 – Battalion 11 Fuel Modification Projects, Community Outreach and Education Programs

Project Name	Status	Estimated Completion Year	Project Type	Net Acres
Ponderosa Fuel Break			Shaded Fuel Break/ Community Protection	
Deer Creek Fuel Break			Shaded Fuel Break / Community Protection	
Wolf Mtn CAL FIRE Lookout	O	N/A	Active Fire Lookout	N/A
Banner Mtn CAL FIRE Lookout	O	N/A	Active Fire Lookout	N/A
Truckee / I80 Fuel break				
FSCNC Chipping program	O	N/A	Fuel Reduction	

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

Success Stories

Fire Safe Council of Nevada County –

FSCNC earned the 2010 Firewise Leadership Award from the National Fire Protection Association for establishing five formal Firewise Communities in Nevada County.

2011 Action Plan

Debris Escapes – Battalion staff will work with local fire protection districts (Peardale, Chicago Park) and the FSCNC to provide educational materials on safe burning practices to local and visiting residents.

Powerline Fires – Powerline fires are a consistent problem within this Battalion and have the potential to increase due to the large quantity of snow and storm damaged vegetation present following the winter of 2010. Battalion staff will respond to citizen complaints regarding right of way clearance, coordinate LE-100 inspections and provide necessary tree review to PG&E when questions arise during powerline inspections.

Equipment Fires - Battalion staff will work with the Unit PIO to locate equipment rental yards and equipment dealers. Battalion staff and PIO will provide educational materials to the vendors and the public regarding fire safe equipment use. Battalion staff will also provide, upon request of the public, inspections of equipment to ensure fire safe operation. Unit PIO will provide radio interviews regarding safe use of equipment in the area.

Ignition Management Plan

Battalion 13

SECTION V: PRE FIRE MANAGEMENT TACTICS

Battalion Description

The Colfax and Alta Battalion covers an area 155,046 acres in size within Placer County along Interstate 80. The area is densely populated and interlaced with an extensive road system. The elevation ranges from 1600 feet in the drainage of the American River Canyon to 5300 feet around Emigrant Gap. The North Fork American River and Bear River form two distinct drainage systems with steep inner gorges and offers dense heavy fuels. The fuels within the Battalion vary as widely as the elevations, spanning an area that contains blue oak woodland where annual grasses and oaks are mixed with brush and landscape plantings to the prime timber bearing soils of the Sierra Nevada mixed conifer zone which are covered with large pine and fir timber. In between these fuel types is a range of chaparral, conifer / oak forest, and grass meadows, all containing light flashy fuels and mixed with residential development.

The population centers are Meadow Vista, Applegate, Weimar, Colfax and Alta/Dutch Flat which are surrounded by a scattered urban interface where parcels range from 2.5 to 20 acres in size, much of which contains residential and some light commercial development. This mix creates a true WUI problem where even the smallest fires with the most prompt emergency response could be catastrophic and result in burned structures. While the Colfax/Alta Battalion is not highly populated as compared to other portions of Placer County, the day to day traffic flow from the major East/West Freeway (Interstate 80) continues to be a fire problem. A majority of the ignitions in the Battalion originate from vehicles.

Cooperators include Placer Sierra Firesafe Council, Iowa Hill Firesafe Council, Auburn Firesafe Council, Foresthill Fire Department, Placer Hills Fire District, Colfax City Fire Department, Alta Fire Department, Iowa Hill Fire Company, Placer County Fire Department, Bureau of Land Management, and the United States Forest Service

Battalion Fire History and Occurrence

Vehicle caused fires rank as the highest cause (45%) of wildfire in the Battalion. This statistic is a reflection of the numerous roads and highways bisecting the Battalion. This portion of Interstate 80 is an area where commercial vehicle traffic often encounters problems as a result of the long downhill run off of Donner Summit. During fire season, as temperatures and vehicle traffic increases on Interstate 80, vehicles with overheating brakes can become an ignition source for roadside vegetation. Conversely, overheating and friction can affect commercial or passenger vehicles climbing grades within the Battalion causing vehicles to ignite.

Exclusive of Interstate 80, many of the roads in the Battalion are rural roads with vegetation growing very close to the road edge, or on the road surface. The exposure of these fuels to hot exhaust, exhaust discharge, or flame impingement from fires originating within the vehicle becomes an ignition source for vegetation fires.

Debris escapes account for the next highest cause of vegetation fires within the Battalion (12%). Generally, the residents in the vicinity realize that the fuel treatments near their residences must

be done, but often delay burning until the final weeks prior to burn bans being instituted. The result is that burn piles are burned later in the season, when control of the fires is more difficult due to weather and fuel conditions. Public education at the time of burn permit issuance is used to reduce the number of escapes.

Equipment caused fires account for 11% of ignitions in the Battalion. Much of the fuel work which occurs in the Battalion involves the use of equipment and construction or land management activities often require the use of equipment. This equipment use takes place in the wildland areas where vegetative fuels are available and susceptible to burning.

Fires with an undetermined cause account for 11% of the fires in the Battalion. These fires are those which the ignition could not be determined due to various factors. These fires are the most difficult to reduce due to their difficulty in assessing. The Unit's Prevention Bureau assists Battalion staff with cause determination if a fire problem persists with no apparent cause. The result is, over time, a reduction in undetermined fires allowing fire prevention education or enforcement to address the actual cause.

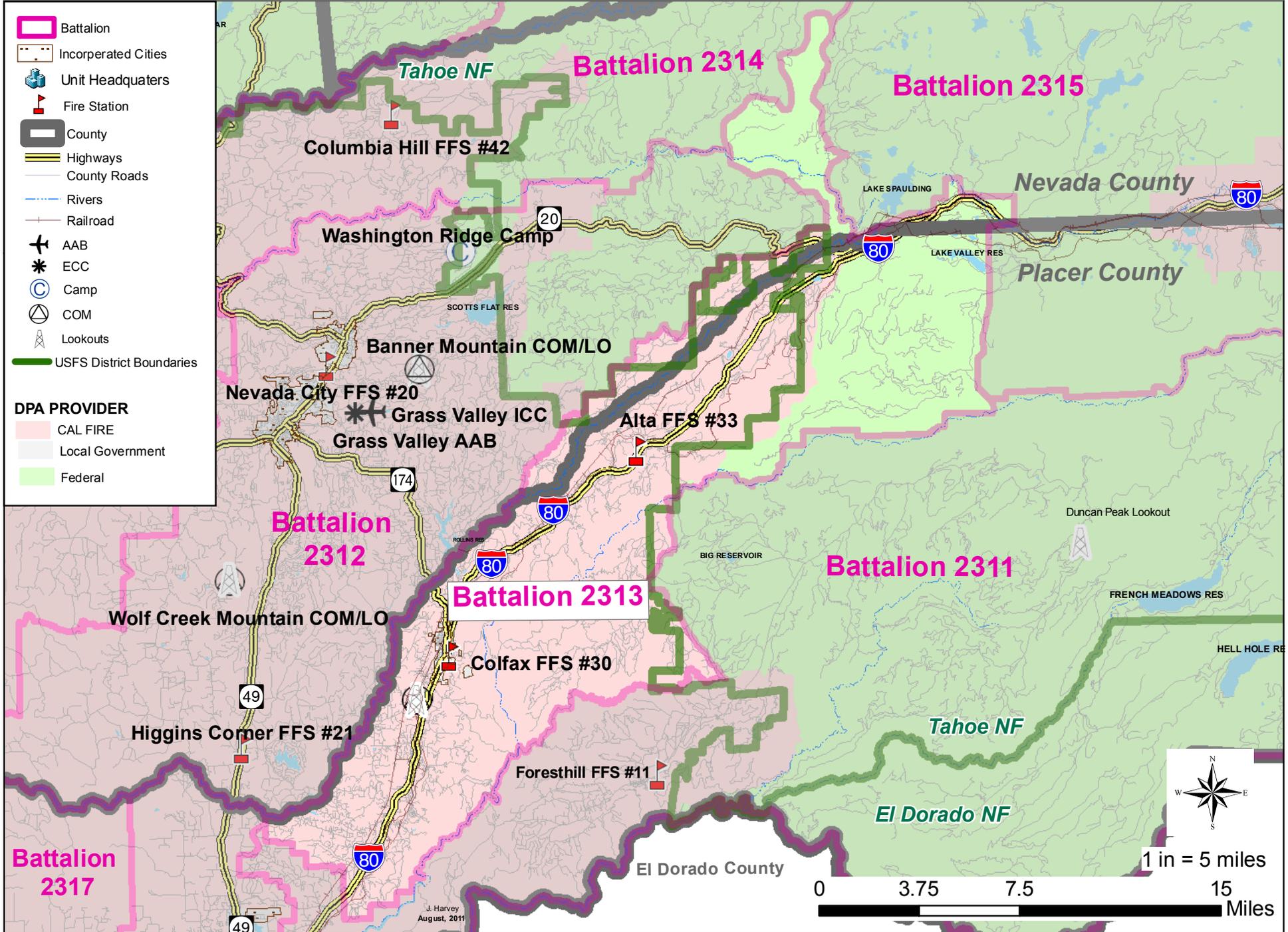
Arson fires account for 11% of the fires in the Battalion. These fires are intentionally set fires and difficult to reduce due to their nefarious nature. The Unit's Prevention Bureau is charged with investigation and pursuit of arson as felonious activity. Continued Law Enforcement in the Battalion will, over time, reduce arson fires.

The balance of the fires is split between various causes which are considered normal accidental fires.



NEVADA - YUBA - PLACER UNIT (NEU) Battalion 13- Administrative Boundary

- Battalion
 - Incorporated Cities
 - Unit Headquarters
 - Fire Station
 - County
 - Highways
 - County Roads
 - Rivers
 - Railroad
 - AAB
 - ECC
 - Camp
 - COM
 - Lookouts
 - USFS District Boundaries
- DPA PROVIDER**
- CAL FIRE
 - Local Government
 - Federal

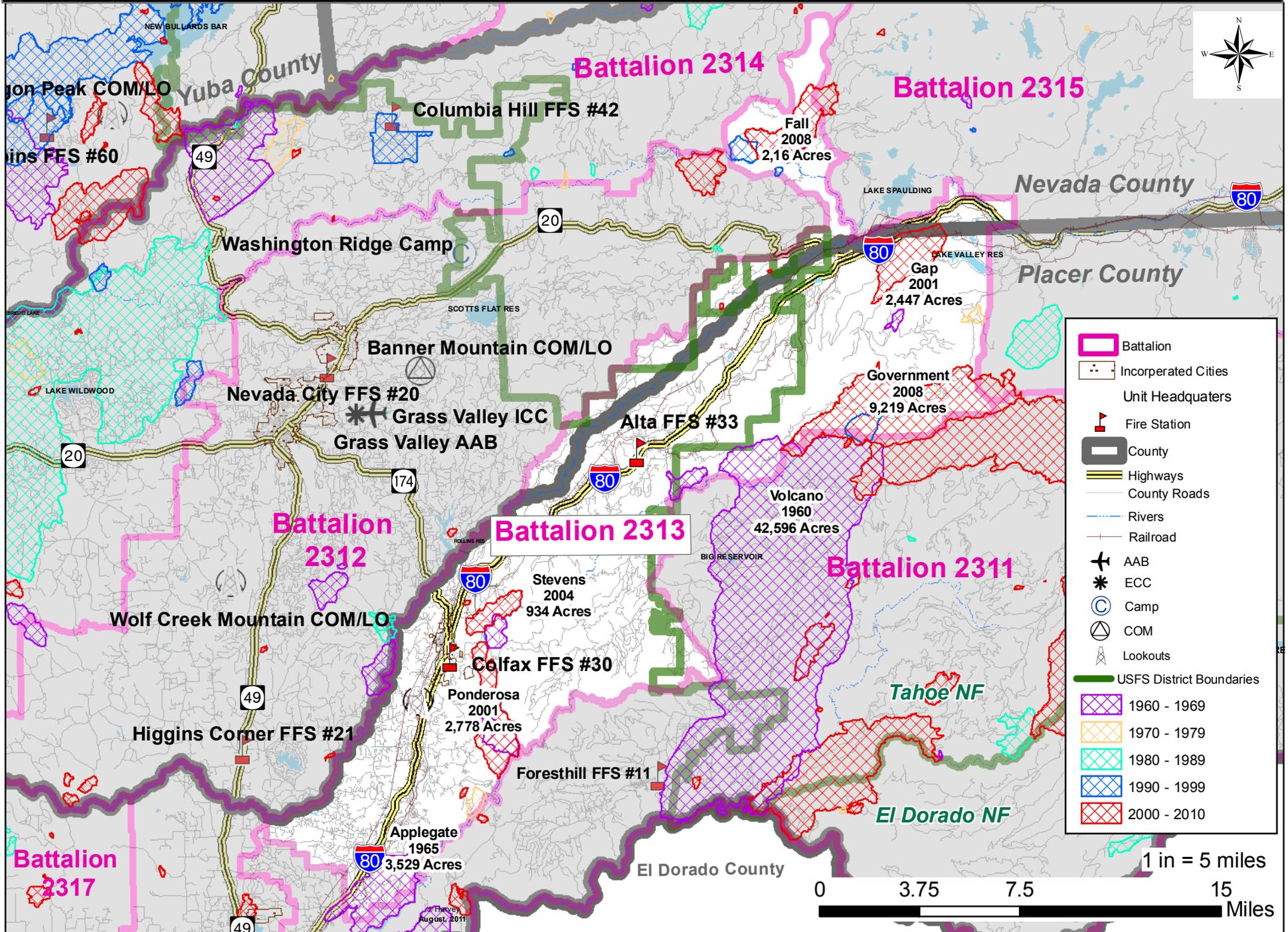


J. Harvey
August, 2011

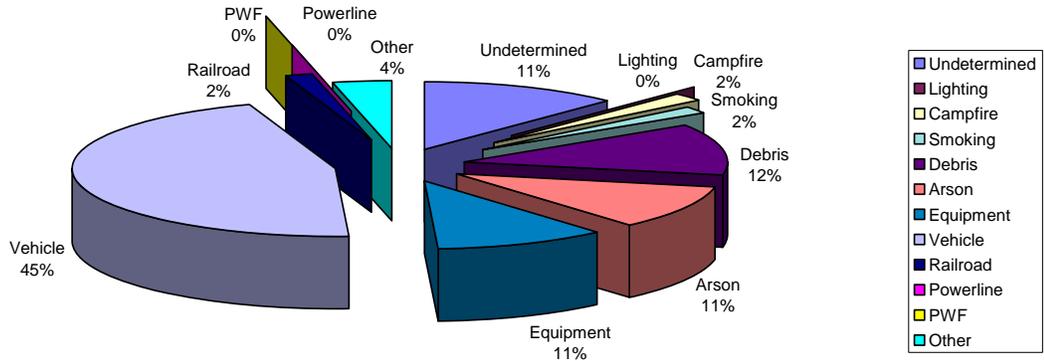


NEVADA - YUBA - PLACER UNIT (NEU)

Battalion 13- Fire History

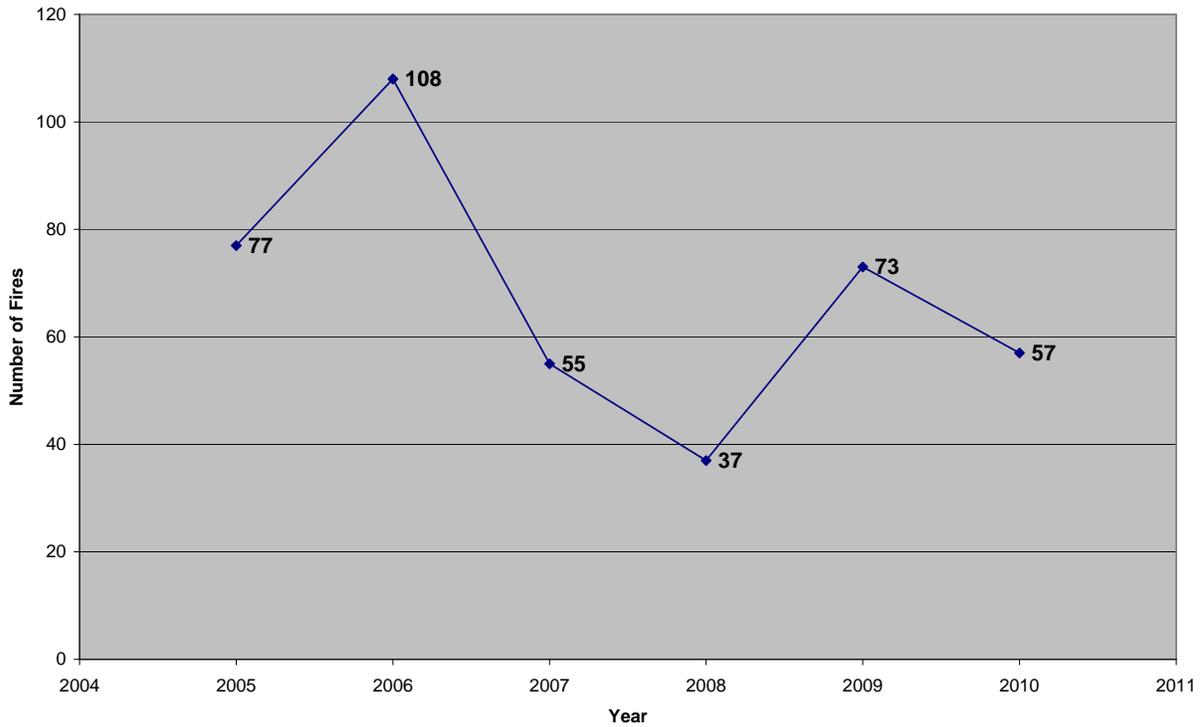


2010 Battalion 13 Fire Causes



Undet.	Lighting	Campfire	Smoking	Debris	Arson	Equip.	Vehicle	Railroad	Powerline	PWF	Other
7	0	1	1	7	6	6	26	1	0	0	2

Battalion 13 Ignitions (2005-2010)



Mitigation Strategies

1. Public Education:

A. Burn Permit Administration

Debris escapes account for 12% of ignitions in the Battalion. This is a significant number considering the requirement to have a burn permit in place prior to burning and the fact that restrictions and information are available on the permit to prevent escape. In order to reduce this number of escapes leading to vegetation fires, education at the time of permit issuance is critical so that residents know to review the restrictions and ensure that they are in compliance before lighting the match.

LE-62s (Residential Burn Permit – Burn Pile) are issued by authorized Cal Fire personnel at the Alta and Colfax Stations. Annually, Battalion personnel issue approximately 800-1000 permits. All employees cover the compliance issues with every permittee.

Battalion personnel will also be issuing permits for the City of Colfax. There will be open hours during the winter. Burn hours will be implemented around May 1 and total restriction will start around July 1 depending on weather. The burn ban will be lifted as per NEU policy in the fall at the end of declared fire season.

LE-5 (California Inter-Agency Burning Permit) and LE-7 (Project Type Burning Permit) are issued on SRA lands after an inspection by an authorized Cal Fire employee. These project burn permits are typically used to dispose of larger piles of material and typically require an inspection by agency personnel prior to authorization to burn.

All permittees are given material covering air pollution rules and information regarding the Placer County chipping program as an alternative to burning.

B. Public Education Forums

Battalion personnel participate in numerous public education programs. The area is a well-known recreational area with campgrounds at the American River, Bear River, Rollins Lake and numerous hiking trails attracting day users throughout the Battalion. The target audience is quite large and has proven to be receptive to various programs as follows:

On going events through out the year include:

- Recreational areas are frequently visited by Cal Fire personnel to provide fire safe information and material.
- The local elementary schools are targeted for Smokey Bear programs.
- Battalion Staff participate in Fourth of July parades at both Colfax & Dutch Flat.
- Battalion Staff work with cooperating fire protection agencies in fire prevention programs in both private and public education forums
- Battalion engine companies are up-dating pre-fire plans, expanding on WUI pre-plan guidelines and maps, and conducting business inspections through-out the year as fiscal limitations and staff time allows.

- The local Battalion Chief works closely with the local Fire Safe Councils on various issues.
- This year Caltrans has agreed to allow NEU Washington Ridge crews to implement their fuel modification program from the Auburn Battalion to the Baxter area along Interstate 80.
- The BC attends the Colfax City Council meetings to provide input relative to Colfax City VFD activities.
- The BC attends Lions Club meetings once a year to provide information on fire prevention in the local area.
- The BC attends the Alpine Meadows Community meeting to provide fire safe information and advice the landowners.
- The BC Attends both the Meadow Vista Municipal Advisory Council and the Weimar/Applegate/Colfax Municipal Advisory Council to the Placer County Board of Supervisors

C. Fire Prevention

NEU Fire Prevention planners are assigned to the Placer County Building Department. Planners review projects to ensure that PRC 4290 requirements are met or exceeded on all new construction. The BC participates in field inspections upon request and meets with landowners to provide input regarding necessary fire protection elements required for development in the WUI.

The BC is in direct contact with Union Pacific representatives on a bi-annual basis. During these meetings, the BC receives information regarding future track maintenance. In the spring of 2011, Union Pacific hired a contractor to install a fuel break through the Battalion within 30 feet either side of the track. The fuel reduction project is intended to mitigate ignition potential as rail traffic is increased. Rail traffic is currently around 15 trains per day. The traffic is expected to reach 45-50 trains per day over the next 2 years.

D. PRC 4291 Inspections

Since 2007 Battalion staff inspected the most critical WUI areas to evaluate PRC 4291 compliance. In that timeframe, the Battalion personnel have inspected approximately 90% of residences. Of those residences inspected, approximately 85% of inspections were non-compliant. The result of the inspections is short term compliance being achieved in the season inspected, but subsequent years following inspection have resulted in no change in the long term compliance. One possible solution is to provide second inspections and provide citations for those residences not achieving compliance. To date, no citations have been provided within the Battalion for non-compliance with PRC 4291 requirements.

High Priority Target Areas

- Colfax WUI
- Alta/Dutch Flat WUI
- Meadow Vista WUI
- Clipper Gap WUI
- Weimar WUI
- Applegate WUI
- American River Drainage (Recreation and Tourist Destinations)

Table 4 – Battalion 13 Fuel Modification Projects, Community Outreach and Education Programs

Project Name	Status	Estimated Completion Year	Project Type	Net Acres
I-80 Fuel Reduction Project	A	2012	Fuel Reduction	
Mt. Howell Maintenance	O	N/A	CAL FIRE Lookout	
Colfax Area Strategic Plan – WUI Pre-Plan	A		Pre-Fire Planning	
Iowa Hill Temporary Refuge Area	A	2012	Fuel Reduction/Public Education	20
Rooster Ridge Fuel Break	C	2011	Fuel Reduction	195
Kings Hill Fuel Break	C	2009	Fuel Reduction	200
Long Point Fuel Break	A	2012	Fuel Reduction	150
Roach Hill	C	2011	Fuel Reduction	100
Succor Flat	A	2012	Fuel Reduction	150
Race Track Ridge	P	2014	Fuel Reduction	200

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

Success Stories

Edwards' Tree Farm / Ponderosa Fire

Allen Edwards retired after many years in State Service. He had decided to spend his time working with his family on their timber property in Placer County. This property is located above the North Fork of the American River, a canyon known in the area for experiencing a number of major fires in the past. The combination of fuels, weather and topography all but guaranteed that history would eventually repeat itself and the American River Canyon would once again be under siege by a wildfire.

Colfax, CA – In August 2001, a fire roared across Placer County, eating up 2,780 acres of forest. Two days after it started, the fire swept into a canyon along the edge of 520 acres owned by Nancy and Allen Edwards.

The flames rushed up the Edwards' side of the canyon and devoured 125 acres of their trees. But Allen Edwards had removed underbrush and thinned trees to cut a shaded fuel break 400 feet wide along the top of the ridge. The fuel break slowed the fire while it sheltered some of the 984 California Department of Forestry firefighters called out to battle the blaze. They stopped the fire from barreling down the other side of the mountain and through the town of Colfax. The fire, started by a vehicle, cost \$4.5 million and injured 19 firefighters. Luckily, it destroyed no houses and took no lives.

(Source: University of California)

When Allen first began working his land he realized that he needed to consider the potential for a wildfire coming out of the canyon. One of his first efforts was to develop a fuelbreak along the ridgeline of his property to help reduce the likelihood of a fire spreading to the remainder of his parcels. Along the ridge top, his property was primarily a second growth mixed conifer woodland, typified by uneven aged Ponderosa Pines, Black Oak, and a heavy brush component. Allen took the time to thin the stands and prune all remaining stems up at least eight above the ground. By doing these two things he was able to have a significant effect on the fire's behavior within the fuelbreak. The work removed the ladder fuels and provided an open stand from which fire fighters could make a stand against the encroaching wildfire.

The canyon below the Edward's property was covered primarily by Manzanita, Ceanothus, and Scrub Oak. There were also pockets of oak and conifer stands in the drainages and scattered across the landscape. The brush was near critical levels based on live fuel moistures and due to its age had a very significant amount of dead material mixed in with the live. The standing fuels averaged between six and eight feet in height but could be found up to fourteen feet tall in places. The mixed oak and conifer stands typically had a significant brush understory. These stands were even more volatile than the rest of the landscape due to the presence of "needle drape" through-out the understory. This added layer of fine fuels resulted in an increase in torching which also increased the potential for spotting.

The North Fork of the American River flows almost due North - South below the Edward's property. Because of the topographic orientation, the fuels receive direct sunlight through the first half of the day. The humidity and fuel moisture are significantly reduced on this slope by mid-day and the fuel temperature is dramatically increased. Mid-September is typified by hot, dry weather and continuous canyon winds. The standard south-southwest winds combine with the daytime up-canyon winds to create very breezy conditions in the canyon and surrounding areas. Around mid-night the up canyon winds will give way to the colder air settling into the canyon causing strong down-canyon winds.

The topography of the American River Canyon has a very powerful effect on any fire that occurs within it. The slope ranges from ten to two hundred percent with most of it in the 45 - 75 % range. This slope greatly increased the fire's spread by allowing the pre-heating of the fuels and keeping the flaming front in contact with a constant supply of unburned fuel. It also hampered fire fighting efforts by limiting the access to the fire's edge as there were very few roads in the area.

The Division Supervisor that was responsible for that portion of the fire, Ken Hughes, said, "The fuelbreak was integral in our operations along Gillis Ridge. It gave us a place to safely fire from where we would not put our crews in danger. We were able to extend the fuelbreak along the ridge and tie in with the river to fully contain the head of the fire. Without the work he, (Allen Edwards) had done prior to this fire there is a very good likelihood that the fire would have run up into the homes further to the west."

It cost Allen Edwards and the NRCS about \$4,500 total to treat about ten acres of land. That money proved to be a wise investment as the fuelbreak resulted in a fire perimeter that had very few homes and other structures within it. Without the fuelbreak it is very likely that the fire would have continued up into the south-eastern edge of the city of Colfax.

The Gillis Hill Fuelbreak did not stop the Ponderosa Fire on its own. What it did is provide a strategic location for ground resources to attack the fire without putting the firefighters in danger. The roads that Allen Edwards had built in the area and the fuel he removed from the understory, provided access that previously was not available in this remote area.

2011 Action Plan

- Public information at equipment rental locations (Hills Flat, Hansen Bros)
- Newspaper releases
- Signage
- Priority PRC 4291 inspection areas
- Focus on 80 corridor
- Monitor North Fork and Bear River to determine impact of lifting of the dredging moratorium on ignitions.
- Scotch Broom evasive species public education and mitigation

Ignition Management Plan

Battalion 14

Description of the Battalion

At over 357,139 acres the Smartsville – Columbia Hill Battalion (B-14) is the largest in the Unit. It includes more than 160,000 acres of SRA and 15,000 acres of Federal land under State DPA. The main centers of population include Penn Valley, Rough & Ready, North San Juan, North Columbia, Smartsville, Beale Air Force Base, Linda and Wheatland. Most of these communities have been identified on the federal registry of Wildland Urban Interface Communities at Risk. The Battalion is made up of the Yuba River, Deer Creek, and Bear River Watersheds all of which have portions that have been identified as High Hazard Watersheds. From west to east the Battalion begins in the relatively flat lands of the Sacramento Valley and continues northeast to the mountainous terrain of the Tahoe National Forest (TNF). In between these boundaries one will find fuel types that represent at least twelve of the thirteen fuel models. From the valley floor to around 800' – 900' ft elevation is primarily the grass models. Beginning around 700', the oak-woodland begins to appear and it continues on up in elevation to about 1,400 ft. The brush models begin to appear around 800' and carry on up to over 3,000 ft in places. The timber models begin at approximately 1,600 ft, in places, and continue to the TNF boundary. Most of the Battalion is zoned for residential properties of five acres or more, agriculture, or timber production.

Along with the several fire agency cooperators, which include Penn Valley Fire Protection District, Smartsville Fire District, North San Juan Fire District, Rough & Ready Fire District, Wheatland Fire Authority, Linda Fire District, the Bureau of Land Management (BLM), the TNF, and Beale Air Force Base we have several non-fire agency cooperators that assist us with our fuel reduction and fire prevention efforts. These cooperators include but are not limited to: The University of California Research and Cooperative Extension Center who allows us to hold annual training burns at their facility. The California Department of Fish and Game (DFG), provides us with areas to conduct wildland training exercises and fuel reduction projects. The Army Corps of Engineers provides water shuttle services for rescues and fire responses across and around Englebright Reservoir. The California State Parks have worked with us in the past to conduct several large Vegetation Management Program (VMP) burns on their lands expanding our fuel reduction efforts in the Yuba River Drainage. Several large landowners who have also participated or are eager to take part in the VMP to continue to augment those same fuel reduction efforts.

Discussion of fire occurrence within Battalion

Since 1970, there have been twenty-five fires in excess of 100 acres within the Battalion. The most notable of those are the 49er Fire, the Trauner Fire, and the Oak Tree Fire.

The Unit's most costly and damaging fire occurred entirely within the Smartsville – Columbia Hill Battalion. The 49er Fire began on Sunday, September 11th, 1988 near the intersection of Highway 49 and Birchville Rd. and was contained on Thursday September 15, 1988 about five miles south of Highway 20 in the Smartsville area. Over the course of five days the fire burned 33,500 acres and destroyed 148 homes, 358 other structures, 89 vehicles, and 17 boats. Suppression costs were estimated at 7.5 million dollars and the total dollar lost was estimated at 22.7 million dollars.

The Trauner Fire occurred in 1994. It burned 536 acres and destroyed several residences and historic structures within the community of Rough & Ready. The cause was determined to be poor maintenance of the vegetation growing around powerlines. As a result, 739 counts of

negligence were filed against Pacific Gas & Electric (PG&E) by the Nevada County District Attorney's office and it resulted in one of the largest claims against the company on record. The outcome of the case is considered to be the motivating force behind PG&E's current fuel reduction program.

The Oak Tree Fire occurred in 1974 and was the result of an airtanker crash while fighting the Keystone Fire in the North San Juan area. Both fires burned almost 900 acres each.

There are areas in the Battalion that experience at least one fire annually.

The Spenceville Wildlife Area Shooting Range on Waldo Rd burns every year. To reduce the threat of these fires becoming extended attack fires, a line is cut around the area each Spring. The area behind the shooting range is broken into two units. The upper unit has several rock outcroppings and typically dries out before the lower unit. Even though the rocks are outside the designated shooting area, shooters with high powered rifles will regularly set targets on them. Eventually, this combination will lead to a rock strike resulting in a fire. By the time responders arrive the shooters will be gone. In the event the fire starts after the fuels have finished curing, responders will fire out the remainder of the unit that is burning. Any fires that start prior to the fuels being cured will be extinguished by the responders. Ignitions at the shooting range have several causes: rock strikes, use of metal targets, and the use of tracer rounds are the most common. All of these cause result from activities that are either illegal or not permitted and the DFG Wardens have been citing individuals found participating in any of those activities. All Battalion personnel are briefed on the plan regarding the shooting range and will evaluate the feasibility of firing it out upon arrival, extinguishing it, or watching as it burns within the pre-designated area(s) then make a decision on the best course of action.

Beale AFB has had fires come off of the base eight of the last ten years. These fires generally originate from birds into powerlines, hazard reduction burns, or munitions work on the base. In an effort to reduce the threat of these fires burning onto SRA, each year Beale AFB puts a fuel break around the perimeter of the base. However, due to their environmental constraints they must leave breaks in the line wherever it crosses winter wetlands or vernal pools. These gaps can be several hundred feet in length and provide significant avenues for the fires to escape the base.

By preparing for these events, we are usually able to keep them in the initial attack phase.

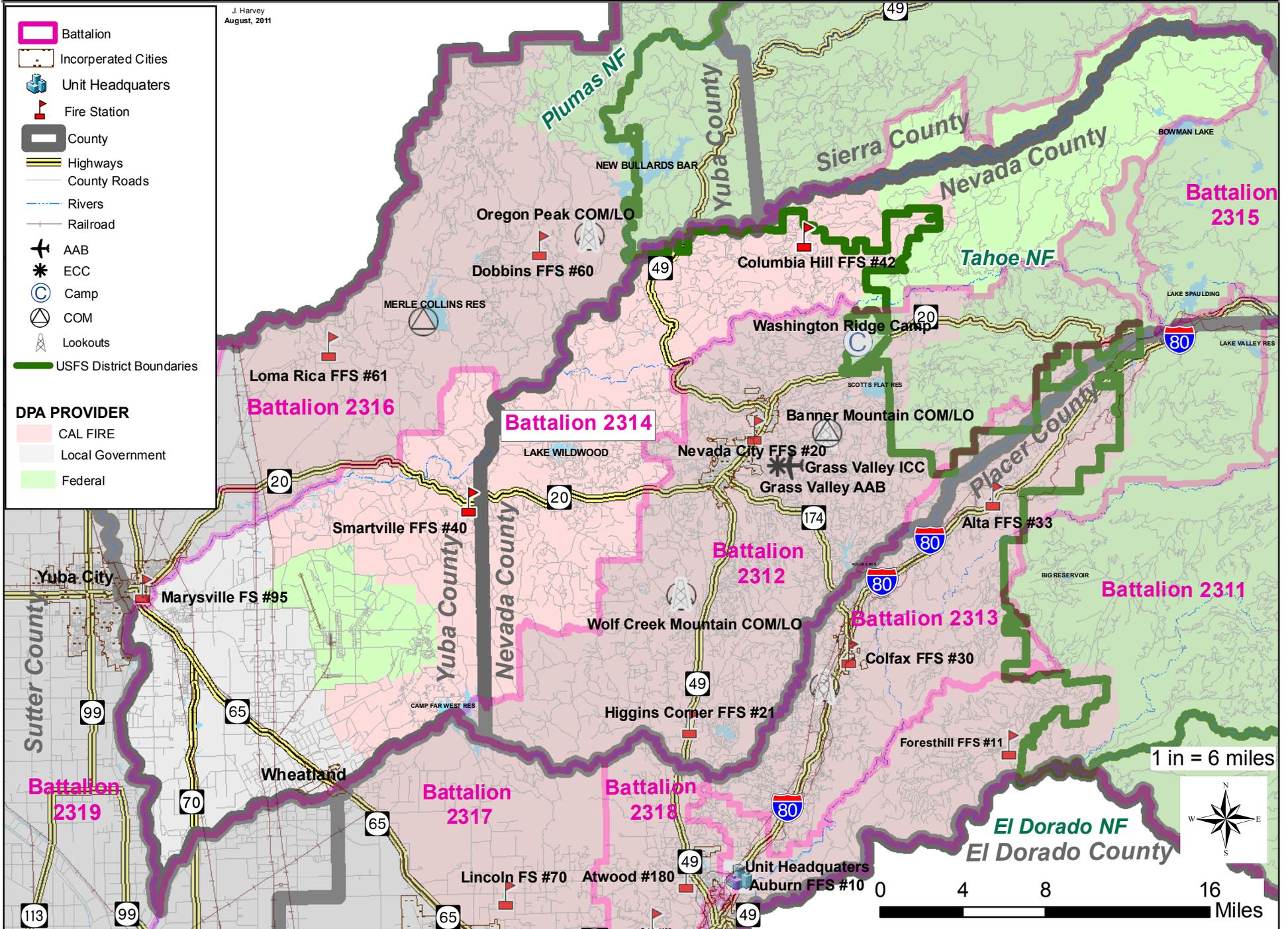


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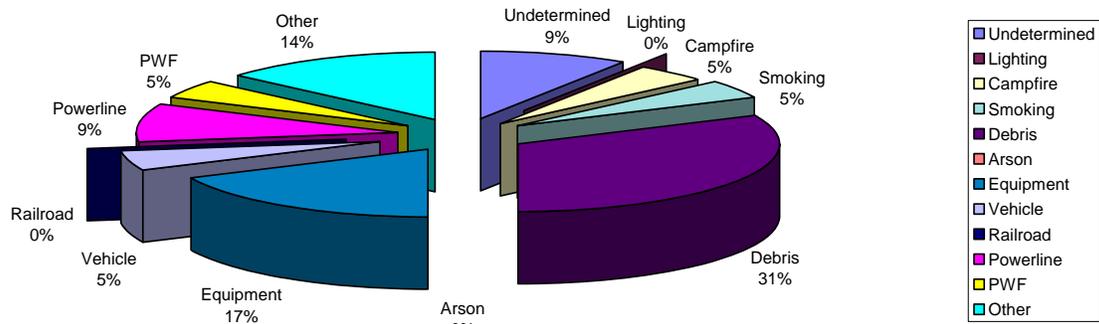
Battalion 14- Administrative Boundaries

J. Harvey
August, 2011

- Battalion
 - Incorporated Cities
 - Unit Headquarters
 - Fire Station
 - County
 - Highways
 - County Roads
 - Rivers
 - Railroad
 - AAB
 - ECC
 - Camp
 - COM
 - Lookouts
 - USFS District Boundaries
- DPA PROVIDER**
- CAL FIRE
 - Local Government
 - Federal

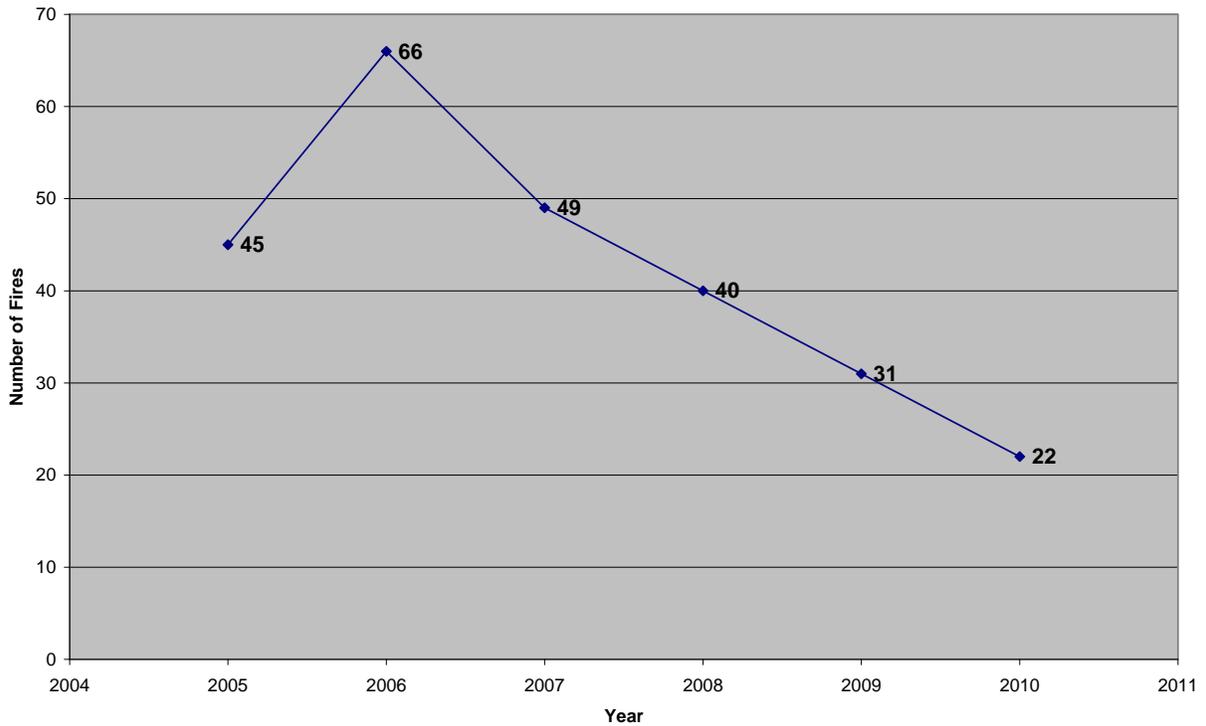


2010 Battalion 14 Fire Causes



Undet.	Lightning	Campfire	Smoking	Debris	Arson	Equip	Vehicle	Railroad	Powerline	PWF	Other
2	0	1	1	7	0	4	1	0	2	1	3

Battalion 14 Ignitions (2005-2010)



Mitigation Strategies

There are several roads in B-14 that were maintained for fire access since the early 1950s. With changes in personnel and land ownership, many of those have been neglected over the past ten to fifteen years. Due to years of neglect many of these roads have become nearly impassable for emergency vehicles. In several places changes in ownership have resulted in the new landowners being unaware of the agreements to the point that North Ponderosa Way now has a home built in the original road prism. Over the next several years, efforts will be made by B-14 personnel to identify the roads that will significantly improve the access into the back country within the battalion and work towards re-establishing as many of the original agreements as possible.

- In 2010 work was completed to improve Spenceville Rd from Pitman Rd to the Double Diamond Ranch to allow access of emergency vehicles into the area. The goal for Spenceville Rd is to continue to work with the landowners and re-establish access from the maintained roads in the Double Diamond Ranch all the way to Pitman Rd. When the most recent work was completed on Spenceville Rd, work was also done to improve the road from Spenceville Rd to Beale Falls.
- Also in 2010, B-14 personnel were able to gain permission from the owners of the Selby Ranch to clear brush and small trees along Scott Forbes Rd and the Woods Creek Truck Trail. These roads had become overgrown to the point of completely restricting access of anything larger than a passenger vehicle. As these are the only roads to access the back country north of Englebright Reservoir, it was essential that work be done to allow emergency vehicles in.
- Additional roads to be included as fire access roads in the battalion's are: North Ponderosa Way from Rough & Ready Hwy to Bitney Springs Rd, South Ponderosa Way from Rough & Ready Hwy to Squirrel Creek Rd, Jackass Flats Rd from Tyler Foote Rd to Purdon Rd, Hoyt's Crossing Rd from Milhous Boys Ranch to the South Fork of the Yuba River, Murphy Rd from Purdon Rd to Milhous Ranch Rd., and Hatchet Creek Rd from McAndrews Rd to Spenceville Rd.
- Point Defiance/Rices Crossing Fire Access Roads along and adjacent to the South Yuba River State Park in the Bridgeport area will be graded at least every other year when weather and equipment availability permit.

Signs are posted along Hwy 20 to advise travelers that fireworks are not allowed in the rural areas of Nevada County. In cooperation with the Penn Valley Fire Department, at least one engine from the Smartsville Station will be sent to patrol the area during the fireworks display put on by the Lake Wildwood Homeowners Association. The Columbia Hill engines will be out in the rural areas during the week of July 4th to remind the residents of the rules regarding fireworks use in the area.

1. Fire Safe Programs

Work with developers and the Planning Dept to ensure that PRC 4290 requirements are met or exceeded on all new construction.

Work with the Fire Safe Councils in both Nevada and Yuba County to identify and implement Fire Safe projects in their areas

2. Burn Permit Administration

Cooperators consistent with past practice will issue LE-62's. Issuing points will be all CAL FIRE, the Penn Valley Fire District, and the North San Juan Fire District. The Penn Valley Fire Protection District will issue at Station #44 and at the administrative office for those areas within Penn Valley and Rough & Ready. The North San Juan Fire District will issue out of Station #3 on Tyler Foote Crossing

Road. This process will ensure that homeowners can get a permit when the CAL FIRE station is not staffed. Burn hours will be determined by CAL FIRE outside the city limits and the individual cities within their boundaries. There will be open hours during the winter. Burn hours will be implemented around May 1 and total restriction will start around July 1 depending on weather. The Ban will be lifted as per CAL FIRE in the fall at the end of declared fire season.

An authorized employee of CAL FIRE or the USFS will issue LE-5 and Project permits on SRA.

3. Defensible Space

Section 4291 of the Public Resources Code will be addressed on SRA. A County funded inspector will be used to cover door to door in all areas of SRA within Nevada County and station personnel will be used in Yuba County. Target areas for 2011 are Big Oak Valley and the Sicard Flat – Scott Forbes Rd areas.

The CAL FIRE stations and Battalion Chief will continue to support this activity with logistical support, inspections and citations, if needed.

4. Railroad / Power Companies

Past spot inspections indicate no violations, however fire occurrence has become significant.

Powerline inspections will occur during the PRC 4291 inspections as inspectors look up and down while conducting their inspection, and where the lines are available. The Prevention Bureau Chief will be meeting with Powerline Representatives to discuss PRC 4292. Powerline caused fires, within the Battalion, relating to negligence are insignificant and do not warrant the resources to follow up.

5. Public Education

CAL FIRE staff is involved in numerous public education programs. The area is a well-known recreation area. The target audience is quite large and has proven to be receptive to various programs as follows:

School Programs - An interagency effort targets all schools in Penn Valley, reaching grades K - 12 in the spring.

Fourth of July Parade – CAL FIRE will have an engine and an antique engine in this year's parade.

Beale AFB Fire Prevention Week – CAL FIRE will provide an engine for the parade and static display for public education.

6. On going events throughout the year

Lake Englebright Camp Ground - The Army Corp. of Engineers and CAL FIRE will construct fire lines around all shoreline campsites starting in May.

Malakoff State Park Camp Ground - A CAL FIRE engine will address campers during special events planned by the camp area.

Spenceville Rifle Range – A fuelbreak will be constructed around the rifle range during May, and the interior burnt.

Channel 44 - The local message station will run the defensible space tape throughout the summer and event specific messages on request.

Vegetation Management:

UC Field Station VMP

Location: The VMP area encompasses treating approximately 1,040 acres in 7 units of the UC field station, approximately 12 miles west of Grass Valley, 7 miles southeast of Loma Rica, and 9 miles southwest of Dobbins.

Purpose: The UC Research Station VMP is an ongoing project to help manage and study means of managing and controlling noxious weeds and fire impacts on water quality. The weeds that are attempting to be controlled are yellow starthistle, barbed goatgrass, and medusahead. These burns allow the field station to scientifically evaluate the effectiveness of burning in a control program. The affect of a controlled, cool to moderate temperature burn on blue oaks will also be studied.

CEQA: PEIR

Bunker Hill VMP

Location: Approximately 5 miles northwest of the town of Nevada City. The proposed project consists of approximately 1,000 acres of mixed brush, primarily on west, north and east facing slopes.

Purpose: The project is within the South Yuba River Watershed. Shady Creek runs through the north end of the project and discharges into the South Fork of the Yuba River.

The project objective is to reduce the potential of a costly and damaging fire within the treated and surrounding area.

A series of prefire projects have been planned to create a contiguous are of hazardous fuel reduction to effectively create a shaded fuel break from Bridgeport extending east up the San Juan Ridge to North Bloomfield. These projects include the completed Bridgeport State Park prescribed VMP burns, the completed VMP prescribed burn at French Corral, Browning property, the completed and proposed Reader Ranch VMP projects, this proposed project, the completed Malakoff Diggins VMP project east of this project, and the completed Montezuma fuel break. These projects have been developed to create a strategic location where fire fighting resources may more effectively attempt fire suppression activities to stop a costly and damaging fire such as the 49'er fire of 1988.

This proposed project will entail the pre-treatment of the brush fuel by creating hand piles with crews and/or piling and crushing with machinery. Control lines will also be re-established by dozers and/or hand crews. Burn piles are to be treated in spring and early fall, however, other conditions may occur that will allow burn treatment at another time of the year. Some areas may be broadcast burned.

CEQA: PEIR

Reader Ranch VMP

Location: Approximately 5 miles northwest of the town of Nevada City. The proposed project consists of approximately 1,200 acres of mixed brush, primarily on west, south and east facing slopes.

Purpose: The project is within the South Yuba River Watershed. Shady Creek runs through the north end of the project and discharges into the South Fork of the Yuba River.

The project objective is to reduce the potential of a costly and damaging fire within the treated and surrounding area.

A series of prefire projects have been planned to create a contiguous are of hazardous fuel reduction to effectively create a shaded fuel break from Bridgeport extending east up the San Juan Ridge to North Bloomfield. These projects include the completed Bridgeport State Park prescribed VMP burns, the completed VMP prescribed burn at French Corral, Browning property, the proposed Bunker Hill VMP projects, this proposed project, the completed Malakoff Diggins VMP project east of this project, and the completed Montezuma fuel break. These projects have been developed to create a strategic location where fire fighting resources may more effectively attempt fire suppression activities to stop a costly and damaging fire such as the 49'er fire of 1988.

This proposed project will entail the pre-treatment of the brush fuel by creating hand piles with crews and/or piling and crushing with machinery. Control lines will also be re-established by dozers and/or hand

crews. Burn piles are to be treated in spring and early fall, however, other conditions may occur that will allow burn treatment at another time of the year. Some areas may be broadcast burned.

CEQA: PEIR

High Priority Target Areas

Big Oak Valley, Sicard Flat – Scott Forbes Rd

Table 5 – Battalion 14 Fuel Modification Projects, Community Outreach and Education Programs

Project Name	Status	Estimated Completion Year	Project Type	Net Acres
UC Field Station VMP	O		Prescribed Fire	
Bunker Hill VMP	P		Prescribed Fire	
Reader Ranch VMP	P		Prescribed Fire	
Yuba County Roads	O		Fuel Treatments	
Spenceville VMP			Prescribed Fire	
Shady Creek Fuel Break			Fuel Treatments	
Columbia Hill Fuel Break	C			
Selby Ranch	O			

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

Success Stories

The line put around the Spenceville Shooting Area has been successful in holding the fires to the control lines every year since it began. Each and every year we experience between one and four starts out there caused by target practice and every year the fires are kept with in our pre-established control lines. Without the lines, many of those fires would have easily developed into an extended attack fire.

2011 Action Plan:

- The primary point of action for the 2011 fire season will be to continue to pursue completion of the VMP contracts that remain in the planning stage. As the contracts are completed we will focus on implementation. Implementation will focus on fuel reduction and live fire training for fire personnel.
- Opportunities to combine our VMP projects with the Fire Safe Council efforts will be researched.
- Continuance of the public education efforts will be a priority for battalion personnel.
- All personnel will focus their daily training efforts on wildland fire suppression.

Ignition Management Plan

Battalion 15

Battalion Description

Battalion 15 covers approximately 115,000 acres within Placer and Nevada counties including some portions of Sierra County. The primary population center is the Town of Truckee which is the Battalion Headquarters. This high sierra community has a permanent year-round population of 18,000 people. Due to the large number of vacation homes in the Battalion, the population can double on summer week-ends. A large portion of the Battalion lies within the boundaries of the Truckee Fire Protection District. In 1994, the Town of Truckee was incorporated, converting 21,000 acres of SRA to LRA. In 2010, a contract was in place between the Town of Truckee and Cal Fire for fire suppression on 11,100 acres of wildland within Truckee's LRA. The acreage is anticipated to drop to 10,400 acres for the 2011 fire season and into the future.

Fuel type varies from desert grass/brush to timber in topography ranging from mountain valleys to peaks over 9000 feet. The fuel makeup is typical of this eastside timber and meadow environment. The fuel loading is indicative of a rain shadow with generally lower fuel loading than Significant WUI problems exist and are difficult to mitigate due to the temporary nature of the residents. Up to half of the residential structures are vacation homes.

Cooperators include Truckee Fire, Northstar Fire, North Tahoe Fire Protection District, Fire Safe Council of Nevada County, US Forest Service (TMU, Tahoe N.F., Plumas N.F.), and Army Corp of Engineers.

Battalion Fire History and Occurrence

Large damaging and costly fires do occur on the east side of NEU. Significant in terms of acreage are the Donner Ridge Fire (1960 – 44,812 acres), Cottonwood Fire (1994 - 46,800 acres), and Martis Fire (2001 – 14,126 acres). Fire hazard severity (2007 FHSZ) predicts a high likelihood that such fires will occur again. Typically, Battalion 15 will receive 15-25 vegetation fires per year dependent upon the occurrence of lightning, normally the primary ignition source (50% of ignitions). The balance of normal fire activity is primarily campfires, including homeless fires and party fires started by careless individuals. Other historic problems include freeway related causes from vehicle fires. Overheating and consumption of vehicles with the wildland as an exposure is the normal vegetation fire ignition source.

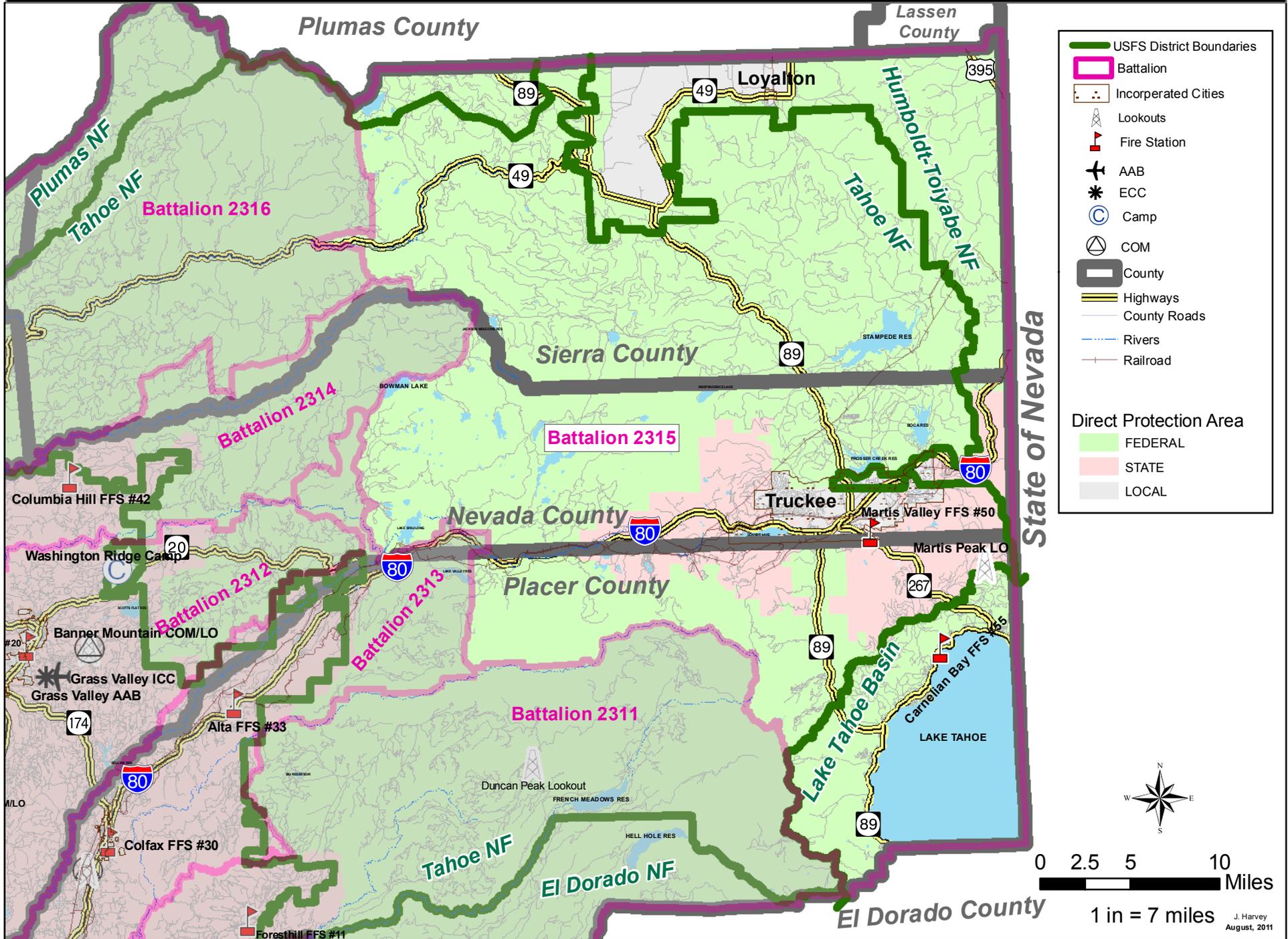
Statistics from the 2010 fire season do not represent normal fire occurrence in the Battalion. The fuel moistures and relatively cool moist fire season yielded fewer fires with abnormal ignition sources. Railroad caused fires are represented as 32% of the ignitions, which is typically much fewer. The 2010 railroad fires were a function of workers using fire causing tools and ignition within the locomotive which spread to the vegetation. Prevention is taking place by performing industrial inspections at work sites and providing advice on improving fire fighting ability of workers, by permitting work during fire season with mitigations to prevent fire, and by Union Pacific Railroad activities geared toward vegetation management along the rail line.

The balance of 2010 fire cause appears normal and do not reflect a significant fire problem. Despite this fact, the staff of the Battalion continues to employ fire prevention practices outlined below in order to reduce the total number of ignitions within the Battalion.

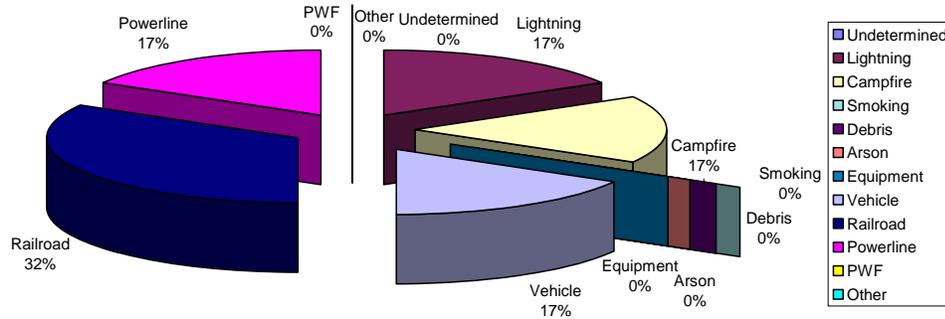


NEVADA - YUBA - PLACER UNIT (NEU)

Battalion 15 - Administrative Boundary

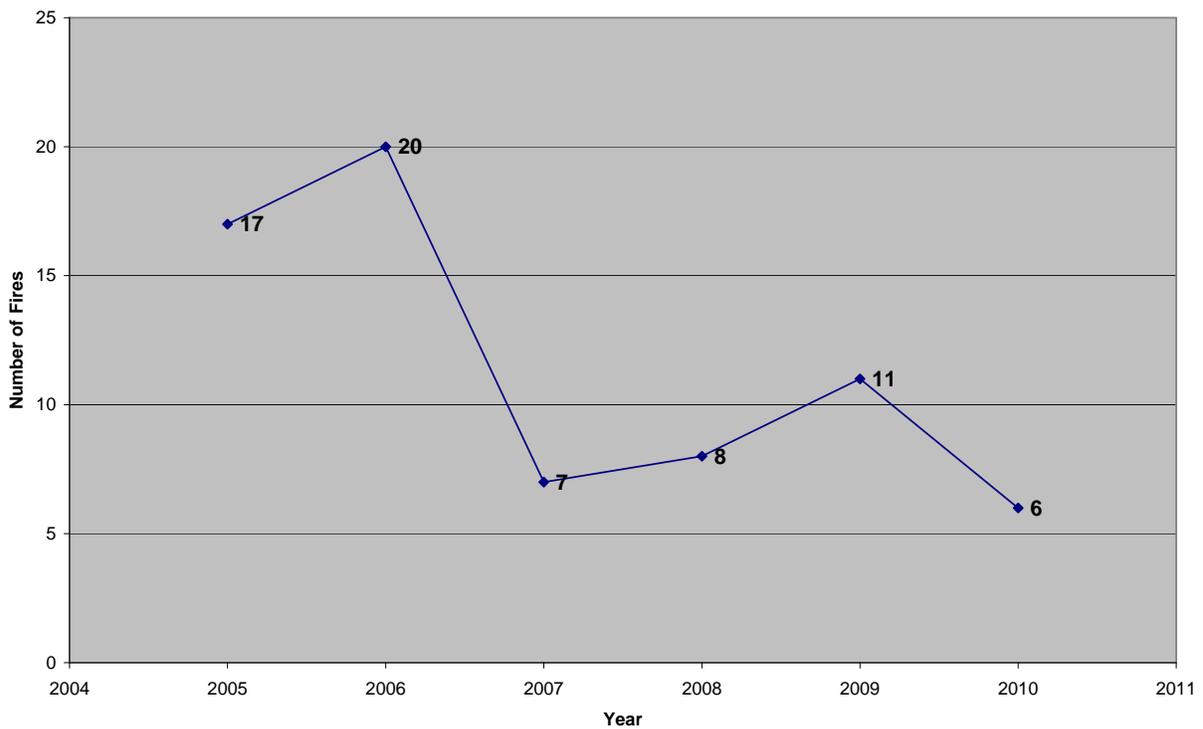


2010 Battalion 15 Fire Causes



Undet.	Lightning	Campfire	Smoking	Debris	Arson	Equipment	Vehicle	Railroad	Powerline	PWF	Other
0	1	1	0	0	0	0	1	2	1	0	0

Battalion 15 Ignitions (2005-2010)



Mitigation Strategies

1. Public Education:

Battalion 15 will work to reduce fire ignitions and reduce damage by fire occurrences by actively participating in public education programs, fuel reduction programs, and homeowner education programs. The components to meet these goals are as follows:

A. Burn Permit Administration

About 2000 dooryard burn permits are issued annually in the battalion. The majority are issued by our local government cooperators. Permits are required from May 1 through December 1. The CAL FIRE imposed burn ban is an important and necessary regulation. Burning on the eastside is daylight hours only on approved burn days. Escapes are rare and usually insignificant.

LE-5 (California Inter-Agency Burning Permit) and LE-7 (Project Type Burning Permit) are issued on SRA lands after an inspection by an authorized employee of CAL FIRE or USFS. These project burn permits are typically used to dispose of larger piles of material and typically require an inspection by agency personnel prior to authorization to burn. About three project burn permits are issued annually by the Battalion Chief.

B. Public Education Forums

CAL FIRE staff is involved in numerous public education programs. The Truckee-Tahoe area is a world known resort area. The target audience is quite large and has proven to be receptive to various programs.

On going events throughout the year:

- Truckee Rodeo Kid's Day – CAL FIRE will have an engine for interactive demonstrations at this year's event, scheduled for Friday, July 22nd.
- School Programs - An interagency effort by CAL FIRE, the Truckee Fire Prevention District, Northstar Fire Department, and the USFS, targets all schools in Truckee, reaching grades K - 3 in the spring. Students create fire safety posters for display on roadside fire prevention signs.
- Fourth of July Parade – CAL FIRE will have an engine in this year's parade.
- Pre School Programs – CAL FIRE will continue to provide age appropriate fire safety programs with an appearance by Smokey Bear at the request of any public day care centers.
- Reno Rodeo - Assist Sierra Front with staffing a booth.
- Tahoe Re Green - An on going process assisting allied agencies around the Lake Tahoe Basin. Projects include: fuel reduction on state owned and conservancy lands and PRC 4291 cooperative inspections.
- Channel 6 - The local message station will run the defensible space tape throughout the summer and event specific messages on request.

C. Fire Prevention

Martis Peak Fire Lookout - Martis Peak Fire Lookout was put into service as a detection platform on July 20th, 2010, and is staffed daily through September 30th. Martis Peak reported 24 smokes in 2010, at distances of up to 40 miles. Three of the smoke reports were initial reports, with one in the South Lake Tahoe area at a distance of 25 miles.

Martis Peak also recorded the locations of numerous lightning strikes, and is instrumental in tracking the progress of developing thunderstorms. Lookout VIP staff at Martis Peak made over 2000 public contacts in 2010, speaking with visitors from as far away as South Africa. The operating agreement with the USFS will remain in place for 2011 with minor changes. We will continue to promote the lookout through the local media and community groups this spring to generate interest in volunteer staffing. All volunteers will be signed up as Volunteers In Prevention (VIP). The Truckee Town Wildland Contract will fund a paid CAL FIRE Lookout position as in past years. This will be a four days per week position, so the remaining three days per week will require staffing by VIPs.

Fire Safe Programs – The Battalion will work regularly with developers and County Planning Departments to ensure PRC 4290 requirements are met on all new construction. Planners are assigned to Nevada and Placer Counties and will review projects where necessary. The BC will participate in field inspections at the BC level when needed. The objective is to emphasize fire safety during construction and compliance with PRC requirements when complete. The BC will also participate in the Eastside Chapter of the Nevada Fire Safe Council.

Railroad and Power Company Contact - The Battalion Chief makes annual contact with Union Pacific representatives. The Battalion is informed of any on-going maintenance along the thirty miles of active track within the Battalion. Spot inspections are usually made and provide suggestions on areas of fire safety improvement. Railroad starts in the area average about one per year.

Annually, the BC meets with both Sierra Pacific Power and Truckee Donner PUD reps to discuss summer work projects in the area. Report and cooperation with SPP has been outstanding. Conductor clearance crews are aggressive in the Battalion. Power line inspections are currently performed by the companies themselves.

D. PRC 4291 inspection:

PRC 4291 inspections serve a dual purpose. One is as a vegetation management motivator. The other is as a public education tool. Battalion staff will continue to support this activity. Station 55 personnel will continue to assist the North Tahoe Fire District with LE-100 inspections on the north and west shores of Lake Tahoe. NEU will supply a Fire Prevention Specialist to assist the Truckee Fire Protection District with LE-100 inspections within the Truckee town limits.

Northstar FD has a comprehensive inspection program in Placer County within SRA that has achieved near 100 percent compliance.

- 2. Vegetation Management:** The vegetation management programs are directed at reducing the potential of a large fire and reducing the damage from a large fire.

B. Chipper Program / Residential Fuel Treatment

Truckee Fire funds and supports a residential chipping program within the Truckee Fire District. The program provides chipping services to landowners to abate hazardous vegetation with reduced costs to the landowner and fewer opportunities for an escaped control burn with the added benefit of reduced impacts to air quality. The Battalion receives great benefit from this program. The Battalion encourages landowners to keep their properties free from flammable vegetation. NEU will support this chipping effort by providing funding when available.

B. Installation and Maintenance of Fuel Breaks

The Battalion will support the acquisition of project funds that will achieve the installation and maintenance of fuel breaks. NEU Washington Ridge Fire Crews will continue to support the communities of Tahoe Donner and Northstar in a comprehensive fuel reduction and fuel break program.

C. VMP Projects

The purpose of these projects is to eliminate the potential for a large and damaging wildfire by eliminating the fuel in a controlled fashion. The current VMP schedule includes:

Donner State Park VMP –

Location: Approximately 23 acres within the Donner State Park boundary. The project area is located south and west of the town of Truckee. Donner Lake is north of the project area.

Purpose: In cooperation with California State Parks, the primary objectives of the project are fuel hazard reduction and wildlife habitat improvement. The project area is strategically located to protect State Park facilities and the Town of Truckee from a summer wildfire burning in the Coldstream Valley or on Schallenberger Ridge. The project shall reduce the threat of catastrophic wildfire and improve native forest composition and structure.

Program Funds: VMP

CEQA: PEIR

Chinquapin – North Tahoe Fire Protection District VMP

Location: Approximately 20 acres between the Dollar Point subdivision and the Chinquapin Condominiums within the North Tahoe Fire Protection District near Tahoe City and Kings Beach. An additional 50 acres will be treated south of the Kingswood West subdivision. The burn will be conducted by CALFIRE, North Tahoe Fire Protection District and other local fire agencies.

Purpose: The primary objectives of the project are for fuel hazard reduction, fuel modification and wildlife habitat improvement. The project area consists of Sierra mixed-conifer timber type.

Program Funds: VMP, Community Assistance Grant

CEQA: Cal Fire Mitigated Negative Declaration

Waddle Ranch VMP

Location: Waddle Ranch consists of approximately 1,462 acres of forest land within the Martis Valley. The landowner is the Truckee Tahoe Airport District.

Purpose: The primary objective is the reduction of fuel. Project area is 60 acres divided into 10 units, all of which have been previously masticated.

Program Funds: VMP

CEQA: PEIR

Table 6 – Battalion 15 Fuel Modification Projects, Community Outreach and Education Programs

Project Name	Status	Estimated Completion Year	Project Type	Net Acres
Chinquapin	A		Prescribed Fire	
Donner State Park VMP	A		Prescribed Fire	
Waddle Ranch	P		Prescribed Fire	
Truckee Home Show	O		Community Education, 2-Day Event	
Truckee Rodeo	O		Youth Education	

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

Success Stories

80 Fire Success Story Results from Cooperative Fuel Reduction Efforts

CAL FIRE works cooperatively at the state, county and local levels to complete fuels reduction projects throughout the Nevada-Yuba-Placer Unit. Projects are designed to encourage landowners to create defensible space and to protect communities from costly and damaging fires. NEU utilizes state and federal grant funds to support these fuels reduction projects.

Recently, on August 22, 2007 cooperative fuel reduction efforts completed by the Tahoe/Donner Homeowners Association, Truckee Fire District and CAL FIRE proved to be a critical component in stopping the advancement of what could have been a devastating wildland fire. The fire started near Highway 80 and quickly advanced upslope towards the Tahoe/Donner subdivision. As the fire approached the subdivision, it



burned into an existing fuel break and was stopped. The fuel break was designed and implemented by the Tahoe/Donner Homeowner’s Association and the Truckee Fire District fuel reduction programs. Cal Fire has provided support to these programs through the California Forest Improvement Program (CFIP) and the Proposition 40 Fuels Reduction Program.



The purpose of Cal Fire's California Forest Improvement Program (CFIP) is to encourage private and public investment in, and improved management of, California forest lands and resources. The program scope includes the improvement of all forest resources, including fish and wildlife habitat, soil, and water quality. Cost-share activities include land management planning, site

preparation, tree purchase and planting, timber stand improvement, fish and wildlife habitat improvement, and land conservation practices.

The goal of Cal Fire's Proposition 40 Fuels Reduction Program is to reduce wildland fuel loadings that pose a threat to watershed resources and water quality. This fuel reduction program is funded by Proposition 40, the California Clean Water, Clean Air, Safe Neighborhood Parks, and Coastal Protection Act of 2002.

High Priority Target Areas

- North side of Highway 80
- Glenshire
- Tahoe-Donner.

2011 Action Plan:

Although 2010 proved to be a slower than average year for vegetation fires, Battalion 15 remains quite busy with prevention activities. The strong relationship between CAL FIRE, Truckee Fire Protection District, North Tahoe Fire Protection District, Northstar Fire Department, U.S. Forest Service and others has provided for a professional and comprehensive program that has shown benefits in public awareness and concern. Many of the fires are caused by people who reside outside the area. Lightning activity is traditionally a wild card in the high country, and most lightning activity in 2010 brought significant moisture. There were no fire starts in 2010 attributed to debris burning or playing with fire. This indicates that education of the public during dooryard burn permit issuance, and education programs aimed at preschool and school aged children have been quite successful.

Ignition Management Plan

Battalion 16

Battalion Description

The Loma Rica/Browns Valley battalion serves a large area of SRA. Population densities within the battalion consist of the towns of Loma Rica, Browns Valley, Brownsville, Dobbins, and Oregon House. The battalion is dominated by grass fuel models in the low valley areas giving way to oak woodlands, mixed brush and conifer at the higher elevations. The topography is flat near the valley floor changing to gentle rolling slopes as one moves west toward the Sierra Nevada. The battalion contains several areas where small fires could likely become large damaging incidents.

There are several cooperators within the Battalion including Dobbins/Oregon House Fire Protection District, Foothill Fire Protection District, Loma Rica/Browns Valley Fire and the Yuba Watershed protection and Fire Safe Council.

Battalion Fire History and Occurrence

Large fire activity in the Battalion has been consistent over the past few years within Battalion 16. Large fire events include the Williams fire (Sept 1997- 5,838 acres), Pendola Fire (Oct 1999 – 11,725 acres), Marysville Fire (Aug 2006 – 388 acres), Yuba Fire (Aug 2009 – 3,829 acres), and Bullards Fire (Aug 2010 – 1,307 acres). Large damaging and costly fires are a regular occurrence in the Battalion. Fire hazard severity mapping (2007 FHSZ), shows that there is a high hazard that large damaging and costly fires will occur in the future.

Historically debris fires have been the biggest problem within this battalion. This is followed by a consistent arson problem in the summer and increasing quantities of roadside fires. For the year 2010, equipment use at 25% was the greatest cause of fire within the battalion. Construction and land management activities often require the use of equipment. Many of the roads in the Battalion have vegetation growing very close to the road edge, or near the road surface. The exposure of these fuels to hot exhaust, exhaust discharge, or flame impingement from fires originating within the vehicle is a problem typical of any community.

The statistics show that debris burning continues to be a significant cause (15%) of wildfire in the battalion. Residents often delay burning until the final weeks prior to burn bans being instituted. The result is a greater number of burn piles being burned later in the season, when control of the fires is more difficult due to weather and fuel conditions. Public education at the time of burn permit issuance will continue to be used to reduce the number of escapes.

Arson and undetermined fires are considered equally and account for 27% of the fires in the battalion. These fires are intentionally set or fires which the ignition could not be determined due to various factors. These fires are the most difficult to reduce due to their nefarious nature. The Unit's prevention program is charged with investigation and pursuit of arson as a felonious activity. The NEU prevention bureau will continue to assist battalion staff with cause determination, if a fire problem persists with no apparent cause. The result is, over time, a reduction in arson fires due to arrest and prosecution and determination of cause on undetermined fires allowing fire prevention education or hazard mitigation to address the actual cause.



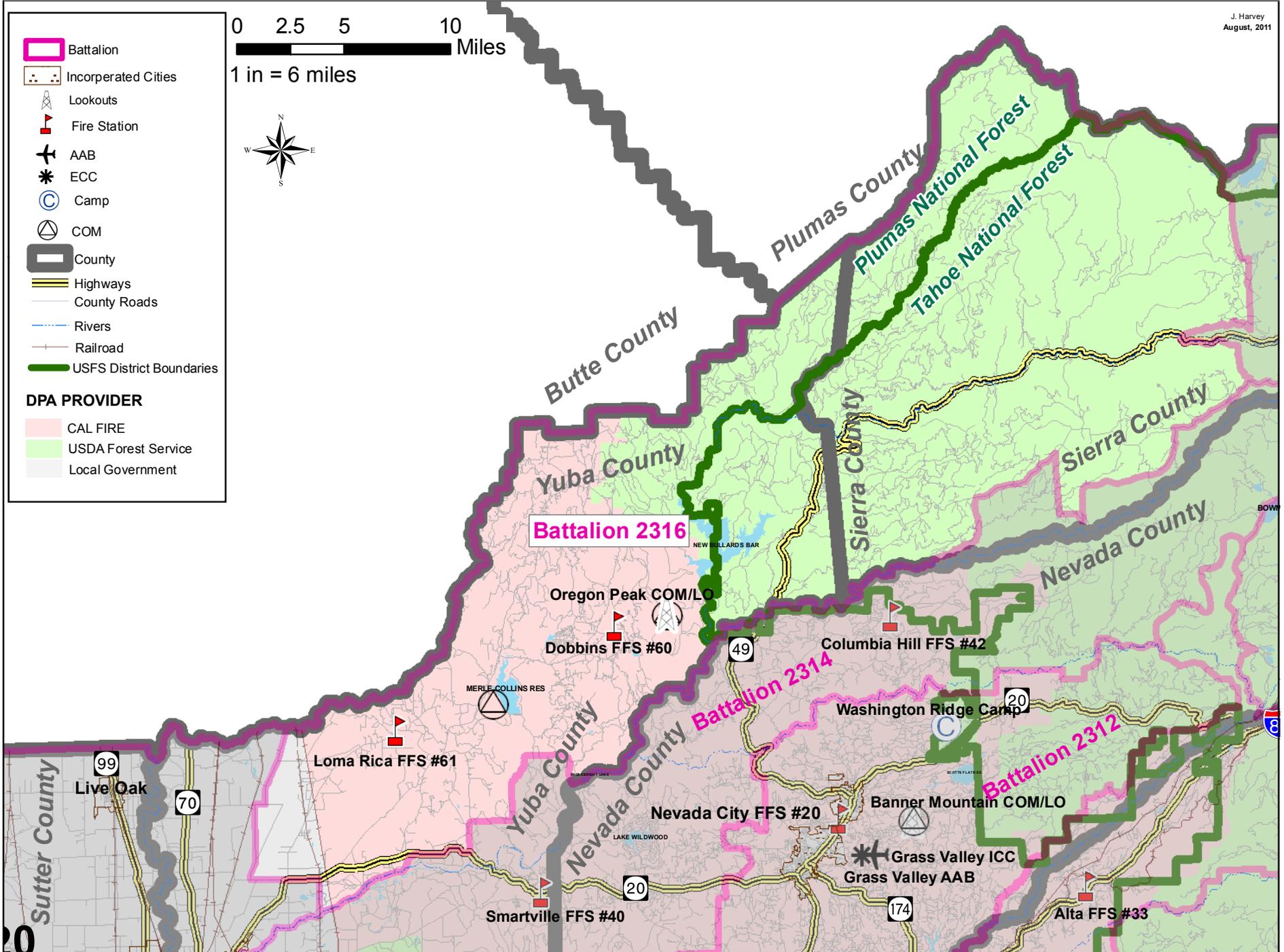
NEVADA - YUBA - PLACER UNIT (NEU) Battalion 16- Administrative Boundaries

J. Harvey
August, 2011

- Battalion
 - Incorporated Cities
 - Lookouts
 - Fire Station
 - AAB
 - ECC
 - Camp
 - COM
 - County
 - Highways
 - County Roads
 - Rivers
 - Railroad
 - USFS District Boundaries
- DPA PROVIDER**
- CAL FIRE
 - USDA Forest Service
 - Local Government

0 2.5 5 10
Miles

1 in = 6 miles





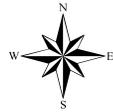
NEVADA - YUBA - PLACER UNIT (NEU)

Battalion 16- Fire History

J. Harvey
August, 2011

0 2.5 5 10
Miles

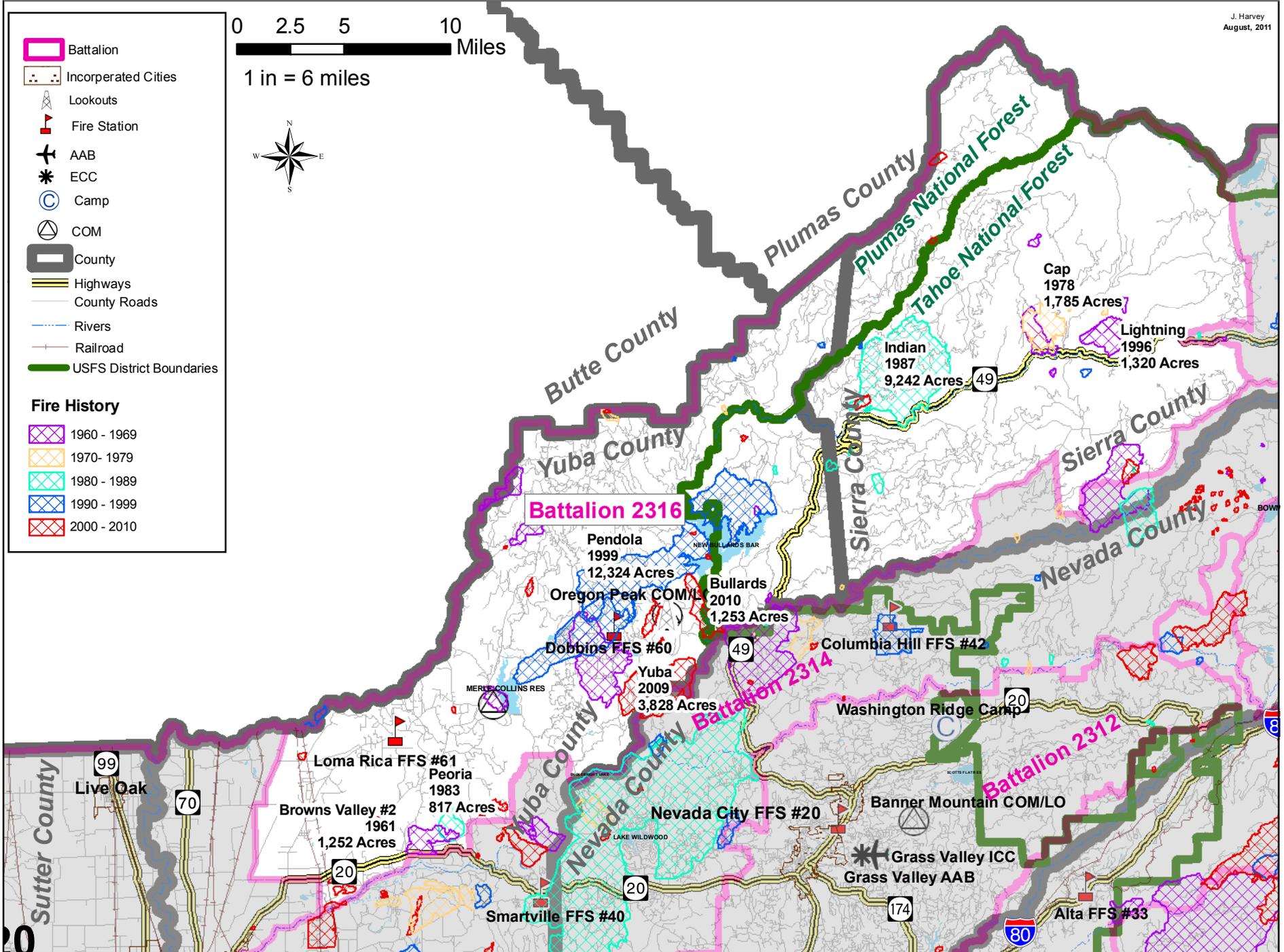
1 in = 6 miles



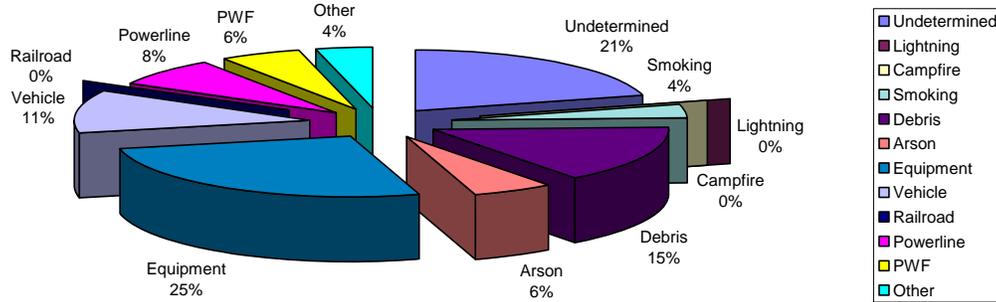
- Battalion
- Incorporated Cities
- Lookouts
- Fire Station
- AAB
- ECC
- Camp
- COM
- County
- Highways
- County Roads
- Rivers
- Railroad
- USFS District Boundaries

Fire History

- 1960 - 1969
- 1970 - 1979
- 1980 - 1989
- 1990 - 1999
- 2000 - 2010

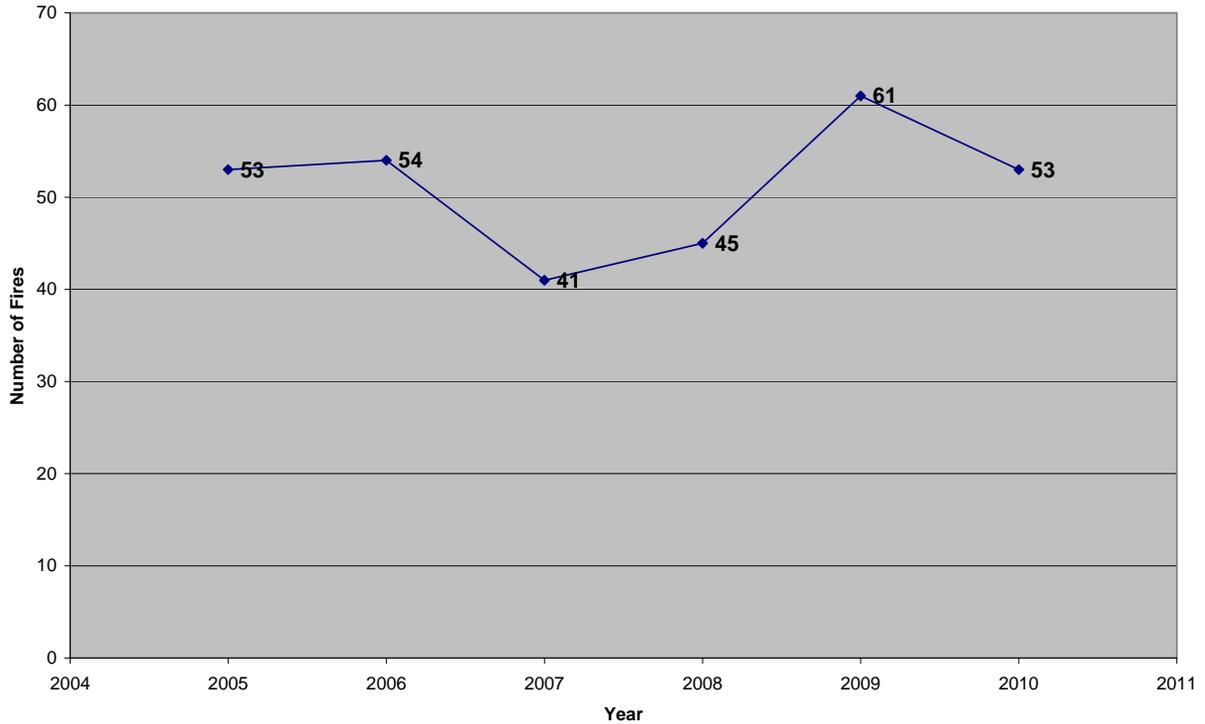


2010 Battalion 16 Fire Causes



Undet.	Lightning	Campfire	Smoking	Debris	Arson	Equipment	Vehicle	Railroad	Powerline	PWF	Other
11	0	0	2	8	3	14	6	0	4	3	2

Battalion 16 Ignitions (2005-2010)



Mitigation Strategies

Mitigation strategies within the battalion include: Advertising and executing LE-100's, year round public education and fuel break construction.

1. Public Education

A. Burn Permit Administration

In March update the Yuba County Burning Permit Issuance Plan in conjunction with the Feather River Air Quality Management District.

In April, Battalion staff will train the V.I.P.s in burning permit issuance and ensure that Cal Fire employees have reviewed the the Yuba County Burning Permit Issuance Plan.

B. Public Education Forums

Community Involvement - Public relations and interaction between Cal Fire and the community is a key factor in promoting a public understanding of fire prevention. Each year Battalion staff will:

- Station 61 will continue a year round coordination of the sales and installation of street and address signs and house numbers.
- Station 60 and 61 along with VIP's and the volunteers from the LR/BV C.S.D. will participate in local community activities including Wild Hog Glory Daze – Loma Rica Lions Club in May, Brownsville Mountain Fair – Foothill Fire Department in July, Bok Kai Parade – Marysville in March, Beale Fire Prevention Week – Beale A.F.B. in November.

C. Fire Prevention and Awareness

An ongoing program, which furthers the public's awareness of the wildland fire problem and develops public habits conducive to fire safety, will be provided. Annually the Battalion staff will:

- During the months of May and June release (4) four general fire prevention news releases to the Appeal Democrat and the Rabbit Creek Journal newspaper.
- Post fire prevention signs
- Volunteers In Prevention (VIP) will conduct school programs each winter at the following schools: Yuba Feather, Dobbins, Loma Rica, and Browns Valley. Station 60 and 61 will provide assistance and an engine at each program
- Station 60 and 61 will be expected to conduct fire prevention programs when requested by local groups, provided fire activity allows for the commitment.
- Participate as an acting member on the Yuba Watershed Protection and Fire Safe Council.
- Conduct PRC 4291 inspection.
- Coordinate with Loma Rica/Browns Valley CSD personnel and incorporate fire prevention and burning permit issuance program to the local responsibility areas of the fire district.
- A door-to-door program to promote the reflective house numbering program.
- Meetings will be conducted with local cooperators covering fire prevention specific to their facilities or agency.

- Reduce the wildland fuel loading by 1) reviewing development projects within the SRA and require developers to instill fuel reduction practices, 2) Yuba Watershed Protection and Fire Safe Council Fuel Break/modification projects, 3) Yuba County Road fuel modification project, 4) CSA 2 emergency evacuation route development
- Each spring spot check 1/3 of the power lines within the Battalion, a map will be maintained to ensure that a different area is inspected each spring.

2. Vegetation Management:

A. Chipping

B. Fuel Breaks

C. VMP Projects

Richards Ranch II VMP (Yuba County)

Location: Approximately one mile south of the town of Oregon House and ½ mile north of Englebright Lake and the Yuba River.

Purpose: The project area encompasses the cooperator's total land ownership (6,045 acres), of which 3,375 acres are included in the burn units. The project objective is to reduce the potential of a costly and damaging fire which may originate within the project or on adjacent property.

A series VMP prescribed burn projects adjacent to this project, scattered from the Yuba River to Dobbins and Oregon House are in the planning phase. Together, these projects will create a location where fuels have been modified to effectively create a fuel break and provide a tactical position to attempt to stop a large fire. The project area has been treated by the landowner over the last few years. The land owner has constructed control lines over that same period of time.

The overall objective is to remove the standing Manzanita and live oak stands which have taken over the project area, reduced the grazing capabilities of the land, and created a heavy fuel load for firefighting efforts. Reducing the fuel load will improve wildlife habitat, improve grazing use and allow for better fire protection to the communities of Oregon House and Dobbins from wildfires that may originate in the Englebright Reservoir. Prescribed fire will be the treatment method for the entire project.

CEQA: Programmatic EIR

High Priority Target Areas

- Due to the demand for water quantity and clarity, watershed protection is a high priority.
- High tension power lines in the Battalion
- Yuba River drainage
- Dobbins Area WUI

- Daugherty Hill Wildlife Area
- Along Rural Roads in the Battalion
- Oregon Ridge Fuel Break

Table 7 – Battalion 16 Fuel Modification Projects, Community Outreach and Education Programs

Project Name	Status	Estimated Completion Year	Project Type	Net Acres
Yuba County Chipper	A	O	Fuel Reduction/Chipper	
Yuba County Roadside Clearing	A	O	Fuel Reduction	
Daugherty Hill Wildlife Area Fuel breaks	O	O	Fuel Break project with DFG	
Yuba Firesafe Council	O	O		
Richard’s Ranch VMP	O	O	Vegetation Management	3,375

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

Success Stories

BLM Grant for Fuel Reduction is One of the Keys to Stopping the Dry Fire

The Yuba Watershed Protection & Fire Safe Council is targeting fuel reduction along roads as a focus for fire season planning in the Yuba County foothills. The Council’s partnership with the Yuba County Public Works Department has resulted in the treatment and maintenance of fuel along over 40 miles of road to reduce vehicle fires from spreading to the wildland. The Bureau of Land Management provided funding through California State Fire Safe Council Clearinghouse to reduce fuel along a six mile portion of Marysville Road.

On the early evening of July 31, 2009, a truck traveling on Marysville Road started at least 5 small road-side grass fires along the cleared section of the project. The reduction of fuels along the road slowed the intensity and spread of the fires. Another large factor in controlling the fire was a dozer line constructed annually by CALFIRE in a wildlife refuge uphill from the fire starts. The fires initially did not burn with high intensity due to fuel reductions. Air tanker use would have been limited if the fire continued to burn into the night, as operations must be suspended shortly after sunset.

Strong initial attack by CALFIRE air resources reinforced the fire lines, allowing ground forces to rapidly control all the fires. CALFIRE fire modeling estimated without the fire prevention work the flame length could have exceeded 20 feet (too extreme for direct attack by ground units at the head of the fire) and the fire would have reached the top of Stanfield Hill in about a half hour.

Homes would have been critically threatened and destroyed. There was a potential for significant spotting. This fire would have exceeded initial attack, and would have required a significant augmentation of resources. It is very likely that this fire would have grown to at least a hundred acres, and destroyed several homes. This is the third documented vehicle-caused fire that did not become catastrophic because of these roadside fuel reduction projects.



Roadside fuel reduction also provides other management benefits during a fire by improving evacuation corridors for citizens and better access for fire fighters and equipment. Due to the roads' bare surface and the commitment of the Yuba County Public Works to maintain the fuel reduction along treated roads, they can also serve as fuel breaks in limited intensity fires.

For more information contact Yuba Watershed Protection & Fire Safe Council Facilitator, Glenn Nader at ganader@ucdavis.edu

Fuel reduced along the Yuba County's Marysville Road slows the rate of spread of the Dry Fire

Middlebrook Fuel Break Used as a Fire Fighter Tool in the Yuba Fire

A CAL FIRE Prop 40 funded grant to the Yuba Watershed Protection & Fire Safe Council was used by fire crews to stop the Yuba Fire from going to Marysville Road and blocking traffic and damaging more watershed and homes in the Dobbins community.

In 2004, landowner, John Middlebrook completed construction of a fuel break 300 feet wide $\frac{3}{4}$ of a mile on his property along Marysville Road and a portion of the east boundary using his own money. The Yuba Watershed Protection and Fire Safe Council, with assistance from High Sierra Resources Conservation and Development Council Inc. obtained a Proposition 40 grant from Cal Fire to complete an additional 1.1 miles of fuel break along the easterly boundary and southerly end of Middlebrook property. Brush and small trees were masticated with equipment or hand cut, piled and burned. A maintenance/access road within the SFB was also constructed. The project was started in 2007 and was completed early in 2008.

On Friday, August 14, 2009, the Yuba Fire started as a result of a bird hitting powerlines. The fire consumed 3,891 acres before it was contained. The fire was slowed down by the southerly end of the fuel break. If the fire had extended 500 to 1000 feet



Fire stopped at the Middlebrook fuel break and access road

northerly it would have entered into young timber stands and done much economic damage and marched northerly uphill toward Marysville Road, a main arterial highway in the County. The fuel break provided time to marshal firefighting resources. Quick access to the fire was also gained from Lake Francis Road to the south into the fire and through the grant funded fuel break access road. The \$52,500 fuel break grant paid off many times over by slowing and stopping the fire, while at the same time providing access for the successful firefight.

Yuba County Roads Project

After the 1997 Williams fire and following the recent (2009) Yuba Fire, the Yuba Watershed Protection & Fire Safe Council (YWP&FSC) identified that heavy fuel along roadways restricted the evacuation of residents and limited fire fighter access. Through this request, 7.5 miles of Oregon Hill Rd (45 acres) will have a shaded fuel break constructed along the county road easement. This will help ensure safe ingress / egress during future community evacuation and fire suppression efforts. This project will also show the public the need and success of reducing fuel loading on their properties. The Yuba County Department of Public Works with assistance from Cal Fire's Washington Ridge Conservation Crew will be completing the work. The hand crews will cut and chip small fuels, while larger fuels will be cut into firewood lengths and left for local landowners. The common chaparral species to be removed are Manzanita, deer brush, toyon, ceanothus, and tanoak. Some small conifer species will also be removed. Completing this project will increase community safety. This project continues a successful program that was initiated through 7 previous grants & has completed 100 miles of shaded fuel breaks along Yuba County Roads.



Roadside Chipping Before.



Roadside Chipping After.

2011 Action Plan:

- Increase advertising exposure and executing of LE-100 inspections.
- Continue year round public education efforts within the battalion
- Continue to support fuel reduction efforts within the battalion
- Establish roadside voluntary disking program where feasible on private property.

Ignition Management Plan

Battalion 17

Description

The Lincoln Battalion serves a mixture of SRA and LRA. The battalion is dominated by grass fuel models in the lower valley area and oak woodlands and mixed brush at higher elevations. The topography is flat near the valley floor changing to gentle rolling slopes as one moves east toward the foothill areas. The battalion contains several areas where small wind-driven fires could likely become large and damaging events.

There are several cooperators within the battalion including the cities of Lincoln, Roseville, Wheatland, Rocklin and Loomis Fire Departments, Placer County.

Fire occurrence within Battalion

The battalion 17 area historically has small acreage fire events. This area does have the potential to experience severe wind driven events. One of the most notable in past years is the wind driven Gladding fire (Sept 2008 – 1,090 acres). Lincoln has traditionally been an area of agriculture and irrigated pastures which served as effective firebreaks. Today development is changing the rural landscape, creating a wildland urban interface at risk.

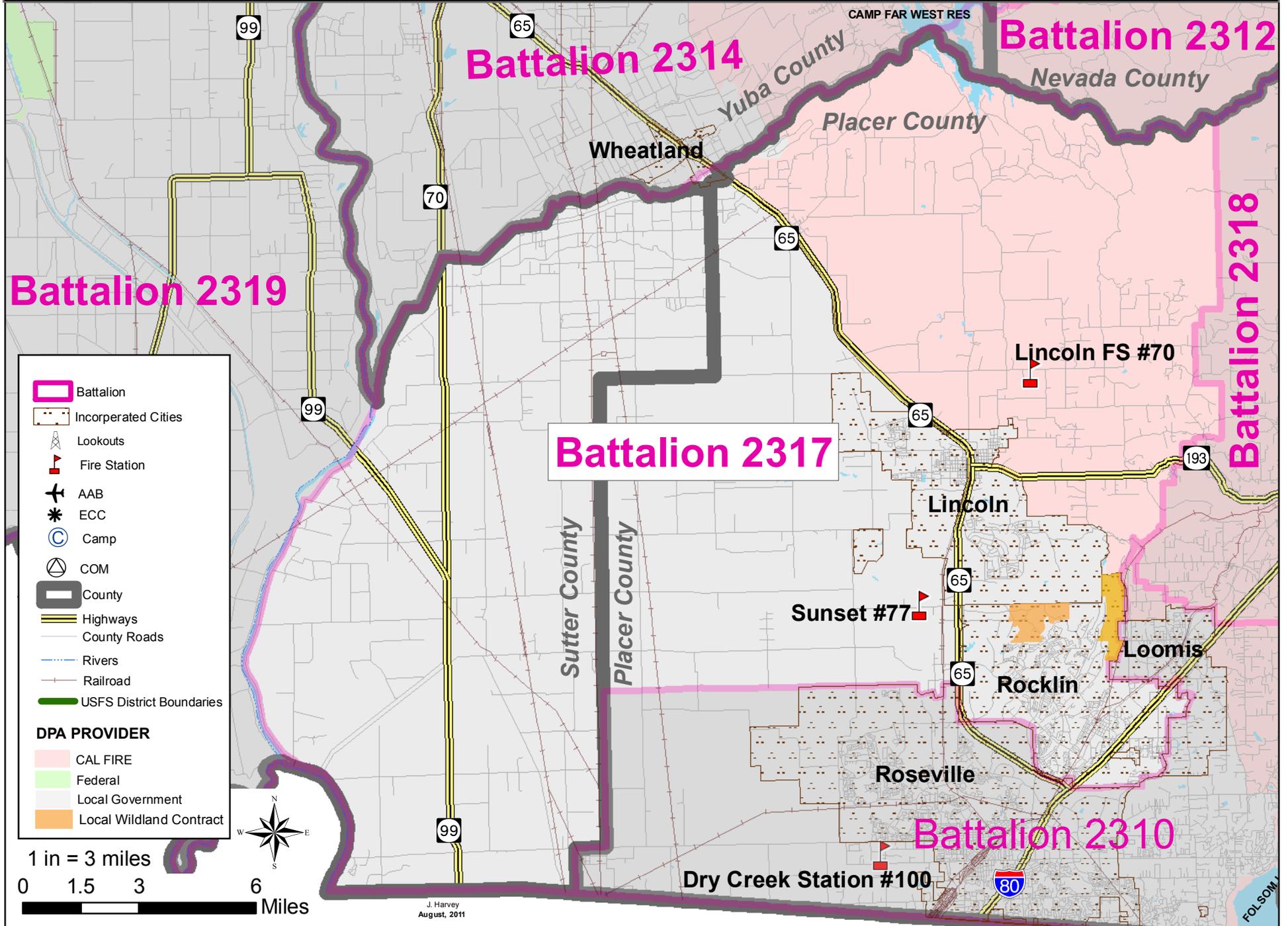
Arson, most often sourcing from the urban center, is a significant problem within the battalion constituting 16% of the fires during the 2010 season. Battalion personnel are working with the prevention bureau to address this issue. Equipment use comprised 21% of the ignitions with 2010.

The majority of the fires within the battalion during the 2010 season were from undetermined (25%) causes. Prevention staff is working with the battalion on cause determination training to help reduce the undetermined causes. The result will allow hazard mitigation to address actual causes.

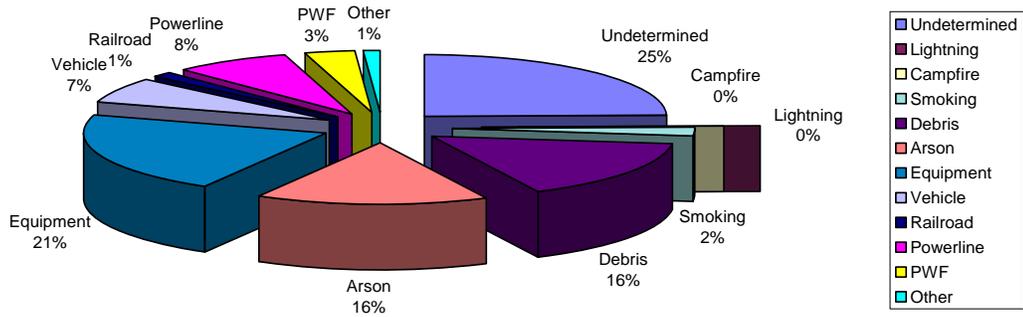


NEVADA - YUBA - PLACER UNIT (NEU)

Battalion 17- Administrative Boundaries

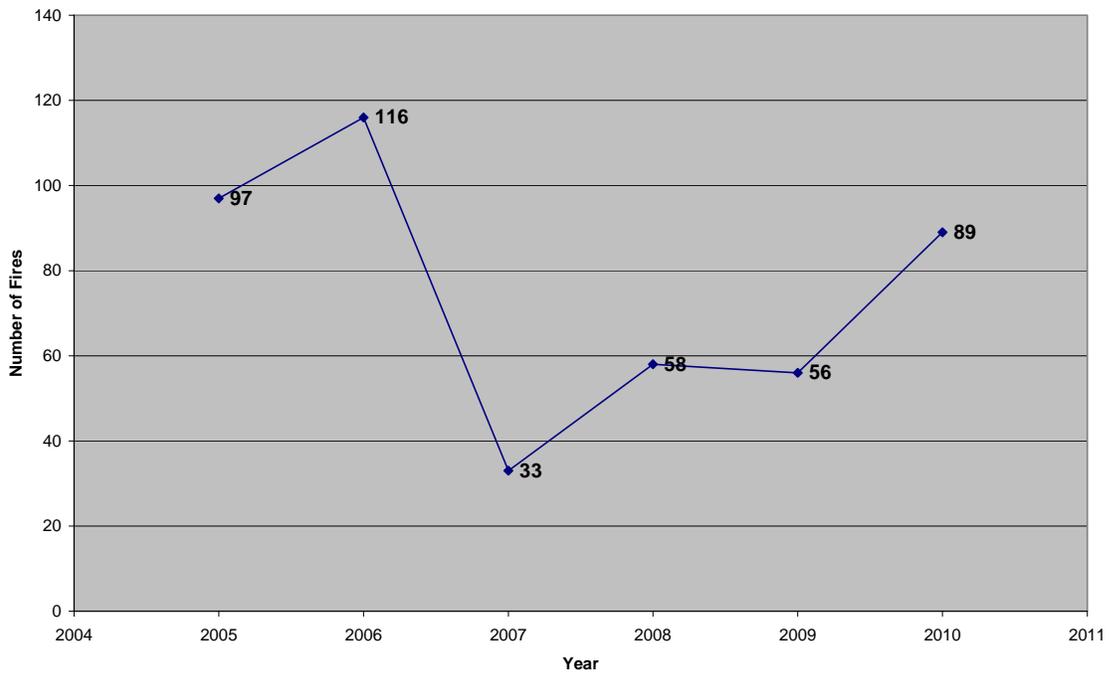


2010 Battalion 17 Fire Causes



Undet	Lightning	Campfire	Smoking	Debris	Arson	Equip	Vehicle	Railroad	Powerline	PWF	Other
22	0	0	2	14	14	19	6	1	7	3	1

Battalion 17 Ignitions (2005-2010)



Mitigation Strategies

Fire Protection Planner

The Placer County Fire Protection Planner will continue to provide building plan fire and life safety reviews for PRC 4290 and uniform fire code regulations.

Burn Permit Administration

Issuing points for LE-62's will be Cal Fire/Placer County Fire Station 70 and Station 77. The local pollution control district determines burn hours. Pre-inspections will be provided on a requested or as needed basis. With each permit written, a Placer County Air Pollution Control District's Residential Open Burning informational sheet will be included. A copy of the permit will be filed at Station 70 or Station 77.

Defensible Space

A battalion goal is to target areas within the foothills that have a significant wildland fire threat or historical clearance problems and inspect homes using the PRC 4291 program. Campgrounds at Camp Far West Lake will be inspected prior to June 15th for compliance of related Forest and Fire Laws.

Power line Inspections

Inspection of power lines will occur during the PRC 4291 inspections. Staff will advise the battalion chief of a violation, the battalion chief will coordinate an inspection by the Units Fire Prevention Bureau.

Volunteer Presence

Battalion 17 has a strong volunteer firefighter presence, including the following stations Paige (Station 75), Thermalands (Station 74), Fowler (Station 73), and Sheridan (Station 78).

Community Involvement

National Night Out

Thermalands Volunteer Fire Department Pancake Breakfast

Public Education

School programs- Station 70 staff along with the Lincoln group; provide fire safe presentations to schools within the battalion. Age specific fire prevention material will be handed out at each presentation.

Parades- each year the City of Lincoln invites Station 70 and the Lincoln companies to their annual parade. The engine company staff will display the engine so members of the public can inspect the engine and equipment, staff will hand out fire prevention material and discuss fire prevention issues.

Business fire safety programs- Station 70 and Station 77 staff will provide instruction on the proper use of fire extinguishers to local businesses within the battalion.

Fire Prevention Signs- Station 70 staff provide maintenance of several signs within the Battalion. Station 70 staff request 3 additional fire prevention signs that will be placed in targeted areas during the fire season.

Thunder Valley Casino- Station 77 in cooperation with Thunder Valley Casino will provide fire prevention material and information to customers of the Casino during National Fire Prevention Week.

High Priority Target Areas

Lincoln City boundaries, Sheridan

Open space areas surrounding dense populations and main road ways are included in the high priority areas.

Table 8 – Battalion 17 Fuel Modification Projects, Community Outreach and Education Programs

Project Name	Status	Estimated Completion Year	Project Type	Net Acres
Hidden Falls	A	O	Fuel Reduction	
Placer County Land Trust VMP	P	P	Vegetation Management	
Fiddymment Training Area	O	O	Firefighter Training Area	
Trail Corridors	O	O	Fuel Reduction	

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

Success Stories

- Juvenile fire setter program

2011 Action Plan:

- Work with Unit prevention to reduce the number of undetermined fire causes: battalion staff will continue prevention training to help improve undetermined fire causes within the battalion.
- Continue public education efforts within the battalion
- Continue defensible space inspections within the battalion
- Focus on business inspections and pre-fire plan activity.

Ignition Management Plan

Battalion 18

Description of the Battalion

The battalion includes unincorporated areas within Placer County and northwest Auburn City through Local Wildland Contract. Highway 80 borders the eastern portion of the battalion and Highway 193 comprises the southern boundary. The topography is characteristic of the Sierra Nevada foothills containing gentle slopes in the flat valley areas to steep inner gorge canyons along upper watercourses. Fuels are a mosaic of grasses, mixed brush, oak woodlands and mixed hardwood-conifer. The battalion includes an extensive amount of urban and rural developments, all bordered by wildland urban interface.

The battalion contains several cooperators including Auburn City Fire, Newcastle Fire, Penryn Fire, Placer County, Placer County Fire Alliance, Placer County Resource Conservation District, U.S. Bureau of Reclamation.

Discussion of fire occurrence within Battalion

Historically both debris burning and homelessness have been the most significant problems within the battalion. Homelessness caused ignitions seems to be decreasing with development. Several of the undetermined fires may in fact be attributed to arson. The prevention bureau is assisting battalion staff with cause determination training to help reduce the number of undetermined causes.

Equipment use combined with vehicles comprised 40% of the fire causes within the battalion during the 2010 season. Construction and land management activities within the WUI often require the use of equipment. This equipment is often rented and use takes place where vegetative fuels are available and susceptible to burning.

The statistics show that escaped debris burns are also a significant cause (12%) of wildfire in the battalion. The residents realize that the fuel treatments near their residences must be done and often delay burning until the final weeks prior to burn bans being instituted. The result is a greater number of burn piles being burned later in the season, when control of the fires is more difficult due to weather and fuel conditions. Public education at the time of burn permit issuance is used to reduce the number of escapes.

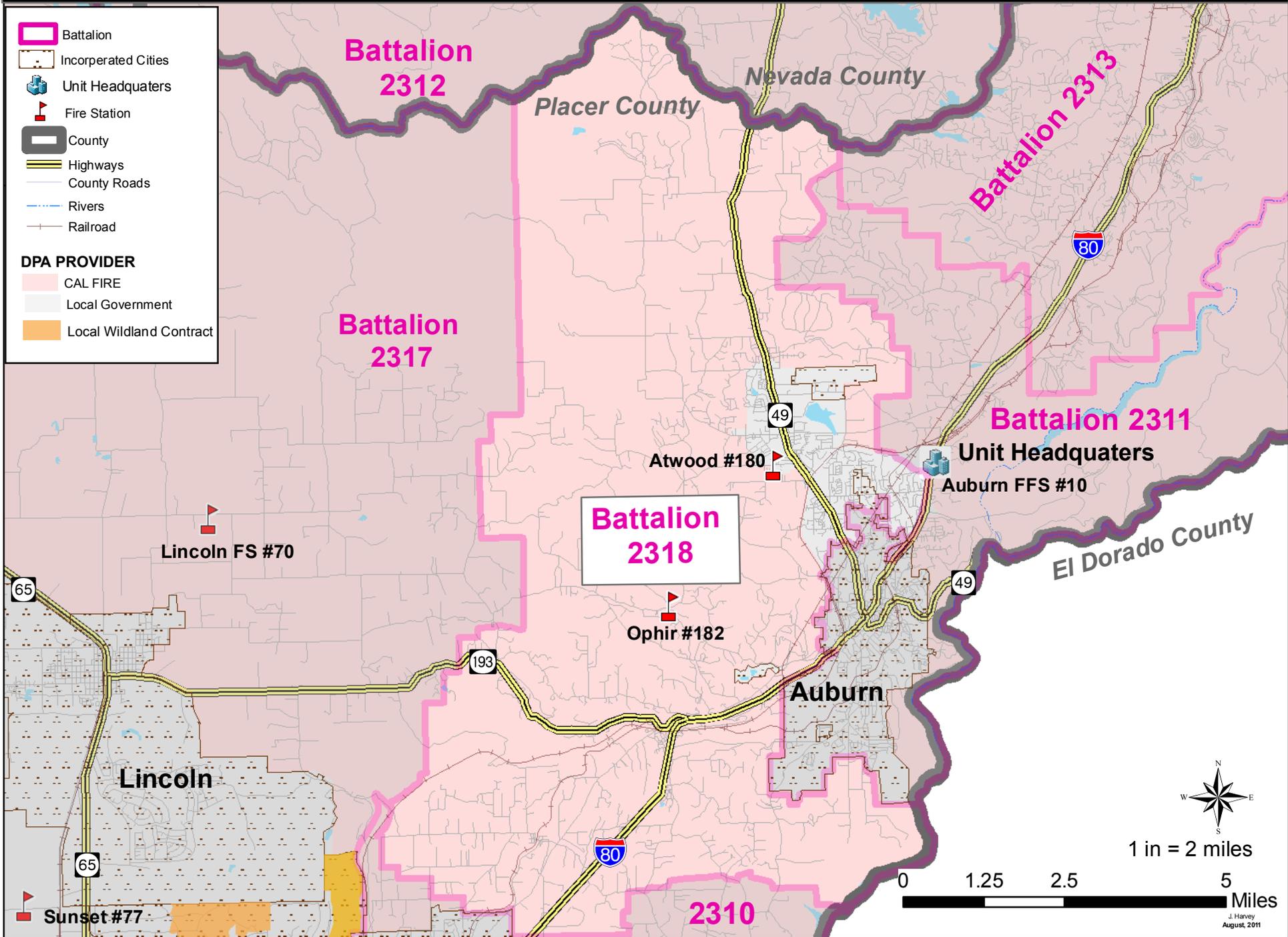
Arson and undetermined fires when combined account for 40% of the fires in the Battalion. These fires are intentionally set fire or fires which the ignition could not be determined due to various factors. These fires are the most difficult to reduce due to their nefarious nature and difficulty in assessing. The Unit's prevention program is charged with investigation and pursuit of arson as felonious activity. The Unit prevention also assists Battalion staff with cause determination if a fire problem persists with no apparent cause. The result is, over time, a reduction in arson fires due to arrest and prosecution and determination of cause on undetermined fires allowing fire prevention education or hazard mitigation to address the actual cause.

Significant fire events within this battalion include the Fawn Fire (August 1992) – 350 acres, 13 structures destroyed and most recently the 49 Fire (Aug/Sept 2009) that burned 343 acres, destroying 65 residential and commercial structures.

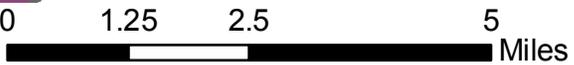


NEVADA - YUBA - PLACER UNIT (NEU) Battalion 18- Administrative Boundaries

- Battalion
 - Incorporated Cities
 - Unit Headquarters
 - Fire Station
 - County
 - Highways
 - County Roads
 - Rivers
 - Railroad
- DPA PROVIDER**
- CAL FIRE
 - Local Government
 - Local Wildland Contract



1 in = 2 miles



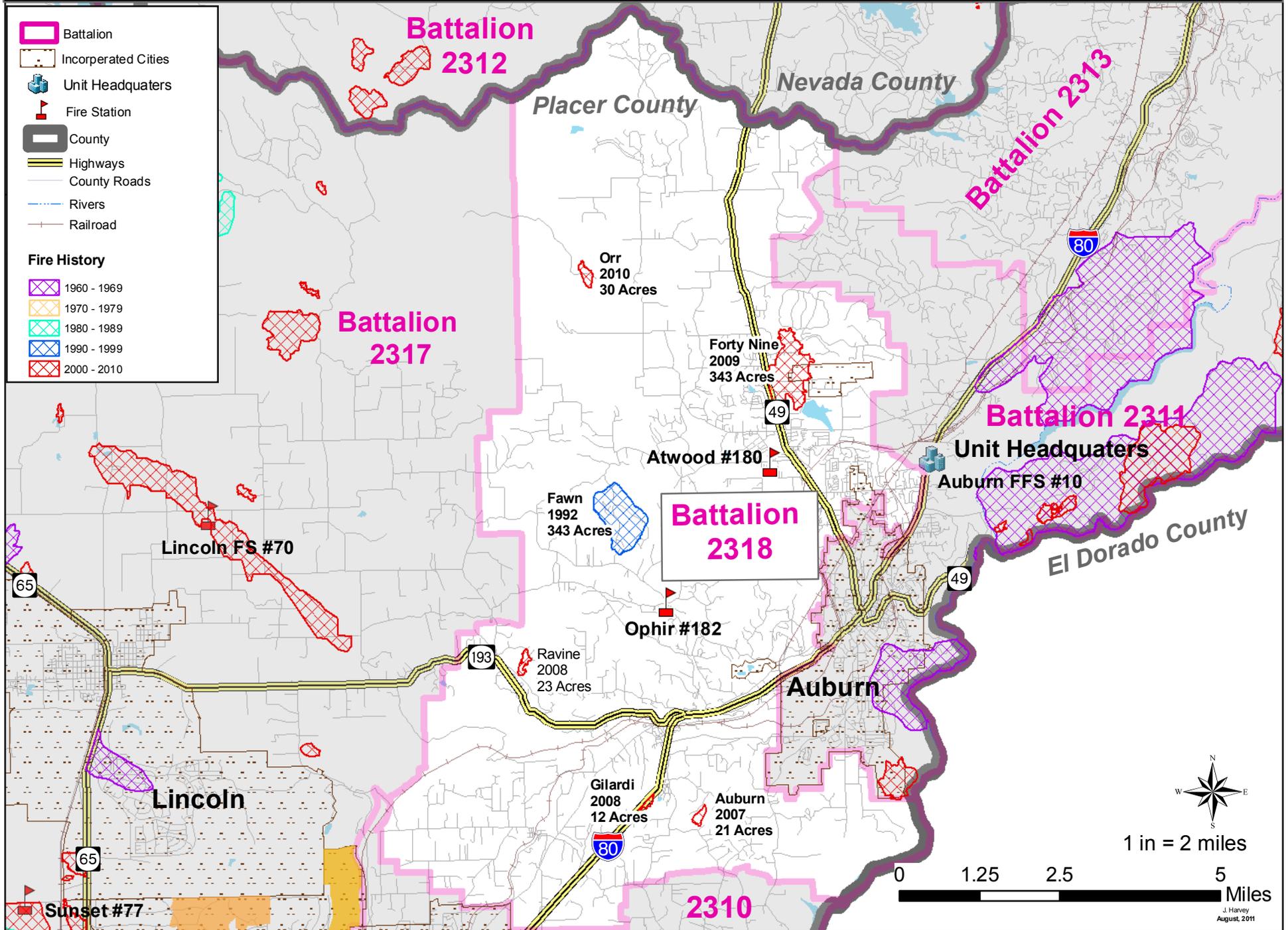


NEVADA - YUBA - PLACER UNIT (NEU) Battalion 18- Fire History

- Battalion
- Incorporated Cities
- Unit Headquarters
- Fire Station
- County
- Highways
- County Roads
- Rivers
- Railroad

Fire History

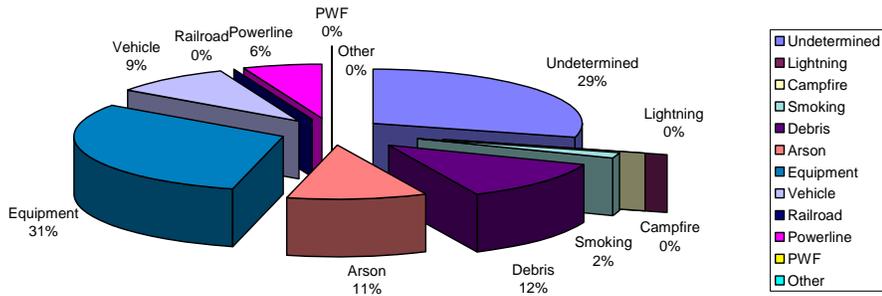
- 1960 - 1969
- 1970 - 1979
- 1980 - 1989
- 1990 - 1999
- 2000 - 2010



1 in = 2 miles

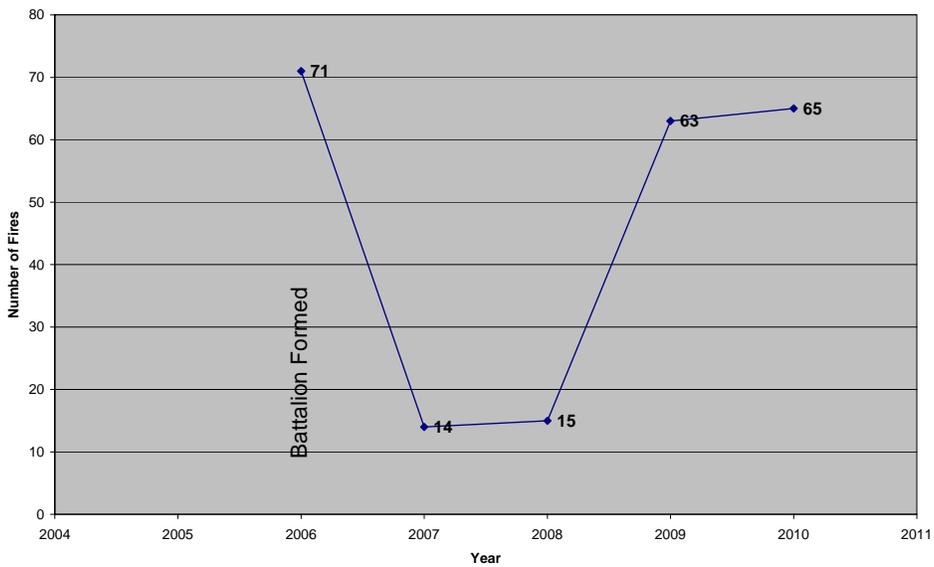


2010 Battalion 18 Fire Causes



Undet.	Lightning	Campfire	Smoking	Debris	Arson	Equip	Vehicle	Railroad	Powerline	PWF	Other
19	0	0	1	8	7	20	6	0	4	0	0

Battalion 18 Ignitions (2005-2010)



Mitigation Strategies

Public Education

- The battalion mitigation strategies will focus on public education and outreach geared toward equipment use and defensible space.
- The battalion will continue to support defensible space inspections and chipping services to reduce fuels
- Battalion staff will work with local cooperators to develop and construct fuel breaks.

Training

- Battalion staff will work with prevention on cause determination training to help reduce the number of undetermined fires within the battalion

Burn Permit Program

It must be recognized that public contact during burn permit issuance provides Cal Fire with the best opportunity to present a fire prevention message.

High Priority Target Areas

Watershed, high tension power lines, the American River drainage, Ophir, Newcastle / south of 80, Jordon, Mt Vernon, Lonestar, Christian Valley and the Penryn fire district

Table 9 – Battalion 18 Fuel Modification Projects, Community Outreach and Education Programs

Project Name	Status	Estimated Completion Year	Project Type	Net Acres
Placer County Chipper	A	O	Fuel Reduction	
Hidden Falls Park	O	O	Fuel Reduction	

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

Success Stories

49 Fire – Moss Rock Dr homes had exceptional defensible space.

Placer County Chipper – over the past several years the Placer Chipper program has provided chipping services and encouraged defensible space for hundreds of homeowners within the battalion.

2011 Action Plan:

- Work with Unit prevention to reduce the number of undetermined fire causes: battalion staff will continue prevention training to help improve undetermined fire causes within the battalion.
- Continue public education efforts within the battalion
- Increase defensible space inspections within the battalion

Ignition Management Plan

Battalion 19

Description of the Battalion

The Marysville battalion includes the Schedule A Contract for the City of Marysville and surrounding SRA lands. The area is commonly referred to as the Yuba-Sutter Area after the two counties. The City of Marysville is 40 miles north of Sacramento and located in the Sacramento Valley where the topography is generally flat. The city has a total area of 3.6 square miles and a population of approximately 12,072 people. The city is bordered on the south and east by the Yuba River and the west by the Feather River. The two rivers converge just southwest of the city and pose a serious flooding hazard during years of heavy precipitation and affiliated runoff. Fuels are dominated by grasses but dense brush is common along river bottoms and in non-agricultural areas. Agricultural crops comprise a significant portion of the battalion. Varying crop stages are often determinant of fire risk within the area. This battalion currently has CAL FIRE administrative battalion for Sutter County. It should be noted that the Marysville Fire Department utilizes Firehouse software for tracking of fire reports and all other activities.

All burn permits for Marysville are issued directly from the air district; mostly ag/non-residential permits.

Cooperators within this battalion include Sutter County Fire, Yuba City Fire, Linda Fire

Discussion of fire occurrence within Battalion

Arson and undetermined fires are considered equally and account for 39% of the fires in the Battalion. These fires are intentionally set fire or fires which the ignition could not be determined due to various factors. These fires are the most difficult to reduce due to their nefarious nature and difficulty in assessing. This community has a significant transient river population. CAL FIRE has been working closely with law enforcement to mitigate. The community also has a large number of abandoned alleys and buildings that tend to attract warming type fires.

For the year 2010, the most significant cause within the battalion was vehicle fires (20%).

Outside the city boundaries, equipment and debris escapes are the most significant causes. Equipment use was a significant cause of fire within the battalion during the 2010 season at 18%. Construction and land management activities often require the use of equipment. This equipment use takes place in the wildland areas where vegetative fuels are available and susceptible to burning.

The statistics show that escaped debris burns are also a significant cause (16%) of wildfire in the battalion. The battalion plans to work with the air district to increase education with permit issuance.



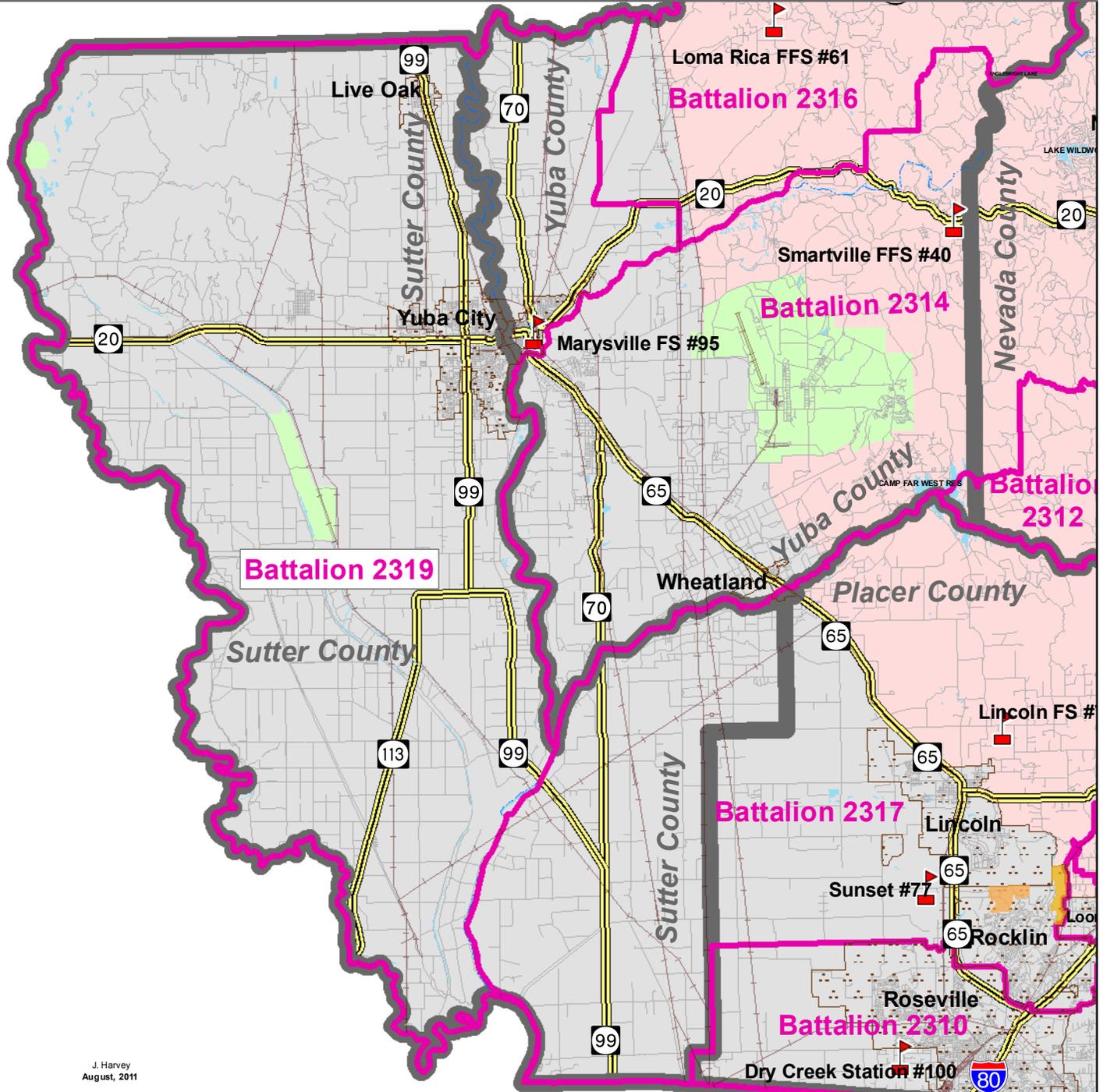
NEVADA - YUBA - PLACER UNIT (NEU) Battalion 19- Administrative Boundaries

Legend

- Battalion
- Incorporated Cities
- Lookouts
- Fire Station
- AAB
- ECC
- Camp
- COM
- County
- Highways
- County Roads
- Rivers
- Railroad
- USFS District Boundaries

DPA PROVIDER

- CAL FIRE
- Federal
- Local Government
- Local Wildland Contract



1 in = 6 miles

0 3 6 12 Miles



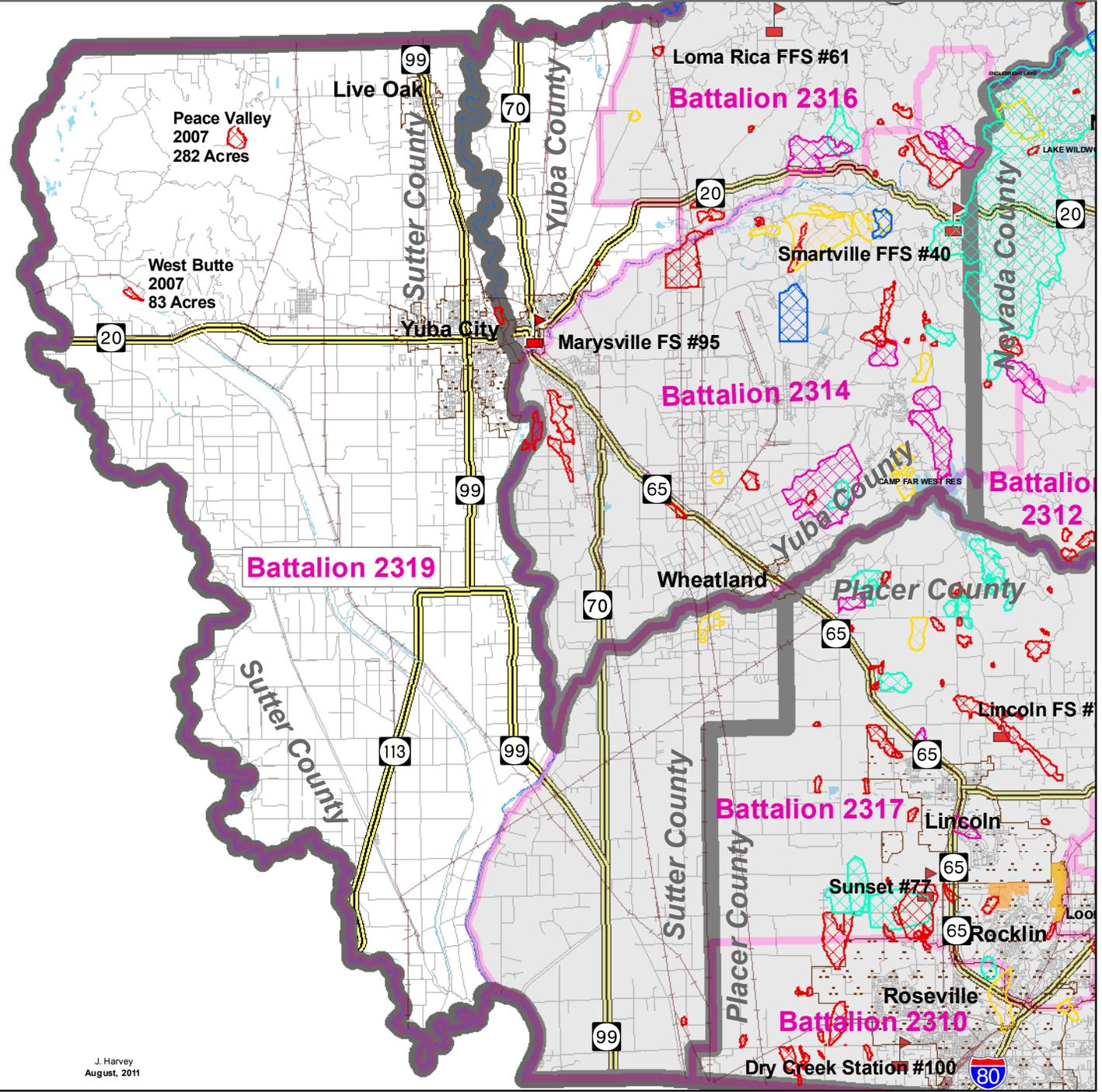
NEVADA - YUBA - PLACER UNIT (NEU) Battalion 19- Fire History

Legend

- Battalion
- Incorporated Cities
- Lookouts
- Fire Station
- AAB
- ECC
- Camp
- COM
- County
- Highways
- County Roads
- Rivers
- Railroad
- USFS District Boundaries

Fire History

- 1960 - 1969
- 1970 - 1979
- 1980 - 1989
- 1990 - 1999
- 2000 - 2010

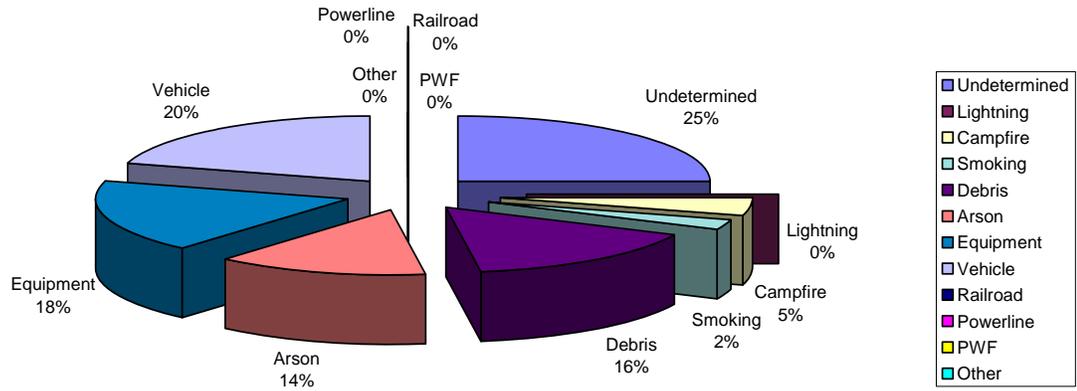


1 in = 6 miles

0 3 6 12 Miles

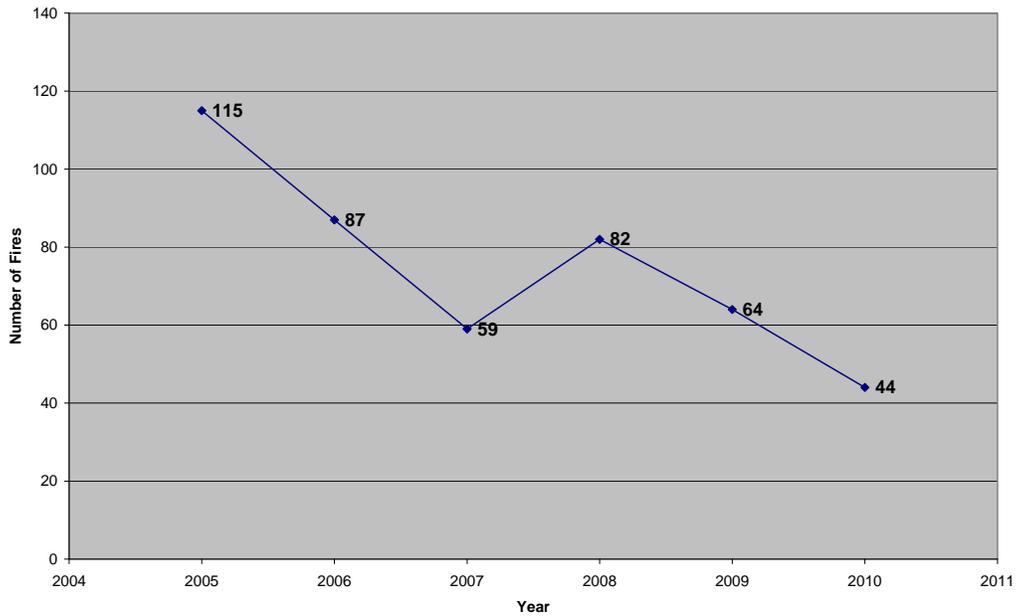
A north arrow is located to the right of the scale bar. The scale bar shows increments of 0, 3, 6, and 12 miles.

2010 Battalion 19 Fire Causes



Undetermined	Lightning	Campfire	Smoking	Debris	Arson	Equipment	Vehicle	Railroad	Powerline	PWF	Other
11	0	2	1	7	6	8	9	0	0	0	0

Battalion 19 Ignitions (2005-2010)



Mitigation Strategies

Battalion 19 will work to reduce fire ignitions and reduce damage by participating in public education programs, business inspections, and the plan review process. The components to meet these goals are as follows:

Commercial Business Inspections

- Inspect local businesses (high risk hazard inspection, sprinkler inspections)

Fire Preplans

- Update fire preplans for all businesses.
- Currently over 800 buildings within city limits with no preplan.
- Work to document resident knowledge of buildings and infrastructure.

Plan Review

- Conduct fire plan review on building projects within the city and district.

Prevention

- Continue working with law enforcement to mitigate homeless caused ignitions.

Vegetation Management

- Complete weed abatement inspections in Marysville City limits.
- Vegetation management along river bottom.
- Work with MPD on annual cleanup day.

Public Education

- Participate in public education programs within the City and Yuba-Sutter Area.
- Marysville Joint Unified School District – Provide public education along with participation in

School organized functions i.e., Read-a-Thon, Athletic events, lunch visits, Fire Station tours, Fire department class visits, School Safe program planning. Senior Safety-Provide fire safety training and public education to local senior care facilities.

- City sponsored Activities- Christmas Parade, Bok Kai Festival, Fourth of July Parade, Gold Days, Peach Festival, Hot Rod Jamboree, Marysville Rodeo, and the Yuba-Sutter Fair.
- Participate in Fire Prevention week with Fire Station Open House
- Participation at Marysville Motocross, providing prevention and EMS standby duties.

Training

- Cause investigation training.
- Inter-company training with Yuba City Fire
- Coordinated hazmat exercises with cooperators.

High Priority Target Areas

River bottoms, the Hollywood area and Thorntree Fish and Game property, open spaces surrounding the city, abandoned structures.

Table 10 – Battalion 19 Fuel Modification Projects, Community Outreach and Education Programs

Project Name	Status	Estimated Completion Year	Project Type	Net Acres
Public Education	A	O	Education/Outreach	
Fire Prevention Week	A	O	Education/Outreach	

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

2011 Action Plan:

The Marysville Battalion continues to interact with its community emphasizing fire safety. Marysville maintains a good cooperative relationship among its neighbors and collectively provides a strong fire safety message that benefits all. This message helps protect its citizens and the surrounding areas. Battalion staff will continue to educate the public on fire prevention and fire safety. Additionally, staff will work to identify fuel reduction opportunities for densely vegetated areas within and surrounding the city.

NEU Chipper Programs

PRIORITY: 1

Description: All of the field projects identified in the NEU Fire Plan identify the need for a chipper. In NEU, the chipper programs provide support to homeowners that do the clearing around their structures as required by the Public Resources Code (PRC 4291). The Chippers are also utilized to reduce the material removed from fuel reduction projects throughout the Unit.

Chipping programs, operating in a similar fashion have been in existence in Nevada, Placer and Yuba counties for several years. Coordinators oversee the chipping programs and manage the day-to-day operations. These programs are a result of cooperator collaboration and many funding sources working together to accomplish fuels reduction work where it is most beneficial and manageable. This project directly affects defensible space and will have the most effect in reducing structure damage or loss in wildfires.

Status: Continuous program

Cooperators: Placer County, Placer County Resource Conservation District, Placer Fire Alliance, North Tahoe Fire, Truckee Fire, Nevada County Fire Safe Council and Yuba County Fire Safe Council.

Cost: \$500,000 annually (financial models differ between counties)

NEU Fire Prevention and Resource Management Projects

PRIORITY: 1

Description: Throughout the Unit NEU staff will continue to develop and support projects designed to educate the public, enforce forest and fire laws, reduce fuels, improve vegetation health and protect high risk communities. These projects will be accomplished through the existing NEU fire prevention and resource management programs and through collaboration with our cooperators. NEU has among the most progressive resource management program in the state, continuing to integrate those programs with fire prevention and law enforcement will improve public service and strengthen program consistencies.

Status: Continuous

Cooperators: Placer, Nevada, Yuba, Sierra and Sutter Counties

Cost: \$300,000

NEU Pre Fire Planning

PRIORITY: 2

Description: This project will focus on new and existing pre fire projects in the Unit and provide pre fire planning tools to identify, define and develop those projects. Project analysis and inventory will be incorporated into GIS for tracking and data management. Ultimately, data will become more readily available for use at the battalion and field levels and by our cooperators. Information will be included and updates annually in the Unit Fire plan.

Status: Partially Complete

Cooperators: Placer, Nevada, Yuba, Sierra and Sutter Counties

Cost: \$150,000

NEU Defensible Space Inspector Program

PRIORITY: 2

Description: Throughout the Unit, grant funded inspectors will conduct residential defensible space inspections for compliance with PRC 4291. The program consists of two inspectors per county, vehicle and materials designed to educate the public on defensible space requirements. Information is also provided on reducing equipment use fires and debris fire ignitions.

Status: Continuous program

Cooperators: Placer County, Nevada County and Yuba County Fire Safe Council

Cost: \$200,000 annually

APPENDIX C: PRIORITY GOALS AND OBJECTIVES FOR 2010-2012

CAL FIRE Units were asked to identify two or more priority objectives under each goal in the 2010 Strategic Fire Plan for California. The Units' priorities are identified in bold and a measurement criteria are provided for each of the identified objectives. Throughout the next year, the Units will implement the identified priorities and report on the measurement criteria by June 2012. The priority objectives are displayed under three headings:

- A. SACRAMENTO PROGRAMS OR COMMITTEE ONLY**
- B. SACRAMENTO PROGRAMS AND STAFF OR COMMITTEE, REGIONS AND UNITS**
- C. UNITS ONLY**

These categories are not intended to exclude Units from addressing priority objectives in any of the three categories, they are only recommendations.

A. SACRAMENTO PROGRAMS OR COMMITTEE ONLY

Goal 1: Identify and evaluate wildland fire hazards and recognize life, property and natural resource assets at risk, including watershed, habitat, social and other values of functioning ecosystems. Facilitate the sharing of all analyses and data collection across all ownerships for consistency in type and kind.

Objectives:

- a) Identify and provide appropriate automated tools to facilitate the collection, analysis and consistent presentation of datasets.**

Measurement Criteria: *CAL FIRE shall establish policy that specifies spatial databases covering all forest and rangeland to not be older than 10 years. Include minimum requirements for spatial databases. Follow the coordinated work schedule with the USDA Forest Service to maintain cost effective collection and processing of data.*

Goal 2: Articulate and promote the concept of land use planning as it relates to fire risk and individual landowner objectives and responsibilities.

Objectives:

- a) Identify the minimum key elements necessary to achieve a fire safe community, and incorporate these elements into land use planning, CWPPs and regional, county and Unit fire plans.**

Measurement Criteria: *CAL FIRE to create a working committee with CAL Chiefs, USDA Forest Service and other key organizations to develop, monitor and refine elements of fire safe*

community, including evacuation plans. The Committee shall review existing templates for FIREWISE Assessments, CWPPs, fire plans and land use plans; identify the common elements and approaches for better integration. Utilize fire protection, planning and engineering expertise to identify the key elements (from existing templates) necessary for fire safe communities. Once agreed upon, these key elements will then be used as a checklist to guide consistency in fire safe planning efforts across jurisdictions. At a minimum, annually report to the Board on results.

Goal 3: Support and participate in the collaborative development and implementation of wildland fire protection plans and other local, county and regional plans that address fire protection and landowner objectives.

Objectives:

- a) **Establish a working group, consisting of Board members and Departmental staff, to develop minimum standard elements for inclusion in Unit fire plans.**
- b) **Emphasize coordination of Unit fire plans with community wildfire protection plans to encourage and support one consistent approach. Develop county or regional fire plans by bringing together community-based groups, such as fire safe councils and affected fire and land management agencies.**

Measurement Criteria: *These measurement criteria meets objectives a and b. CAL FIRE to revise the template for the Unit fire plans to incorporate the goals and objectives of the 2010 Strategic Fire Plan. During the revision, the template for a CWPP will be jointly reviewed in order to reduce duplication of fire planning efforts. The key elements identified through the process identified in Goal 2, Objective b will also be incorporated into the Unit fire plan/CWPP.*

- c) **Create and support venues in which individual community members can be actively involved in local fire safe councils, community emergency response teams, FIREWISE and other community-based efforts to develop readiness plans and educate landowners to mitigate the risks and effects of wildland fire.**

Measurement Criteria: *The California Fire Alliance to work with the California and local FSCs to develop venues (e.g., workshops) that assist landowners with readiness planning and education. CAL FIRE, California Fire Alliance Liaison to report to the Board annually on Alliance activities.*

Goal 4: Increase awareness, knowledge and actions implemented by individuals and communities to reduce human loss and property damage from wildland fires, such as defensible space and other fuels reduction activities, fire prevention and fire safe building standards.

Objectives:

- a) **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.**

Measurement Criteria: *In coordination with the CAL FIRE Communications Program, the USDA Forest Service and local fire agencies, University of California and county cooperative extension offices, CAL FIRE to collect information on methods and effectiveness of existing outreach. Complete the information collection within year one of adoption of the 2010 Strategic Fire Plan. Develop a common set of measures to assess CAL FIRE efforts, build those into Unit fire plans and report to the Board. Report the progress of implementation at the end of year two.*

Goal 5: Develop a method to integrate fire and fuels management practices with landowner priorities and multiple jurisdictional efforts within local, state and federal responsibility areas.

Objectives:

- b) **Work to remove regulatory barriers that limit hazardous fuels reduction activities.**

Measurement Criteria: *In conjunction with the Resource Protection Committee, CAL FIRE will develop an approach to identifying and recommending ways to address regulatory and other barriers that limit hazardous fuels reduction activities. This approach should include consultation with the Board's Interagency Forestry Working Group and with other agencies, such as the USDA Forest Service, the US Fish and Wildlife Service, the California Energy Commission, the Department of Fish and Game, regional water quality control boards, local government and the public. Finish this compilation within the first year of adoption of the 2010 Strategic Fire Plan. Based on barriers identified and recommendations for change, report to the Board starting in the second year.*

Goal 6: Determine the level of fire suppression resources necessary to protect the values and assets at risk identified during planning processes.

Objectives:

- e) **Initiate and maintain cooperative fire protection agreements with local, state and federal partners that value the importance of an integrated, cooperative, regional fire protection system and deliver efficient and cost effective emergency response capabilities beneficial to all stakeholders.**

Measurement Criteria: *CAL FIRE to identify the number and effectiveness of agreements and partnerships. In conjunction with the Board's Resource Protection Committee, CAL FIRE will develop suggested measures of effectiveness of cooperative agreements. This should be in collaboration with its partners, completed within 18 months of adoption of the 2010 Strategic Fire Plan and reported to the Board.*

- i) **Provide for succession planning and employee development at all levels within CAL FIRE to maintain emergency response leadership capabilities, administrative management skills and pre-fire planning expertise.**

Measurement Criteria: *CAL FIRE to revise and update the information developed in the 2005 Succession Planning meetings. This work should be completed within two years of the adoption of the 2010 Strategic Fire Plan, with annual reporting to the Board based on issues raised, including identification of key training needs, funding available and expenditures on the training program, content of Academy curricula, number of students requesting and/or able to take classes at the Academy, local community college or other educational outlets.*

B. SACRAMENTO PROGRAMS AND STAFF OR COMMITTEE, REGIONS AND UNITS

Goal 1: Identify and evaluate wildland fire hazards and recognize life, property and natural resource assets at risk, including watershed, habitat, social and other values of functioning ecosystems. Facilitate the sharing of all analyses and data collection across all ownerships for consistency in type and kind.

Objectives:

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

Measurement Criteria: *CAL FIRE shall designate personnel as advisors/liasons to the California Fire Safe Council (CFSC) and to each county or regional FSC. The advisors will be responsible for reporting activities to the Unit and Region. The advisor to the CFSC will report to the Board. Annual reporting of time-spent working will be displayed in hours at the Unit, Region and Headquarters level. Reporting will include activities with local FSCs, communities, watershed groups or others defining hazards and risk of wildfire and documenting these in a CWPP or Unit fire plan. Emphasize the products developed in Goal 3, Objective b. Advisors will emphasize using standard guidelines and templates for consistency throughout the state.*

Goal 2: Articulate and promote the concept of land use planning as it relates to fire risk and individual landowner objectives and responsibilities.

Objectives:

- b) **Assist the appropriate governmental bodies in the development of a comprehensive set of wildland and wildland urban interface (WUI) protection policies for inclusion in each county general plan or other appropriate local land use planning documents.**

Measurement Criteria: *CAL FIRE to appoint a committee including Unit, Region, Headquarters and Contract County representatives. Develop a work plan that identifies key elements of improving WUI strategies, including planning. Reporting should be based on elements identified and priorities for addressing them.*

Under the Board's Resource Protection Committee, review existing Board policies as they relate to wildland fire and the relevance (ease of use, applicability) to incorporation in local general plans. Identify areas of possible improvement and update policies.

Track and report hours at the Unit, Region and Headquarters level spent in reviewing plans and projects; number of local Board/Council, Planning Commission meetings and/or meetings with other cooperators.

Goal 4: Increase awareness, knowledge and actions implemented by individuals and communities to reduce human loss and property damage from wildland fires, such as defensible space and other fuels reduction activities, fire prevention and fire safe building standards.

Objectives:

- c) 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.**

Measurement Criteria: *CAL FIRE to form an advisory committee to review PRC §4291 regulations and make recommendations to the Board that will provide for consistency, streamlining and clarification of existing regulations. The Committee shall develop criteria to increase the number and effectiveness of defensible space inspections. The Committee will develop an implementation plan for the recommendations and report on progress to the Board*

Goal 7: Address post-fire responsibilities for natural resource recovery, including watershed protection reforestation, and ecosystem restoration.

Objectives:

- a) Encourage rapid post-fire assessment, as appropriate, and project implementation to minimize flooding, protect water quality, limit sediment flows and reduce other risks on all land ownerships impacted by wildland fire.**

Measurement Criteria: *Provide training for CAL FIRE personnel on suppression repair and damage assessment procedures. Develop standard formats and documentation templates for these assessments. Identify and use the findings to reduce the impacts of fire suppression on the landscape and improve resiliency of assets at risk from wildfire.*

B. UNITS ONLY

Goal 5: Develop a method to integrate fire and fuels management practices with landowner priorities and multiple jurisdictional efforts within local, state and federal responsibility areas.

Objectives:

- h) 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.**

Measurement Criteria: *CAL FIRE will report to the Board on the number of crews available each year with a description of projects, including acres treated, completed by each Unit. Report the number of agreements and/or amount of funding and acres treated that involve grants or partnerships with federal agencies, resource conservation districts, local FSCs, fire districts, watershed groups or other non-profit or community groups that support the ability to carry out fuels reduction projects.*

Goal 7: Address post-fire responsibilities for natural resource recovery, including watershed protection reforestation, and ecosystem restoration.

Objectives:

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

Measurement Criteria: *CAL FIRE (utilizing Incident Command Teams) to schedule a post-fire review of the planning documents that cover the area affected by the fire. Review the goals, objectives and projects (implemented and planned) to identify successes and failures. Review the features developed during the fire and incorporate them into the existing Unit fire plan documents. This objective will only be reported when a fire occurs in an area with an existing Unit fire plan document. Incident command teams may conduct this post fire assessment under the direction of the Unit Chief.*

C. ADDITIONAL UNIT SPECIFIC GOALS AND OBJECTIVES

Goal 1: Identify and evaluate wildland fire hazards and recognize life, property and natural resource assets at risk, including watershed, habitat, social and other values of functioning ecosystems. Facilitate the sharing of all analyses and data collection across all ownerships for consistency in type and kind.

Objectives:

- b) Update and maintain consistent, detailed vegetation and fuels maps across all ownerships in an efficient and cost-effective manner.**
- f) Update existing data for values and assets at risk utilizing geographic information systems (GIS) data layers and other mapping solutions, including fire behavior-specific effects.**

Measurement Criteria: *NEU Staff will work with Sacramento staff including FRAP to stay updated on current fuels GIS data. NEU staff will participate in FSC and cooperator meeting to share GIS information. The NEU GIS database will be updated with new data developments.*

Goal 2: Articulate and promote the concept of land use planning as it relates to fire risk and individual landowner objectives and responsibilities.

Objectives:

- b) Identify the minimum key elements necessary to achieve a fire safe community, and incorporate these elements into land use planning, CWPPs and regional, county and Unit fire plans.**
- c) Engage in the development, review and adoption of local land use plans to ensure compliance with fire safe regulations and current building standards.**

Measurement Criteria: *NEU pre fire staff will continue to focus on the battalion level to further define and describe the key elements necessary to improve fire safety for communities across the Unit. These elements will be further incorporated into annual Unit Fire Plan revisions. NEU staff will work with County Planning in order develop, review and adopt local land use plans pertinent to fire safe regulations and current building standards.*

Goal 3: Support and participate in the collaborative development and implementation of wildland fire protection plans and other local, county and regional plans that address fire protection and landowner objectives.

Objectives:

- a) **Establish a working group, consisting of Board members and Departmental staff, to develop minimum standard elements for inclusion in Unit fire plans.**
- b) **Emphasize coordination of Unit fire plans with community wildfire protection plans to encourage and support one consistent approach. Develop county or regional fire plans by bringing together community-based groups, such as fire safe councils and affected fire and land management agencies.**

Measurement Criteria: *NEU staff will continue to revise the Unit fire plan and incorporate the goals and objectives of the 2010 Strategic Fire Plan. Staff will work to further ensure the Unit Plan includes updates from local CWPP development.*

Goal 4: Increase awareness, knowledge and actions implemented by individuals and communities to reduce human loss and property damage from wildland fires, such as defensible space and other fuels reduction activities, fire prevention and fire safe building standards.

Objectives:

- c) **Facilitate activities with individuals and organizations, as appropriate, to assist individual property owners in complying with fire safe regulations.**
- i) **Actively enforce and seek updates as necessary to fire prevention codes and statutes, including those regulating utilities, railroads, small engines and other categories of equipment use that contribute to fire ignition.**

Measurement Criteria: *NEU staff will seek to continue defensible space inspection efforts, participate in prevention community outreach and education activity and provide landowner assistance through fire safe forestry recommendations beyond defensible space into defensible landscapes.*

Goal 5: Develop a method to integrate fire and fuels management practices with landowner priorities and multiple jurisdictional efforts within local, state and federal responsibility areas.

Objectives:

- d) **Assist collaborative partners by educating, improving grant capacity and other means that provide tools to achieve fuels reduction work on the landscape.**
- g) **Promote the development of multi-agency/landowner fuels reduction policies and activities at the watershed and fireshed level.**

Measurement Criteria: *NEU staff will work with cooperators to identify and improve grant opportunities, seek fuel reduction funding and provide recommendations to improve fuel reduction work across the Unit.*

Goal 6: Determine the level of fire suppression resources necessary to protect the values and assets at risk identified during planning processes.

Objectives:

- i) Provide for succession planning and employee development at all levels within CAL FIRE to maintain emergency response leadership capabilities, administrative management skills and pre-fire planning expertise.**
- j) Effectively engage and train employees across all disciplines to address both planning and emergency response utilizing a “total force” approach.**

Measurement Criteria: *Unit administration will work to develop and utilize staff based on training and qualifications, streamline and integrate the pre fire, resource management and fire prevention to improve and standardize program deliverables and public service.*

Goal 7: Address post-fire responsibilities for natural resource recovery, including watershed protection reforestation, and ecosystem restoration.

Objectives:

- a) Encourage rapid post-fire assessment, as appropriate, and project implementation to minimize flooding, protect water quality, limit sediment flows and reduce other risks on all land ownerships impacted by wildland fire.**
- c) Effectively utilize available resources, including CAL FIRE hand crews, to accomplish restoration and protection activities.**

Measurement Criteria: *NEU staff will review potential project environmental impacts, develop CEQA recommendations and mitigations, and ensure watershed protection through proper implementation of required protection measures according to State and Federal law. NEU staff will work with cooperators providing education on environmental protection measures and assistance with project mitigations.*

APPENDIX D

Standards for Hazardous Fuel Reduction in NEU

Purpose/Overview

The purpose of the development, implementation and maintenance of a project such as fuel modification can be considered a fire prevention/management tool that may promote awareness, mitigation, and assist in fire suppression activities in the event of a wildland fire situation in Interface Lands. The objective is to reduce, modify, and manage fuels within designated areas that may enhance mitigation efforts in the event of a wildland fire situation. The Shaded Fuel Break is an identified key component of any project:

is a strategic location along a ridge, access road, or other location where fuels have been modified. The width of the fuel break is usually 100 to 300 feet depending on the site. This is a carefully planned thinning of dense vegetation, so fire does not easily move from the ground into the overhead tree canopy. A shaded fuel break is not the removal of all vegetation in a given area. Fire suppression resources can utilize this location to suppress wildland fires due to the modification of fuels of which may increase the probability of success during fire suppression activities. Any fuel break by itself will not stop a wildland fire.

The Shaded Fuel Break is a recommended guideline for fuel management within identified Interface Lands.

The goal is to protect human life and both public and private resources by reducing the risk and potential hazard of wildland fire by practicing management strategies that promote the preservation and restoration of natural resources and protection of cultural resources.

Objectives are mitigation of fire dangers in an effort to: Enhance public safety; Protect natural and cultural resources; Provide for recreational opportunities; Conduct cost effective maintenance of features and facilities.

In previous Fire Plans, three separate fuel reduction prescriptions were described (Defensible Space, Defensible Landscape, and Modified Shaded Fuel Break). With the adoption of the new PRC 4291 standards, NEU is recommending landowners utilize the guidelines adopted statewide. Further, we recommend landowners utilize the “Defensible Space – Reduced Fuel Zone” guidelines for areas beyond the required 100 feet. These guidelines can be downloaded from the Internet at:

http://www.bof.fire.ca.gov/pdfs/4291finalguidelines2_23_06.pdf

The three fuel reduction prescriptions described below are standards or guidelines and are being provided for guidance, they are not intended to be regulatory and are as follows:

Defensible Space (PRC 4291): Area surrounding a structure where fire protection or firebreak is made by removing all brush, flammable vegetation, or combustible growth which is located up to 100 feet from such structure or to the property line, whichever is nearer. The goal is to create an area where ground based fire suppression resources, such as fire engines, can successfully defend the structure from an advancing fire.

Defensible Landscape: The area outside of the defensible space zone where additional fuel reduction is completed to enhance the protection value of the defensible space zone around a structure. Increased aesthetics and habitat values are planned for in this prescription.

Modified shaded fuel break: defined as a defensible location, where fuels have been modified, that can be used by fire suppression resources to suppress oncoming wildfires. Any fuel break by itself will NOT stop a wildfire. It is a location where the fuel has been modified to increase the probability of success for fire suppression activities. Ground resources can use the location for direct attack or firing out. Air resources can use the location for fire retardant drops. The public and fire resources can use the location for more efficient ingress and egress.

The three prescriptions are listed below. The defensible space and defensible landscape prescriptions incorporate the modified shaded fuel break prescription with a few variations. ***The only trees eligible to be removed under the following prescriptions are in the 10- inch diameter class (diameter of main stem at breast height) or smaller. All trees larger than the 10- inch diameter class will only be pruned to a height of 8 to 10 feet above the ground, not to reduce the live crown ratio of the plant to below 50%. Exceptions for defective trees and snags are noted below.***

I. Defensible Space Prescription: PRC 4291

Includes all of following:

1. Maintain around and adjacent to a building or structure a firebreak made by removing and clearing away, for a distance of not less than 100 feet on each side thereof or to the property line, whichever is nearer, all flammable vegetation or other combustible growth. This does not apply to single specimens of trees, ornamental shrubbery, or similar plants that are used as ground cover, if they do not form a means of rapidly transmitting fire from the native growth to any building or structure.
2. Remove that portion of any tree that extends within 10 feet of the outlet of any chimney or stovepipe.
3. Maintain any tree adjacent to or overhanging any building free of dead or dying wood.
4. Maintain the roof of any structure free of leaves, needles, or other dead vegetative growth.
5. Provide and maintain at all times a screen over the outlet of every chimney or stovepipe that is attached to any fireplace, stove, or other device that burns any solid or liquid fuel. The screen

shall be constructed of nonflammable material with openings of not more than one-half inch in size.

6. Within 100 feet of existing structures all annual grasses are to be maintained to below 6 inches in height.

7. Except as noted in 1 above, the Modified Shaded Fuel Break prescription described below also applies.

II. Defensible Landscape Prescription:

Includes all of the following:

1. Oak trees with trunks within 3 feet of each other, essentially making one canopy, may be considered one tree in the defensible landscape areas. Prune branches off of all residual trees from 8 to 10 feet off the forest floor, not to reduce the live crown ratio below 1/2 of the height of the tree. ***Adjacent trees shall be removed to create horizontal distances between residual trees from 20 feet between trunks up to 8 to 15 feet between tree crown drip lines.***

2. One clump of trees per lot or acre, where tree trunks are within 20 feet of each other, may also be retained in the defensible landscape areas providing spread of fire to or from this feature is adequately mitigated. Mitigation measures for this feature include:

- a. Prune branches off of all residual trees from 8 to 10 feet off the forest floor, not to reduce the live crown ratio below 1/2 of the height of the tree
- b. Trees adjacent to this feature shall be removed to create horizontal distances ***between residual trees from 20 feet between trunks up to 8 to 15 feet between tree crown drip lines.*** No ground fuels shall exist within the drip line of the feature.

3. Except as noted in 1 and 2 above, the Modified Shaded Fuel Break prescription described listed below also applies.

III. Modified Shaded Fuel Break Prescription:

Implementation consists of removing or pruning trees, shrubs, brush, and other vegetative growth on the project area. For site protection, all work is encouraged to be completed by use of a masticator and/or hand crews supported by chippers and/or burning. Heavy equipment with blades is not recommended for use for fuel reduction work.

1. ***Understory Fuels***

Understory fuels over 1 foot in height are to be removed in order to develop vertical separation and low horizontal continuity of fuels. Individual plants or groups of plants up to 10 feet in canopy diameter may be retained provided there is a horizontal separation between plants of 3 to 5 times the height of the residual plants and the residual plants are not within the drip lines of an overstory tree.

For rare and endangered species concerns, elderberry trees shall not be removed or treated within the shaded fuel breaks in elevations below 3000 feet.

2. Mid-story Fuels

Only trees up to the 10-inch diameter class (at breast height (dbh)) may be removed. Exception to this size limit shall be trees that have significant defect and/or which do not have a minimum of a 16-foot saw log. Live but defective trees larger than the 10-inch diameter class providing cavities or obvious wildlife use will be retained.

Trees shall be removed to create horizontal distances between residual trees from 20 feet between trunks up to 8 to 15 feet between tree crown drip lines. Larger overstory trees (> 10 inches dbh) do count as residual trees and, in order to reduce ladder fuels, shall have vegetation within their drip lines removed. Prune branches off of all residual trees from 8 to 10 feet off the forest floor, not to reduce the live crown ratio below 1/2 of the height of the tree.

For rare and endangered species concerns, elderberry trees shall not be removed or treated within the shaded fuel breaks below the 3000 feet elevation level.

Criteria for residual trees (< 10 inch diameter class (dbh)):

Conifers:

Leave trees that have single leaders and thrifty crowns with at least 1/3 live crown ratio.

Conifer leave tree species in descending order:

- Ponderosa pine
- Sugar pine
- Douglas fir
- White fir
- Incense cedar

Intolerant to shade species have a higher preference as leave trees because their seed will be less likely to germinate in the understory.

Snags

Snags are a conduit for fire spread during a wildfire. However, they also provide excellent wildlife habitat in their natural state. The following is the criteria of when snags shall be retained:

18 inch diameter class or larger and not more than 30 feet in height which are not capable of reaching a road or structure provided there is a separation of least 100 feet between snags.

Hardwood trees:

Leave trees that have vertical leaders and thrifty crowns with at least 1/3 live crown ratio. Retain all elderberry trees.

Hardwood leave tree species in descending order:

- Big Leaf Maple- Riparian area, less common
- Blue Oak - least leaf surface area, less volatile when burning

Black Oak - higher leaf surface area
Madrone - more volatile when burning
Live Oaks - most volatile when burning, branches closest to ground.

Brush:

It is desirable to remove as much brush as possible within the shaded fuel break area. However, if individual plants or pairs of plants are desired to be left, leave plants with the following characteristics: young plants less than 5 feet tall and individual or pairs of plants that are no more than 5 feet wide. Retain all elderberry trees.

Brush leaf species in descending order:

- Toyon – Less Common
- Buckeye – Less Common
- Dogwood – less common
- Lemmon Ceanothus - less common, less volatile
- Buck brush (Wedge leaf ceanothus) - smaller brush plant, less volatile
- Redbud - less common
- Coffeeberry - less common
- Whitethorn - lower lying plant
- Deer brush - larger plant, high leaf surface area, more volatile when burning
- Manzanita - larger plant, high leaf surface area, more volatile when burning
- Chamise - foliage contains highest amount of flammable oils, most volatile when burning

3. Wetlands:

Functional wetlands will be avoided for treatment and ground operations.

4. Watercourse and Lake Protection Zone (WLPZ):

To provide mitigation for riparian associated species and to reduce the potential risk of habitat fragmentation, the following will apply:

Maintenance Prescriptions

Once fuels have been modified within an area, maintenance activities should be planned and implemented on a regular basis to keep the effectiveness of the original treatment. If no maintenance activities occur, the effectiveness of the original treatment will diminish every year, potentially yielding no net effect within 5 years. The necessary maintenance activities will be minimal if implemented on an annual basis.

The original prescription treatment should be followed for maintenance. Possible fuel reduction techniques to be utilized for maintenance include the following:

Hand Work: Use of hand tools by crews or individuals. This technique is labor intensive and potentially expensive (>\$1000 per acre). Impacts to soils are negligible.

Mechanical Work: Use of heavy equipment such as masticators and/or bulldozers. This technique is moderately expensive (as low as \$400 per acre) but limited by topography (to slopes less than 50%) and not appropriate for most watercourse and lake-protection zones and excessively wet soils.

Chemical Controls: Use of California registered herbicides. This is the most cost-effective technique. Implementation usually requires one or two individuals for ground application. This technique has negligible soil effects but may not be appropriate for certain areas such as riparian zones, watercourses, and areas of listed plants.

Prescribed Browsing: Use of goats in a controlled setting to browse within appropriate areas to reduce fuel levels. Browsing goats can be an effective tool to control grasses and low growing vegetation, when controlled properly, can have little impact to the environment. Costs may vary.

Prescribed Burning: The use of planned and controlled burning operations to reduce fuel levels. Control lines are established prior to burning. Burning and Air Pollution permits are required to conduct these operations. This technique varies in cost per acre depending on complexity of project. Burning is becoming more difficult to complete due to air regulations.

916.5, 936.5, 956.5 Procedures for Determining Watercourse and Lake Protection Zone Widths and Protective Measures [All Districts]

TABLE I

Procedures for Determining Watercourse and Lake Protection Zone Widths and Protective Measures¹								
Water Class Characteristics or Key Indicator Beneficial Use	1) Domestic supplies, including springs, on site and/or within 100 feet downstream of the operations area and/or		1) Fish always or seasonally present offsite within 1000 feet downstream and/or		No aquatic life present, watercourse showing evidence of being capable of sediment transport to Class I and II waters under normal high water flow conditions after completion of timber operations.		Man-made watercourses, usually downstream, established domestic, agricultural, hydroelectric supply or other beneficial use.	
	2) Fish always or seasonally present onsite includes habitat to sustain fish migration and spawning.		2) Aquatic habitat for nonfish aquatic species.					
			3) Excludes Class III waters that are tributary to Class I waters.					
Water Class	Class I		Class II		Class III		Class IV	
Slope Class (%)	Width Feet	Protection Measure	Width Feet	Protection Measure	Width Feet	Protection Measure	Width Feet	Protection Measure
					[see 916.4(c)] [see 936.4(c)] [see 956.4(c)]		[see 916.4(c)] [see 936.4(c)] [see 956.4(c)]	
<30	75	BDG	50	BEI	See CFH		See CFI	
30-50	100	BDG	75	BEI	See CFH		See CFI	
>50	150 ²	ADG	100 ³	BEI	See CFH		See CFI	
1 – See Section 916.5(e) for letter designations application to this table. 2 – Subtract 50 feet width for cable yarding operations. 3 – Subtract 25 feet width for cable yarding operations.								

Appendix E – Project Description

AUBURN FUEL BREAK

This project is within the Auburn State Recreation Area (ASRA) Fire Management Plan developed as part of the contract between CDF, Bureau of Reclamation (BOR) and State Parks (CSP&R). A complete copy of the 2005 ASRA Fire Management Plan can be found near the back of this document ([see Appendix 6](#)). The Auburn Fuel Break is designed to reduce the threat of a canyon fire moving into the residential area of Auburn along the rim of the North Fork of the American River. It will also help protect the ASRA from a fire moving from residential area. The residential properties are immediately adjacent to large tracts of federal land, which extend all the way to the river and up the other side. The federal lands were originally established to occupy the river canyon up to, and including, the predicted high water mark for the proposed Auburn Dam Project. Since the dam is yet to be constructed the lands are open to the public for recreational purposes. Due to its proximity to the river, the use of these lands by recreationists dramatically increases during the summer months when the fire danger is at its highest.

Project Proposal

Work with the BOR and CSP&R to develop a fuel break on the public lands along the ridgeline and below the private property. Assist Auburn City in encouraging the private landowners immediately adjacent to the public land to commit to fuel reduction projects on their own land. The goal is to establish a 300 foot modified shaded fuel break along the ridge that utilizes both public and private lands in an effort to protect the interests of all those involved.

Event 1: Using GIS and other means identify the properties that will require fuel modification in order to establish an effective fuel break. Notify those landowners in an effort to educate them on the necessities of the fuel break and attempt to get their “buy-in” to the project.

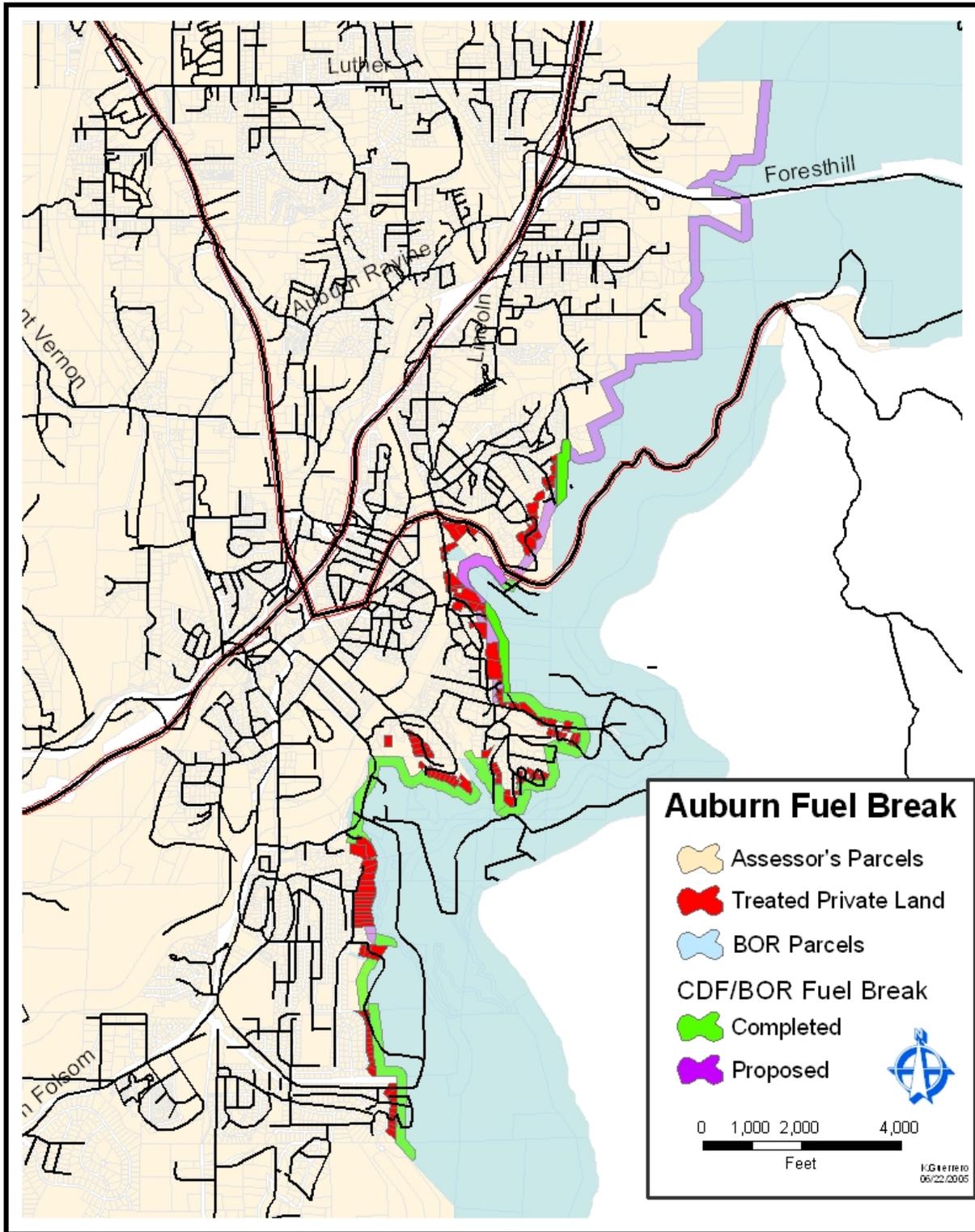
Event 2: Assist Auburn City with developing a use agreement with the private land owners that will allow the City to act as a contract agent on their lands to assist in the fuels modification work.

Event 3: Identify the BOR parcels that will require fuels modification work and work with them to complete the fuels modification work in whatever means are available.

Event 4: A second fuel break is proposed for the rim of the canyon on the other side of the river and will be addressed in the Amador – El Dorado Fire Management Plan and the ASRA Fire Management Plan.

The proposed fuel break is approximately nine miles long and will occupy over 325 acres.

Estimated Project Cost \$300,000 Primarily funded by the BOR with some assistance to the home owners via the Placer County chipping program.



Appendix F – Project Description

ONGOING COUNTY CHIPPER PROGRAM OPERATION FUNDS

Issue/Background: Since 1998, the Placer County Chipper Program has provided a free service to residents of the County. This helps to lower the costs of creating and maintaining defensible space and also reduces the amount of outdoor burning and the associated air pollution as well as escaped fires.

The County owns four chippers and tow vehicles, purchased from a PG&E settlement and supplemented by a Prop 204 grant. Maintenance is performed by CDF. Therefore the annual cost is for the four crew managers, one for each chipper, and the crews. In order to keep costs down, trustees from the County Jail are used as crews.

Response to the program has been excellent. As of June 2004, an estimated total of 17,486 tons of vegetation had been processed through the Chipper Program since its inception. The number of parcels chipped has steadily increased every year.

Other Alternatives: No Action - If the Chipper Program is not continued, there is a risk of lower compliance with defensible space requirements as well as increased burning.

Responsible Office: Rick Gruen, Manager, Placer County Resource Conservation District; Cal Fire NEU, Placer County

Priority (H, M, L): High

Cost Estimate: The cost of operation is about \$191,000 annually, or an average of \$76 per parcel chipped.

Benefit: Life Safety; Reduce property Loss. A cost of \$76 per parcel is about 0.03 percent of the average Assessor's Roll Value of about \$260,000 per home (which is far below actual replacement value).

Potential Funding: Current funding is through a WUI grant. However this funding is not guaranteed for future years and options are now being considered to continue this service when Grant funding is no longer available.

Schedule: Ongoing annually.

Appendix G – Project Description

MAINTENANCE ON SHADED FUEL BREAKS AND DEMONSTRATION FUEL BREAKS.

Issue/Background: Several roadside shaded fuel breaks and demonstration fuel breaks were created from 1998 to 2002 using a grant from Proposition 204 funds and other sources. In order for these fuel breaks to continue to be effective, maintenance must be done on a periodic basis.

The fuel breaks are on primarily private property, and the property owners are expected to perform the maintenance with some cost-share assistance. The fuel break locations, size, and resources protected are listed in the following table:

Location	# Acres	# Homes Protected	Value*
Aeolia Heights demo SFB	20		Educational
Alta demo SFB	20		Educational
Foresthill School demo SFB	25		Educational
Maidu demo SFB	20		Educational
Foresthill Divide Rd. (Todd Valley)	36	1,500	391,500,000
Michigan Bluff	43	14	3,654,000
Boole Road	11	100	26,100,000
Cerro Vista	16	100	26,100,000
Ponderosa Road	21	100	26,100,000
Spring Garden Road	25	100	26,100,000
Yankee Jims Road	55	50	13,050,000
TOTALS	312	1,964	512,604,000

*The value is based on the average home value for the unincorporated County from the Assessor’s Roll Values. The number of homes is approximate.

Other Alternatives: Taking no action will result in the continued re-growth of vegetation and the disappearance of the fuel breaks.

Responsible Office: Rich Gresham, Manager, Placer County Resource Conservation District

Priority (H, M, L): Medium

Cost Estimate: Estimated cost is \$500 per Acre for a total of \$156,000.

Benefit: The roadside fuel breaks protect homes valued at approximately \$512,604,000, and also shield evacuation routes and firefighter access. The demonstration fuel breaks educate and encourage homeowners to create and maintain defensible space. The cost of \$156,000 is 0.03 percent of the values protected.

Potential Funding: The roadside fuel breaks are on private property. This project would offer staff to provide follow up recommendations. Costs could be reduced by sharing costs with private property owners.

In general, the cost of maintenance is about \$500 per acre, depending on the method used. The cost share for the project is estimated to be \$78,000, with the property owners contributing an equal amount of their own funds and/or labor. The County Chipper Program will be used to help reduce the overall cost. The costs include funds for staff time and project management.

The responsibility for maintenance of the demonstration fuel breaks varies. The Aeloia Heights fuel break is on public and private lands; Alta's is managed by the Alta Fire Safe Council; the one at Foresthill School is maintained by the school; and the Maidu project is on private property within the Auburn Fuel Break and will be maintained as part of that project (described separately). This project would offer staff to provide follow-up recommendations plus cost-share funds for the private lands portions of the Aeloia Heights and Alta fuel breaks.

Possible source of funding are National Fire Plan, the Healthy Forests Initiative, CalFed grants, and EQIP.

Schedule: Every 3-5 years, if funding is available, starting in the spring of 2005 or 2006.

ESTABLISH ADDITIONAL FIRE SAFE COUNCILS IN THE THE LINCOLN AREA, GRANITE BAY – AND POSSIBLY STARTING A COUNCIL IN THE TRUCKEE AREA)

Issue/Background:

Many residents of this area are not aware of the wildfire hazard. This hazard was illustrated by the 2001 Sierra Fire in the Loomis/Rocklin area, which destroyed six homes, numerous outbuildings, and several vehicles. A couple of years ago, a home was lost to a grass fire in Loomis!

Establishing Fire Safe Council(s) in this area of the County is a first step towards educating local residents about the fact that they live in an urban forest and there is a wildfire hazard, and motivating them to take appropriate action to reduce their risk.

Other Alternatives: Taking no action will continue to leave these homes at risk.

Responsible Office: Placer County Fire Safe Alliance partners, including local fire agencies

Priority (H, M, L): High

Cost Estimate: The major cost involved is fire agency manpower, especially on the part of the Prevention Officer/Fire Marshal. There may also be some administrative cost for mailings, etc. However, most of these costs can probably be included in normal operating expenses.

The “Core Group” models used by the Greater Auburn Area Fire Safe Council and the Ponderosa Fire Safe Council in their Partnership Agreements could be replicated to create a local base of involved citizens to work with their local fire agencies.

Benefit: Fire Safe Councils have been demonstrated across the state as being effective in informing and motivating local residents to take action to create and maintain defensible space. It costs almost nothing to start and operate a fire safe council and to create local education programs. Grant funding for larger projects will be worked through the Placer County Fire Safe Alliance partners and the developing Community Wildfire Protection Plan.

Potential Funding: Existing Budgets

Schedule: Start up at least one additional Fire Safe Council in 2005. Sub-chapters could be implemented via homeowner associations, neighborhood watch groups, and other existing community-based organizations.

**** The Colfax, Meadow Vista, Alta, and Ponderosa proposed Fire Safe Councils were all combined into the “Placer Sierra FSC” this year. There are now a total of 4 FSC’s in the County – Greater Auburn, Foresthill, Iowa Hill and Placer-Sierra.**

MEADOW VISTA / APPLGATE PRE-FIRE PROJECT PROPOSAL

The Meadow Vista / Applegate pre-fire project was also designed to augment current pre-fire projects that have been implemented by the Placer County Resource Conservation District, in conjunction with Placer Hills Consolidated Fire District, Natural Resources Conservation Service, and the Black Oak Waldorf School, through grants funded by way of CDF and other sources. These projects include demonstrations of a CDF Vegetation Management Program prescribed burn, shaded fuel break, defensible space, and hand versus mechanical methods of fuel reduction, and a handbook for home-owners about defensible space. There is strong support of these pre-fire projects by the local community as evidenced by heavy attendance of public workshops and landowner participation.

Meadow Vista / Applegate Pre-Fire Project

Event 1: A series of roadside fuel modifications, located in strategic areas to allow fire fighting resources access and a location to effectively suppress an encroaching wildfire. Using existing roads for the location of the fuel modification takes advantage of the area occupied by the road surface, which is devoid of all vegetation. Modifying the fuels for a distance of 25 feet on both sides of the existing road will give an effective fuel break width of approximately 70 to 80 feet for secondary roads. The location of these fuel modifications will allow ready access and a strategic defensive position for fire suppression resources and facilitate long term maintenance of the fuel breaks.

Proposed Roadside Fuel Modifications:

1. Canyon River Fuel Break separating Applegate from the North Fork of the American River. The fuel break will follow primarily along portions of Cerro Vista Drive, and Boole Road.
 - Approximately 7 miles (This portion has been completed)
2. Placer Hills Road Fuel Break from I 80 to and including Weimar Cross Roads to I 80 again.
 - Approximately 8 miles

The total area encompassed by the shaded fuel breaks is about 90 acres over a distance of approximately 15 miles.

Event 2: An inspection program of the Meadow Vista and Applegate area to enforce the Public Resources Code 4291 Fire Safe standards (LE 38 Inspection). Placer County Planning Department estimates that there are approximately 3,400 housing units in this general area. Inspection of these housing units will serve two purposes: To date over 2,600 of the homes in the area have been inspected for compliance with PRC 4291. Of those inspected, less than twenty percent received a warning notice and more than 280 have made use of the chipping program. There were an additional seventy-one residents that utilized the chipper without having an inspection to encourage them.

1. Ensure compliance with PRC 4291. This will promote a fuel condition adjacent to structures where fire suppression resources will have a better chance of protecting homes should a wildfire occur.

2. Educate the homeowners of the state law requirements regarding defensible space standards and what they should do to help the chances of their house surviving a wildfire in the area.

The Nevada Yuba Placer Unit has found, in its LE 38 Inspection program in 2003, that less than 1% of the residences required a third inspection.

Event 3: Second LE 38 inspection of approximately 1,122 housing units.

Event 4: Third LE 38 inspection of approximately 34 housing units.

Event 5: Homeowner support for removal of vegetation as a result of the LE 38 inspections. The inspections will most likely occur in the late spring and summer months. Residents who remove vegetation as a result of the inspections may need alternative ways to dispose of the material. Burn days will be limited due to air quality and fire hazard concerns. The proposed support for the homeowner is to notify the residents that have been inspected as to a time frame when a chipper and crew will be by their street. The homeowner can then clear vegetation around their residence and bring it to the curbside. The crew will then chip the vegetation and deposit the material back onto the property.

Event 6: A series of prescribed burn units along the north side of the North Fork of the American River designed to reduce the fuel load along the slope in a mosaic pattern. Treatment of these units will break the continuity of the mature and dense brush currently occupying the slope. The advance of wildfire at this location would slow as it moved into a treated unit allowing fire suppression resources more time and a better location for fire fighting operations.

- Prescribed Fire size is approximately 320 acres over 8 units

Potential Stakeholders to participate in Cost Sharing to Fund the Project:

- Placer County
- Local Service Groups
- Placer County Resource Conservation District
- Natural Resources Conservation Service
- Placer County Air Pollution
- Placer Hills Fire District
- American River Watershed CRMP
- Homeowners Associations

Estimated Cost of Proposed Project

Total = \$259,355.70

To date over \$98,000 has been expended towards this program. The funding has come from variety of programs including Pacific Gas & Electric settlement funds, Prop 204, and National Fire Plan monies.

FORESTHILL FUEL MODIFICATION PROJECT

The Foresthill pre-fire project was designed to tie in with and increase the effectiveness of current projects that the Placer County Resource Conservation District (RCD) has implemented in the area as a result of grant funding from CDF and fuel break projects the Tahoe National Forest has started to the east of Foresthill. The RCD projects include a demonstration of a shaded fuel break for forest lots, education of the local population of fire safe standards, and fuel break planning for the Foresthill Divide.

Foresthill Pre-fire Project:

Event 1: An inspection program of the Foresthill Divide area to enforce the Public Resources Code 4291 Fire Safe standards (LE 38 Inspection). Placer County Planning Department estimates that there are approximately 2,400 housing units on the Divide. Over 700 of these homes have been inspected so far. Inspection of these housing units will serve two purposes:

1. Ensure compliance with PRC 4291. This will promote a fuel condition adjacent to structures where fire suppression resources will have a better chance of protecting homes should a wildfire occur.
2. Educate the homeowners of the state law requirements regarding defensible space standards and what they should do to help the chances of their house surviving a wildfire in the area.

The Nevada Yuba Placer Unit has found, in its Nevada County LE 38 Inspection program in 2001, that 33% of the residences require a second inspection to ensure compliance with PRC 4291. Approximately 1% of the residences required a third inspection.

Event 2: Second LE 38 inspection of approximately 800 housing units.

Event 3: Third LE 38 inspection of approximately 24 housing units.

*Includes General Services vehicle rental for inspectors.

Event 4: A series a roadside fuel modification projects located in strategic areas to allow fire fighting resources access and a location to effectively suppress an encroaching wildfire.

(This portion of the project has been completed).

Event 5: Homeowner support for removal of vegetation as a result of the LE 38 inspections. The inspections will most likely occur in the late spring and summer months. Residents who remove vegetation as a result of the inspections may need alternative ways to dispose of the material. Burn days will be limited due to air quality and fire hazard concerns. The proposed support for the homeowner is to notify the residents that have been inspected as to a time frame when a chipper and crew will be by their street. The homeowner can then clear vegetation around their residence and bring it to the curbside. The crew will then chip the vegetation and deposit the material back onto the property. Multiple residents within the project area have made use of the chipper program and many others have cleared around their homes in an effort to reduce their fire hazard. Inspectors are not concentrating in the Foresthill area this year

(2006) as the community has begun to self police and make use of the chipper program in record numbers.

Potential Stakeholders to participate in Cost Sharing to Fund the Project:

- Placer County
- Todd Valley Homeowners Association
- Local Service Groups
- Placer County Resource Conservation District
- Placer County Air Pollution
- Natural Resources Conservation Service
- California Energy Commission
- Tahoe National Forest
- Bureau of Land Management
- Bureau of Reclamation
- American River Watershed CRMP
- Foresthill Fire Protection District
- Pacific Gas & Electric

Estimated Cost of Proposed Project: \$153,910.14

To date over \$75,000 has been expended towards this program. The funding has come from a variety of programs including Pacific Gas & Electric settlement funds, Prop 204, and National Fire Plan monies.

Appendix K – Project Description

NEVADA – YUBA - PLACER FUELS REDUCTION PROJECT PROPOSAL

Ongoing Priority # 1 Project

PROJECT DESCRIPTION: All of the field projects identified in the Nevada-Yuba-Placer Pre-fire Management Plan identify the need for a chipper. In the NYP CDF Unit, the chipper will provide support to the homeowners that do the clearing around their structures as required by the Public Resources Code (PRC 4291) and be utilized to reduce the material removed from the shaded fuel breaks to a manageable size.

Once the homeowners accomplish their necessary 4291 clearance, they need a way to dispose of the vegetative waste that is created. The current options are: burn it, haul it to a disposal site, pile it and allow it to turn to mulch, or hire a contractor to dispose of it. Additionally, studies have shown that defensible space and construction materials have the greatest effect on a structure's survival of a wildland fire. This project directly affects defensible space and will have the most effect in reducing structure damage or loss in wildfires.

The Fire Plan assessment process has identified debris escapes as the leading cause of ignitions throughout the Unit. This debris burning results in an increased fire risk and diminishes the air quality, both of which are potentially hazardous to the public. As the rural population continues to grow throughout the Unit, both air quality and fire risk are going to become bigger issues. The Northern Sierra Air Quality Management District (AQMD), Placer County Air Pollution Control District, and the Feather River AQMD all strongly support the use of a chipper program to accomplish the required fuels reduction.

Another problem inherent to an increasing population is that of waste disposal. Currently our landfills are becoming overburdened with waste. The addition of vegetative waste only compounds the problem. One advantage of the chipper program is that it reduces the volume of the vegetative material and also expedites the process of natural breakdown. The Nevada-Yuba-Placer Pre-fire Management Plan designates that the chips created in this process will be distributed back onto the property of origin allowing the landowners to utilize the material as they see fit. Dispersion of the chipped material back onto the site also reduces the germination of annual grasses and the sprouting of brush.

Many landowners have constructed piles from the material they removed. However, due to the restriction of burn days and the cost and labor requirements to haul it away they just allow the piles to sit and decompose naturally. This system is beneficial in that it does not reduce air quality; however, it does create many heavy pockets of dead fuel available to an encroaching fire. These pockets of fuel can have an adverse effect on fire behavior. A slow moving ground fire burning into one of these piles will increase the potential for spotting and hamper control efforts. Depending on the placement of the piles, there is an increased chance for torching nearby trees and other vegetation.

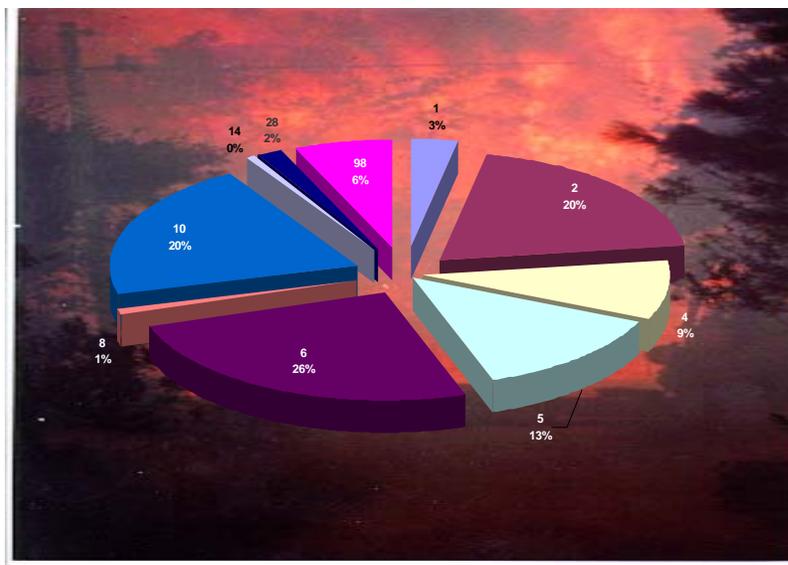
The final option for the landowners is for them to hire a private contractor to dispose of the vegetation. The contractor would, most likely, use one of the methods mentioned above, so the ultimate effects are unchanged. Of the options mentioned above, chipping the material is the most preferable in relation to the fire hazard and air quality. Currently, the costs of chipping make it unfeasible for many small landowners. Each landowner has to pay a “Haul-in” or “Setup” fee and are generally required to pay for a minimum of one hour when using a private contractor.

Coordinators are currently overseeing chipping programs throughout Nevada and Placer Counties. These programs are a result of many funding sources working together to accomplish fuels reduction work where it is most beneficial and manageable. The Coordinators group landowners that are in close proximity to each other and make the arrangements for a chipper crew to respond. The initial work provided through these programs allow for the removal of the old, decadent material that has become established over the last 100 years of fire suppression. Once this build-up of fuels is eliminated the landowners will be better able to deal with the fuels on an annual basis. It is the Unit’s expectation that once it is shown how beneficial this project is to individual neighborhoods, those areas will utilize the process on their own as a method of maintaining the required clearance around structures. In addition, this program would encourage people to do their PRC 4291 required clearing that would not have done it voluntarily as now there is a method of disposing of the cut material.

The fuel models in the area are displayed in figure 1 below. As is evident from the chart, nearly fifty percent of the fuels are in brush models. The fuel model 10 in this area also has a heavy brush component in the understory. So far the fuels around more than 9,500 homes have been modified from the brush models to a fuel model 8. A wildland fire that now encroaches on these homes will experience a significant reduction in fire behavior. It is estimated that there are still over 140,000 properties in the Unit requiring inspections. Of those approximately 130,000 will require brush disposal. By encouraging those property owners to meet PRC 4291, we will effectively treat a minimum of 20,000 acres within the Unit. This treatment will affect the fuels immediately adjacent to homes. Many studies have shown this combined with building construction measures to be the most effective treatments for protecting structures during a wildfire.

Estimated Project Cost
\$2,750,000

Chipping programs have been successfully operating in each of the three counties for three or more years. Even though these programs are separate and operated in various fashions, the overall results remain the same.



Nevada County – The fuels reduction program within Nevada got it start through the FEMA Hazard Mitigation Program (HGMP). We initially received approval for approximately \$600,000 to create fuel breaks and provide chipping services to specific areas within the County. This program sparked the interest of many of the residents that lived outside of the identified project areas and they immediately began requesting that the same service become available throughout the County. The following year we were able to accomplish that through \$22,000 of Fuels Reduction funds provided by CDF through the Fuels Reduction Program. Those funds introduced many residents to the Chipping Program and resulted in a demand that was greater than we could have hoped for. To date the Chipper Program has resulted in the treatment of over 2,917 residences by processing in excess of 208,000 cubic yds of fuels at those residences. We have also treated over 80 acres along more than eight miles of roads by removing more than 1,200 tons of vegetative fuels to create roadside fuels reduction areas. We have continued the program over the years through funds from a variety of sources including but not limited to: WUI Grants (\$216,000), Forest Stewardship Grant (\$165,000), BLM (\$228,000), USFS (\$220,000, Northern Sierra AQMD (\$75,000), Nevada County \$(129,000), Allstate Insurance (\$33,000), Proposition 40 Funds (\$235,000) in 05-06 FY, and a number of home-owner associations (\$45,000). Through Prop 204 (\$125,000) over 300 acres were treated by our cooperators. Options are now being considered to allow the program to continue if Grant funding becomes unavailable in the future.

Placer County – Initial fuels reduction efforts in Placer County were undertaken as an outcome of the settlement between Placer County and Pacific Gas & Electric. Approximately \$271,000 was set aside to reduce the fuel loading within the County. We utilized that as start up money to initiate the Residential Chipper Program within the County. To date the Chipper Program has resulted in the treatment of over 13,086 residences by processing in excess of 25,568 tons of fuels at those residences. Operation of the Placer County Chipper has also significantly reduced the volume of air pollutant emissions within Placer County. The following table contains the pollutant emission estimates prevented thru operation of the Placer County Chipper Program 1998-2006:

Particulate Matter 10 (PM10)	276 tons
Particulate Matter 2.5 (PM2.5)	237 tons
Oxides of Nitrogen (NOx)	48 tons
Oxides of Sulfur (Sox)	1.4 tons
Volatile Organic Compounds (VOC)	197 tons
Carbon Monoxide (CO)	2,102 tons

We have also treated over 150 acres along more than 40 miles of roads removing over 5,367 tons of vegetative fuels to create roadside fuels reduction areas. These areas will allow for reduced fire behavior along the roadways in times of fire emergencies. The program has been able to continue with the application of funds provided through Proposition 204 (\$252,000), Wildland Urban Interface (WUI) Grants \$(506,000), Placer County Air Quality Management District (AQMD) \$(65,000). Options are now being considered to allow the program to continue if Grant funding becomes unavailable in the future. ([see Map following](#))

Yuba County - The fuel reduction efforts in Yuba County have been directed primarily at large landowners. Approximately \$966,000 has been spent treating parcels ten acres and larger. These funds were obtained by the Yuba Watershed Protection & Fire Safe Council through Prop 204 monies. NYP has established a contract with the Dobbins-Oregon House Fire Department

to provide chipping services throughout the foothill communities of Yuba County. By July 1, 2005 residential chipping services should be in place. These additional services will be dependent on Proposition 40 funding.

ANNUAL DEFENSIBLE SPACE INSPECTIONS PROGRAM IN THE UNINCORPORATED COUNTY

Issue/Background: Defensible space is recognized by CDF as the single most important action that a homeowner can take to increase the chances that homes and other structures will survive a wildfire. Defensible space also helps to protect the wildland from a structure fire. Another benefit of defensible space is that it provides firefighters with a safe place to work while defending a home from fire.

When SB 1369 took effect on January 1, 2005, the minimum defensible space requirement increased from 30 feet to 100 feet.

Many homeowners are not aware of the requirements of defensible space, especially new residents who move to the County from highly urban areas where it is normal to expect a fire engine, or even multiple engines, to be dedicated to fighting a structure fire. However, during a wildfire, this is not feasible. Homes and other structures must be able to withstand an approaching wildfire with no assistance from firefighters. Also, fire fighters will not defend a home unless they can do so safely.

Regular inspections, based on the requirements of California Law as specified in Public Resources Code 4291, can help ensure that homeowners create and maintain adequate defensible space. The inspection process is also an opportunity to educate and motivate the homeowners to take action to improve their wildfire safety.

While CDF has the legislative mandate to perform these inspections, in reality budgets do not provide for sufficient staffing to do this beyond the occasional inspection requested by a homeowner. Since 1998, PRC 4291 inspections in the Placer County Foothills have been funded by grants from Prop 204, the Community-Based Wildfire Protection Program through the California Fire Safe Council and BLM, and Title III funds from the *Secure Rural Schools & Community Self-Determination Act of 2000* (AKA “HR 2389 Timber Tax”) payments to Placer County.

Future programs need to expand to include the south County, especially the South Placer Fire Protection District and the Loomis Fire Protection District.

Other Alternatives: Taking no action will result in less compliance with defensible space requirements.

Responsible Office: Placer County Fire Safe Alliance partners, including fire agencies

Priority (H, M, L): High

Cost Estimate: Inspections cost approximately \$10.50 for the inspector’s time and insurance, mileage, and a manager. Adding administrative overhead brings the cost to about \$11.50. (These are 2001 dollars.) An additional cost is for literature to handout. The most important handout is the Homeowner’s Checklist, which can be downloaded at http://www.fire.ca.gov/php/education_checklist.php.

The most recent grant for Defensible Space Inspections was for \$79,746.67 with an in-kind match for literature and other support by CDF for \$13,236.50. These inspections focused on the foothills communities of Foresthill, Iowa Hill, Weimar, Meadow Vista, Applegate, the Colfax area, etc. There are approximately 7,000 homes in this area. Inspections cost approximately \$10.50 for the inspector's time and insurance, mileage, and a manager. Adding administrative overhead brings the cost to about \$11.50. An additional cost is for literature to handout. The most important handout is the Homeowner's Checklist, available at http://www.fire.ca.gov/php/education_checklist.php or from CDF. Color copies of this document cost from \$1.50 to \$2.00 depending on the number of copies.

Benefit: Life Safety; Reduce property Loss. A cost of \$13.00 per home inspected (\$11.50 + \$1.50) is about 0.005 percent of the average Assessor's Roll Value of about \$260,000 per home (which is far below actual replacement value).

Potential Funding: Potential sources of funding include: National Fire Plan, Healthy Forests Initiative, and Title III funds from the *Secure Rural Schools & Community Self-Determination Act of 2000* (AKA "HR 2389 Timber Tax") payments to Placer County.

Schedule: Annually, as funding permits. Since not every property needs to be inspected every year, doing inspections on a rolling basis would allow smaller annual grant amounts to be needed.

**** Over 6500 inspections were completed in 2005 - 2010 ****

ONGOING COUNTY CHIPPER PROGRAM OPERATION FUNDS

Issue/Background: Since 1998, the Placer County Chipper Program has provided a free service to residents of the County. This helps to lower the costs of creating and maintaining defensible space and also reduces the amount of outdoor burning and the associated air pollution as well as escaped fires.

The County owns four chippers and tow vehicles, purchased from a PG&E settlement and supplemented by a Prop 204 grant. Maintenance is performed by CDF. Therefore the annual cost is for the four crew managers, one for each chipper, and the crews. In order to keep costs down, trustees from the County Jail are used as crews.

Response to the program has been excellent. As of June 2004, an estimated total of 17,486 tons of vegetation had been processed through the Chipper Program since its inception. The number of parcels chipped has steadily increased every year.

Other Alternatives: No Action - If the Chipper Program is not continued, there is a risk of lower compliance with defensible space requirements as well as increased burning.

Responsible Office: Rich Gresham, Manager, Placer County Resource Conservation District; CDF NYP, Placer County

Priority (H, M, L): High

Cost Estimate: The cost of operation is about \$191,000 annually, or an average of \$76 per parcel chipped.

Benefit: Life Safety; Reduce property Loss. A cost of \$76 per parcel is about 0.03 percent of the average Assessor's Roll Value of about \$260,000 per home (which is far below actual replacement value).

Potential Funding: Current funding is through a WUI grant. However this funding is not guaranteed for future years and options are now being considered to continue this service when Grant funding is no longer available.

Schedule: Ongoing annually.

DEVELOP THE FOLLOWING GIS LAYERS FOR EMERGENCY SERVICES WITHIN YUBA COUNTY:

Issue/Background:

Readily accessible information is needed in cases of natural disasters. Yuba County is vulnerable to large, fast moving fires that involve deployment of incident command teams and evacuations. Building a readily accessible master database of county data and fire related data will expedite strategic planning and streamline the mapping process. This master dataset will include data from Yuba County, the Yuba County Firesafe Council, CAL FIRE, USFS, BLM, UC Davis and local timber company owners.

Yuba County and other should have the ability to assess the status of critical facilities at the time of an incident. Mapped data would improve this process by allowing the Emergency Operations center to compare a mapped hazard against mapped facilities allowing for a more precise query of affected facilities. Mapped data will significantly improve the direction of damage assessment teams as an example.

The Yuba County Firesafe Council has also been developing data layers for fire hydrants and water sources. All of the County's fire agencies routinely provide mutual aid into each other's jurisdiction. Mapped fire hydrants and water sources will reduce the time that it takes an engine company to find an adequate water source in the event of a fire.

Other Alternatives: Continue to estimate fire mitigation measures based on memory and un-mapped data. Continue to estimate critical facilities risk and vulnerability based on un-mapped data. Continue to use manually mapped fire hydrant data that is seldom shared with agencies who are providing mutual aid to a sister agency.

Responsible Office: Project coordinated by Yuba County Firesafe Council, data will be hosted by Yuba County.

Priority (H, M, L): Medium

Benefit: The development of a shared GIS server will significantly improve the quality of the County's . Mapped data will improve planning accuracy, will improve precision in operations and will improve response timeliness. It is not possible to quantify cost savings in terms of dollars.

Potential Funding: TBD

Schedule: An interagency group was formed in early 2011. Yuba County is investigating server availability and security policies. Each member has been tasked with collecting an inventory of the data they house. A geodatabase template for collecting fuel treatments has been started.

ALTA SIERRA PRE-FIRE PROJECT

The Alta Sierra area was targeted for a pre-fire project due to its high rate of ignitions and its close location to areas to the north that have high rankings for assets, fuel hazard, and the lower rated level of service. In addition, this area has a past history of enthusiastic support of fire hazard reduction programs by the homeowners, Northern Sierra Air Quality District, and Nevada County Consolidated Fire Protection District (NCCFD). The NCCFD is currently the lead on continuing this project. They have instituted an ordinance that requires the owners of vacant lots to remove the hazardous fuels prior to fire season. If the landowner does not comply the NCCFD contracts to have the work completed and bills the landowner via their property taxes. The personnel from this department have conducted 285 inspections, which, resulted in fuel treatments on over 250 properties totaling more than 350 acres within their fire district.

Alta Sierra Pre-fire Project

Event 1: An inspection program targeting the vacant properties within the local fire district has been ongoing since 1997. They have developed a schedule that inspects each vacant property at least once every five years. This program holds the individual landowner responsible for reducing the hazardous fuels on their own lands.

Event 2: An inspection program of the Alta Sierra area to enforce the Public Resources Code 4291 Fire Safe standards (LE 38 Inspection). Nevada County Planning Department estimates that there are approximately 2,900 housing units in this area. Inspection of these housing units will serve two purposes:

Ensure compliance with PRC 4291. This will promote a fuel condition adjacent to structures where fire suppression resources will have a better chance of protecting homes should a wildfire occur.

Educate the homeowners of the state law requirements regarding defensible space standards and what they should do to help the chances of their house surviving a wildfire in the area.

The Nevada Yuba Placer Unit has found, in its Nevada County LE 38 Inspection program in 2000, that only about 5% of the residences require a second inspection to ensure compliance with PRC 4291. Approximately 1% of the residences required a third inspection.

Event 3: Second LE 38 inspection of approximately 145 housing units.

Event 4: Third LE 38 inspection of approximately 29 housing units.

*Includes General Services vehicle rental for inspectors.

Event 5: Homeowner support for removal of vegetation as a result of the LE 38 inspections. The inspections will most likely occur in the late spring and summer months. Residents who remove vegetation as a result of the inspections may need alternative ways to dispose of the material. Burn days will be limited due to air quality and fire hazard concerns. The proposed support for the homeowner is to notify the residents of the Western Nevada County chipping

program at the time of the inspections. The homeowner can then clear vegetation around their residence, bring it to the curbside, and notify the FireSafe Council of Nevada County (NCFSC) once completed. The NCFSC will then dispatch a chipping crew to the area once sufficient material has been piled to keep the chipper busy for a minimum of four hours. The crew will then chip the vegetation and deposit the material back onto the property.

Potential Stakeholders to participate in Cost Sharing to Fund the Project:

- Nevada County
- Local Service Groups
- Nevada County Resource Conservation District
- Natural Resources Conservation Service
- Northern Sierra Air Quality District
- Nevada County Consolidated Fire Protection District
- Alta Sierra Subdivision Homeowners Association

Estimated Cost of Proposed Project

Total = \$125,652.50

The chipping portion of this program is incorporated in the amounts listed in the totals for the Unit-Wide Chipping described above. The cost of inspecting the vacant lands is being born by the Nevada County Consolidated Fire Department. The landowners fund clearing the properties.

In 2004, approximately 195 total acres on 161 parcels were treated within Nevada County between Cascade shores area and the Alta Sierra project.

COLUMBIA HILL SHADED FUEL BREAK PROJECT

With California's wildland-urban interface areas quickly growing, as well as the population of Nevada County, the objective of the Columbia Hill Shaded Fuel Break Project is to create a shaded fuel break in the Columbia Hill area of Nevada County. Strategically, the project will tie in with the earlier established Montezuma Fuel Break to give firefighters a place to make an efficient stand against a wildfire on the San Juan Ridge.

In the 6 mile fuel break area there are approximately 85 separate landowners, 47 of whom chose to participate in the project. Nearly all of these homeowners have insufficient defensible space and combining this with poorly maintained roadside vegetation, the Fire Safe Council of Nevada County was able to work with the California Department of Forestry and Fire Protection to identify the prior mentioned aspects of the area as a recipe for disaster.

The Columbia Hill area is predominately heavy timbered land with thick manzanita understory fuels.

Actions involved in the proposed project

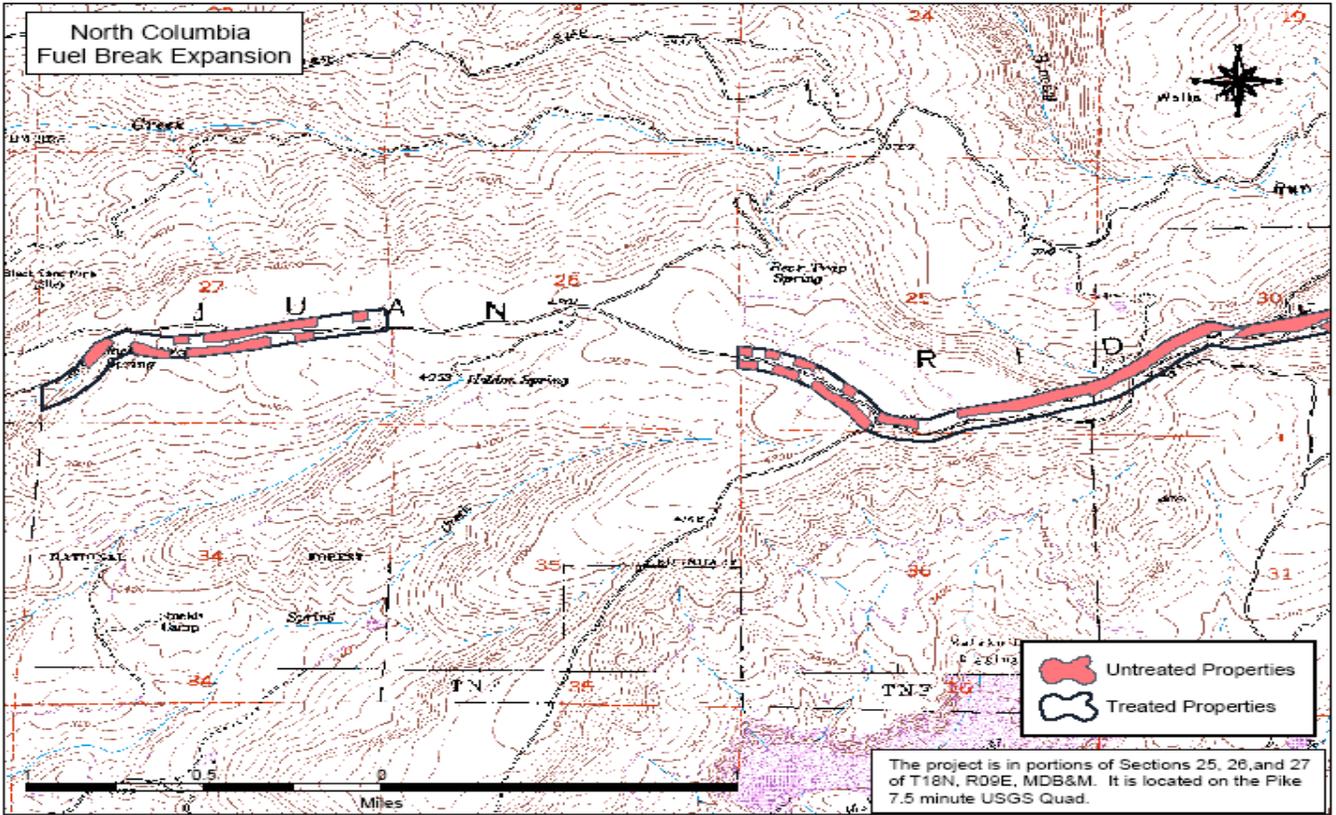
The Columbia Hill Fuel Break Project was designed to tie in with previously established fuels reduction efforts, such as the Montezuma Fuel Break. Specifications written into the project called for the creation of a 400' wide shaded fuel break to run 200' along both sides of Tyler Foote and Cruzon Grade Roads in the project area. There has been strong support and great interest in this project from the involved community.

Event 1: Fuel Break Construction. A community meeting was held in July of 2003 to introduce this project to the community. After a number of other mailings to landowners, the FSCNC began meeting with landowners who chose to participate in the project to mark property boundaries as well as determine what specific work they would like accomplished. Under the grant funding the project the FSCNC was also able to hire a contracted forester who met with each landowner who wished to have timber removed from their land to mark timber and confirm their wishes. Once this was accomplished, a Timber Harvest Plan was submitted to the California Department of Forestry and Fire Protection and the hand clearing and timber work was put out to bid. Pending approval of the Timber Harvest Plan, the FSCNC will select a licensed timber operator to contract with to complete the work at which time a FSCNC representative will be on site at all times to ensure correct operations are taking place on individually owned lands. The end result will be a 400' wide fuel break throughout much of the Columbia Hill area.

With the exception of one small area that has only been cleared to 100' along the roadsides, **this portion of the project has been completed.** The additional portion to be cleared will be funded by a newly acquired Proposition 40 Grant.

Event 2: Fuel Break Maintenance. With the exception of one parcel, all participating landowners have agreed to donate revenue from their harvested timber back to the Fire Safe Council of

Nevada County. These funds will be placed in a trust fund and utilized to maintain the fuel break over the next five to ten years.



SNOWTENT SHADED FUEL BREAK PROJECT

The second area identified by the Fire Safe Council of Nevada County as an addendum to the Columbia Hill project is the conversion of an additional 4 miles of roadway to shaded fuel break along North Bloomfield – Graniteville Road, tying the Columbia Hill project into the Graniteville Townsite Fuels Reduction. This stretch will complete a part of the North San Juan Coordinated Resources Management Plan with a shaded fuel break running from Bridgeport on the South Fork of the Yuba River to the town of Graniteville. The stretch of planned treatment area under the project is heavy timberlands with thick manzanita and suppressed conifer under story fuels.

Event 1: *Establish Funding Sources: The Fire Safe Council of Nevada County has secured funding for this project from the US Forest Service.*

Event 2: Environmental Compliance: Fire Safe Council of Nevada County staff will be working with a privately contracted forester and CDF staff to complete environmental compliance for the project, which with the possible removal of timber, may involve the completion of and Emergency Fire Hazard Exemption. Environmental work began in January of 2006 and will be completed by July of 2006.

Event 3: Treatment of non-Federal lands, approximately 4 miles, extending from Snowtent Springs to the town of Graniteville. This step is planned for the Summer of 2006, prior to winter snowfall.

Appendix Q – Project Description

SENIOR AND DISABLED ASSISTANCE PROGRAM

The Fire Safe Council of Nevada County has identified a need to continue the Senior and Disabled Assistance Program to provide defensible space clearing for elderly and disabled Nevada County residents unable to physically and financially clear on their own. The program currently utilizes workers from the Nevada County Probation Department's Work Release Program with supervision and direction from FSCNC staff to complete the requested work and bring participants into compliance with current defensible space laws.

Event 1: Secure Funding for Program Continuation – This program is currently funded by a grant from the Allstate Foundation, however the Fire Safe Council of Nevada County is applying for additional grants to expand program operations.

Event 2: Senior Contacts and Clearing – The Fire Safe Council of Nevada County will meet on-site with Seniors to determine what work they would like completed and consequently schedule the clearing work with the Probation Department. This task will be ongoing from the current time period until funding is no longer available.

DEFENSIBLE SPACE DROP OFF PROGRAMS

In an effort to encourage residents in outlying portions of the County and the East side of the County to clear defensible space, the FSCNC provides drop-offs days and locations throughout the County where residents are allowed to drop off vegetative material, including pine needles and other materials not able to be processed through the chipping program, for a weekend time frame. Materials are then ground and transported to cogeneration facilities or distributed as mulch. This program has proven more effective than chipping in the Eastern portion of Nevada County.

Event 1: Secure Funding for Program Continuation – This program is currently funded through grants of Proposition 40 Funds.

Event 2: Schedule Drop-offs: Multiple drop-offs have been scheduled throughout the County in 2006 in Condon Park, Owl Creek, Glenshire, Plavada, Soda Springs, Hobart Mills and Tahoe Donner.

Event 3: Conduct Drop-Offs: The drop-offs will be open for a full month with material being processed within seven days of the close of each drop-off. Material will be trucked to a cogeneration facility or left onsite.

YUBA COUNTY PUBLIC WORKS ROADSIDE CLEARING PLAN

Actions involved in the proposed project:

Roads side clearance projects that will benefit the various foothill community's fire protection and traffic safety have been identified by the cooperative efforts of CDF, USFS, and the Yuba Watershed Protection & Fire Safe Council. Through a system of prioritization and cooperation the Yuba County Department of Public Works (YCDPW) will direct their roadside clearing efforts to those roads identified as having the greatest potential for improving fire safety, evacuation, egress, and access.

Event 1: A priority list of roads will be provided to the YCDPW. They will then direct their roadside clearance crews to direct their efforts on the roads based on the established priorities. Under the current plan, it is anticipated that twelve to fifteen miles will be accomplished this coming fiscal year and there are a total of eighty-eight miles identified for treatment.

This portion of the project has been completed.

Initial funding for this program was accomplished through Proposition 204 funds through the Fire Safe Council. Now that those funds have been expended YCDPW is continuing the program in coming fiscal years with partial funding through HR 2389 Title III funds and general gas tax revenues. The continuance of the funds is uncertain so currently the planning extends for the next five years. However, if additional funds become available they will be directed to the program and the list of roads may be expanded.

Justification: This project will result in a direct reduction of the fire hazard to the homes immediately adjacent to the identified roads and will provide enhanced protection to the communities of Dobbins – Oregon House, Brownsville, Challenge, Loma Rica and many more.

Potential Stakeholders to participate in Cost Sharing to Fund the Project:

- Yuba County
- Local Service Groups
- U.S. Forest Service
- Feather River Air Management District
- Yuba Watershed Protection & Fire Safe Council

Estimated project cost is **\$950,000**. As of June 1, 2004, over \$200,000 had been spent on the project, the majority of which came from Prop 204. Last year \$58,500 was contributed from HR 2389 funds and \$30,000 from gas tax revenues for a total of \$88,500. Updated totals were not available at the time of publishing of this year's plan.

The program had been utilizing California Youth Authority crews from the Washington Ridge Conservation Camp to assist with the labor involved in this project. With this winter's removal of CYA crews from Washington Ridge, this program has been placed on hold. It is anticipated that the project work can resume once the transition from CYA to CDC (Calif. Dept. of Corrections) is completed at Washington Ridge.

Appendix T – Unit Projects

PROPOSITION 40 CFIP PROJECTS

Project Name	Project Number	Type	County	Treated Acreage	Status
Tahoe Donner Association	08-NYP-NEV-1057	Mastication	Nevada	58.0	Complete
Peacemaker Trust	08-NYP-YUB-1058	Mastication	Yuba	20.0	Complete
Pacific Edge	08-NYP-YUB-1059	Mastication	Yuba	25.0	Complete
Seferovich Family Trust	08-NYP-NEV-1064	Mastication	Nevada	32.0	Complete
Oro Mtn.View Properties	08-NYP-PLA-1065	Mastication	Placer	49.0	Complete
Coyote Hill, et al Amended 7-24-08	08-NYP-PLA-1069	Mastication	Placer	14.2	Complete
Pitts/Carr	08-NYP-NEV-1070	Mastication	Nevada	13.0	Complete
Hill Haven	08-NYP-PLA-1073	Hand pile/burn	Placer	36.2	Complete
Lorang, James & Kathryn J.	08-NYP-PLA-1075	Mastication	Placer	33.0	Complete
Cunningham Trust/Carraway	08-NYP-NEV-1081	Mastication	Nevada	17.0	Complete
Palisades Association	08-NYP-PLA-1082	Mastication	Placer	23.0	Complete
Homewood Village	08-NYP-PLA-1089	Mastication	Placer	5.0	Complete
Fletcher Family Trust	08-NYP-YUB-1090	Mastication	Yuba	39.0	Complete
Nina Allen Cunningham	08-NYP-NEV-1119	Mastication	Yuba	14.0	Complete
Miller (Lady Bug Ranch)	08-NYP-NEV-1120	Mastication	Nevada	31.0	Complete
Weimar Institute	08-NYP-PLA-1121	Mastication	Placer	53.0	Complete
Paye	08-NYP-NEV-1123	Mastication	Nevada	11.7	Complete
Clemons, Art & Joanna	07-NYP-PLA-1001	Mastication	Placer	16.0	Complete
Salvation Army/Kittle, Bob	07-NYP-NEV-1003	Mastication	Nevada	29.0	Complete
Burns Family Trust	07-NYP-NEV-1011	Planting	Nevada	20.0	Complete
Eaglecrest Association	07-NYP-PLA-1014	Mastication	Placer	16.0	Complete
Trailhead Estates	07-NYP-PLA-	Mastication	Placer	34.5	Complete

Association	1015				
Trails End/Wilson	07-NYP-PLA-1016	Mastication	Placer	18.0	Complete
T. Phillips Trust	07-NYP-YUB-1017	Hand pile/burn	Yuba	44.0	Complete
DiBari Family Trust	07-NYP-NEV-1019	Mastication	Nevada	30.0	Complete
Robinson & Sons Terminated 7-29-08	07-NYP-NEV-1021	Mastication	Nevada	10.0	Complete
Esoteric Fraternity	07-NYP-PLA-1024	Mastication	Placer	25.0	Complete
McCormick, Jr.	07-NYP-PLA-1025	Mastication	Placer	40.0	Complete
Jensen, Erik	07-NYP-YUB-1027	Mastication	Yuba	43.0	Complete
Czarnecki Trust	07-NYP-NEV-1031	Hand pile/burn	Nevada	14.0	Complete
Church of Sacramento	07-NYP-NEV-1032	Mastication	Nevada	56.0	Complete
McCaffree, Patrick	07-NYP-NEV-1033	Mastication	Nevada	11.0	Complete
Adyota/Dinardo	07-NYP-NEV-1035	Mastication	Nevada	43.0	Complete
Steger Trust	07-NYP-NEV-1036	N/A	Nevada	0.0	Complete
Bare Trust	07-NYP-NEV-1037	Mastication	Nevada	13.0	Complete
Silver Tip Ent.	07-NYP-PLA-1038	Mastication	Placer	34.0	Complete
Trabucco/Reynolds/Trabucco Trust	07-NYP-NEV-1043	Mastication	Placer	55.0	Complete
North Fork Association	07-NYP-PLA-1044	Mastication	Placer	75.0	Complete
Firth/Yee/Murray	07-NYP-SIE-1056	Mastication	Sierra	24.0	Complete
Paye, Mark H.	07-NYP-NEV-1100	Mastication	Nevada	47.0	Complete
Paye, Mark Howerth	07-NYP-NEV-1113	Mastication	Nevada	65.0	Complete
Mitchell. Dale	07-NYP-YUB-1114	Mastication	Yuba	35.0	Complete
Tahoe Donner Association	05-CNR-NEV-01	Mastication	Nevada	51	Complete
Genshire/ Devonshire	05-CNR-NEV-02	Hand pile/burn	Nevada	29	Complete
York	05-CNR-NEV-03	Mastication	Nevada	38	Complete
Keufer/Mcdowell etal	05-CNR-NEV-04	Hand pile/burn	Nevada	19	Complete
Deschamps etal.	05-CNR-NEV-	Mastication	Nevada	21	Complete

	05				
Brewer/Lasley	05-CNR-NEV-06	Mastication	Nevada	17	Complete
Wolfe Trust	05-CNR-NEV-07	Hand pile/burn	Nevada	26.2	Complete
Loma Rica Ranch	05-CNR-NEV-08	Hand pile/burn	Nevada	79	Complete
Paye	05-CNR-NEV-10	Mastication	Nevada	50	Complete
Bond/ Raymond	05-CNR-NEV-11	Mastication	Nevada	33	Complete
Bennett- Morrow	05-CNR-PLA-01	Mastication	Placer	18	Complete
Miller	05-CNR-PLA-02	Mastication	Placer	20	Complete
Mahoney	05-CNR-PLA-03	Mastication	Placer	16	Complete
Jacobsen	05-CNR-PLA-04	Mastication	Placer	60	Complete
Peterson	05-CNR-PLA-05	Hand pile/burn	Placer	60	Complete
Leonard	05-CNR-PLA-06	Mastication	Placer	30	Complete
Allen-Ray	05-CNR-PLA-07	Mastication	Placer	30	Complete
Oro Mtn.View Properties	05-CNR-PLA-08	Mastication	Placer	38	Complete
North Fork Association	05-CNR-PLA-09	Mastication	Placer	75	Complete
Susan Dunn	05-CNR-PLA-10	Mastication	Placer	24.4	Complete
Dashiell	05-CNR-PLA-11	Mastication	Placer	25	Complete
Hufford	05-CNR-PLA-12	Mastication	Placer	17	Complete
Gordon Trust	05-CNR-PLA-13	Mastication	Placer	10	Complete
Garry Gordon	05-CNR-PLA-14	Mastication	Placer	57	Complete
Bowman (Trust)	04-CNR-NEV-01	PCT, Chipping	Nevada	18.0	Complete
Sieler	04-CNR-NEV-02	PCT, Planting	Nevada	20.0	Complete
Snapp Family Trust	04-CNR-NEV-03	Mastication	Nevada	45.0	Complete
Personeni	04-CNR-NEV-04	Mastication	Nevada	57.0	Complete
Kramer	04-CNR-NEV-05	Mastication	Nevada	40.0	Complete
Fuller	04-CNR-NEV-	Hand	Nevada	32.0	Complete

	06	pile/burn			
Dover	04-CNR-NEV-07	Mastication	Nevada	32.0	Complete
Scotts Flat Pine Group #1	04-CNR-NEV-08	Mastication	Nevada	28.0	Complete
Toney	04-CNR-NEV-09	Hand pile/burn	Nevada	22.4	Complete
Coffin/Hoppe	04-CNR-NEV-12	Mastication	Nevada	13.5	Complete
Jacobson	04-CNR-NEV-13	Hand pile/burn	Nevada	15.5	Complete
Ostrom	04-CNR-NEV-14	Mastication	Nevada	28.0	Complete
Wilder	04-CNR-NEV-15	Mastication	Nevada	37.0	Complete
Yeager	04-CNR-NEV-18	Hand pile/burn	Nevada	27.0	Complete
Barklage	04-CNR-NEV-19	PCT, Planting	Nevada	50.0	Complete
Wilde	04-CNR-NEV-20	Mastication	Nevada	33.0	Complete
Conner	04-CNR-NEV-21	PCT, Planting	Nevada	9.0	Complete
Malott	04-CNR-NEV-22	Mastication	Nevada	39.0	Complete
Stanford	04-CNR-NEV-23	Hand pile/burn	Nevada	25.0	Complete
Warrick	04-CNR-NEV-24	Hand pile/burn	Nevada	42.0	Complete
Hass (Trust)	04-CNR-NEV-25	Hand pile/burn	Nevada	36.0	Complete
O'Conner	04-CNR-NEV-26	Hand pile/burn	Nevada	11.0	Complete
Sawyer,Fowler,Jeffery, Copas, Downing	04-CNR-NEV-27	Hand pile/burn	Nevada	18.0	Complete
Optimist Foundation	04-CNR-NEV-28	Mastication	Nevada	25.0	Complete
Steber	04-CNR-NEV-29	Hand pile/burn	Nevada	21.0	Complete
Morgan	04-CNR-NEV-30	Mastication	Nevada	39.0	Complete
Church of God Association	04-CNR-NEV-31	Mastication	Nevada	34.0	Complete
Nevada Irrigation District	04-CNR-NEV-32	Mastication	Nevada	41.0	Complete
Browning	04-CNR-NEV-33	N/A	Nevada	0.0	Complete
Sinclair	04-CNR-NEV-34	Hand pile/burn	Nevada	36.0	Complete
Valentino/Rossi	04-CNR-NEV-35	Hand pile/burn	Nevada	37.0	Complete

Rubin	04-CNR-NEV-36	Mastication	Nevada	21.0	Complete
Behrend	04-CNR-YUB-01	Mastication	Yuba	17.0	Complete
Lacey	04-CNR-YUB-02	Mastication	Yuba	28.0	Complete
Mitchell	04-CNR-YUB-03	Mastication	Yuba	37.0	Complete
Harris	04-CNR-YUB-04	Hand pile/burn	Yuba	24.0	Complete
Mitchell	04-CNR-YUB-07	Mastication	Yuba	17.0	Complete
Adasiewicz	04-CNR-SIE-01	Hand pile/burn	Sierra	20.0	Complete
Schroll	04-CNR-SIE-02	Herbicide	Sierra	120.0	Complete
Hammock/Wheelean	04-CNR-PLA-01	Hand pile/burn	Placer	12.5	Complete
Chastain	04-CNR-PLA-02	Mastication	Placer	13.0	Complete

Appendix U - Cooperator Projects:

Placer County

Foresthill / Iowa Hill Fire Safe Council & Foresthill Fire Protection District

Project Name	Type	County	Treated Acreage	Status / Priority
McKeon Fuel Reduction	PCT, Pruning, Mastication	Placer	93	Planning / 1
Yankee Jims Fuel Reduction	PCT, Pruning, Burn	Placer	138	Planning / 5
Todd Valley Fuel Break	PCT, Pruning, Mastication	Placer	130	Planning / 1
Mosquito Hazard Reduction 1	PCT, Pruning, Mastication	Placer	Unknown	Planning / 2
Mosquito Hazard Reduction 2	PCT, Pruning, Mastication	Placer	Unknown	Planning / 2
Mosquito Hazard Reduction 3	PCT, Pruning, Mastication	Placer	Unknown	Planning / 3
Mosquito Hazard Reduction 4	PCT, Pruning, Mastication	Placer	Unknown	Planning / 2
Mosquito Hazard Reduction 5	PCT, Pruning, Mastication	Placer	Unknown	Planning / 3
Mosquito Hazard Reduction 6	PCT, Pruning, Mastication	Placer	Unknown	Planning / 3
Thomas Street Education	Education and Outreach	Placer	N/A	Active
Spring into Safety	Education and Outreach	Placer	N/A	Active
Evacuation Street Signage	Evacuation Signage	Placer	N/A	Complete
Foresthill Evacuation Plan	Education and Outreach	Placer	N/A	Active
Foresthill Evacuation Map	Education and Outreach	Placer	N/A	Active

Foresthill Harvest Festival	Education and Outreach	Placer	N/A	Active
2000 to 2008 Wildfire on the Divide	Education and Outreach	Placer	N/A	Complete
2011 Long Point (100 AC)	PCT, Pruning, Mastication	Placer		Active
2011 Roach Hill (100AC)	PCT, Pruning, Mastication	Placer		Active
2010 Rooster Ridge	PCT, Pruning, Mastication	Placer	192	Complete
2008 Pipe Line 1	PCT, Pruning, Mastication	Placer	63	Complete
2008 Todd Valley 1	PCT, Pruning, Mastication	Placer	147	Complete
2007 Indian Creek	PCT, Pruning, Mastication	Placer	100	Complete
2006 Roach Hill	PCT, Pruning, Mastication	Placer	100	Complete
2005 Iowa Hill	PCT, Pruning, Mastication	Placer	200	Complete
2004 Monte Verdi	PCT, Pruning, Mastication	Placer	100	Complete
2004 Finning Mill	PCT, Pruning, Mastication	Placer	243	Complete

Auburn City Fire Department

Project Name	Type	County	Treated Acreage	Status / Priority
Areolia Heights/Chamberlain (7 Acres)	PCT, Pruning, Pile & Burn	Placer	0	Planning / 1
Aeolia Olive Orchard (6 acres)	PCT, Pruning, Pile & Burn	Placer	0	Planning / 1
Virginia/Gold (4 Acres)	PCT, Pruning,	Placer	0	Planning / 1

	Pile & Burn			
Union Pacific Railroad right-of-way throughout the City of Auburn	PCT, Pruning, Removal	Placer	Unknown	Active
Interstate 80 corridor areas within City limits	PCT, Pruning, Chipping	Placer	Unknown	Active
American Canyon Shaded Fuel Break	PCT, Pruning, Pile & Burn	Placer	N/A	planning / 2
Auburn Dam Overlook	PCT, Pruning, Pile & Burn	Placer	N/A	planning / 2
Borland Ave., El Dorado/Hwy 49 areas & Canyon Ridge Subdivision	PCT, Pruning, Pile & Burn	Placer	N/A	planning / 2
Southridge Subdivision	PCT, Pruning, Pile & Burn	Placer	N/A	planning / 2
Grayhorse Subdivision	PCT, Pruning, Pile & Burn	Placer	N/A	planning / 3
Grand Oaks Homeowners Open Space	PCT, Pruning, Pile & Burn	Placer	N/A	planning / 3
Auburn Bluffs Subdivision	PCT, Pruning, Pile & Burn	Placer	N/A	planning / 3
Vienna Woods Subdivision, Dairy Road	PCT, Pruning, Pile & Burn	Placer	N/A	planning / 4
White Hawk Meadows Subdivision	PCT, Pruning, Pile & Burn	Placer	N/A	planning / 4
2010-2011 Virginia & Gold St. Fuel Break (Davenport)	PCT, Pruning, Pile & Burn	Placer	6	Complete
2010-2011 Canyon Rim Estates, Eagles Nest Fuel Break	PCT, Pruning, Pile & Burn	Placer	5	Complete
2004 GAAFSC Shaded Fuel Break II	PCT, Pruning, Chipping	Placer	37	Complete
2005 GAAFSC Shaded Fuel Break III	PCT, Pruning, Chipping	Placer	66	Complete
2007 GAAFSC Shaded Fuel Break III	PCT, Pruning, Chipping	Placer	30	Complete

North Tahoe Fire Protection District

Project Name	Type	County	Treated Acreage	Status / Priority
2011 CTC Future Project (25 Acres)	PCT, Pruning, Chipping	Placer	0	Planning / 1
2011 Vedanta (80 Acres)	PCT, Pruning, Chipping	Placer	0	Planning / 1
2011 Maloney (3 Acres)	PCT, Pruning, Chipping	Placer	0	Planning / 1
2011 Regency CTC (40 Acres)	PCT, Pruning, Chipping	Placer	0	Planning / 1
2011 NTRP (31 Acres)	PCT, Pruning, Chipping	Placer	0	Planning / 1
2011 Mourelatos (15 Acres)	PCT, Pruning, Chipping	Placer	0	Planning / 1
2011 Beach Street (5 Acres)	PCT, Pruning, Chipping	Placer	0	Planning / 1
2011 McKinney Chambers (40 Acres)	PCT, Pruning, Chipping	Placer	0	Planning / 2
2011 Book 85 (40 Acres)	PCT, Pruning, Chipping	Placer	0	Planning / 2
2010 Eagle Rock CTC	PCT, Pruning, Chipping	Placer	8	Complete
2010 Rideout School	PCT, Pruning, Chipping	Placer	3	Complete
2010 Ward Unit CSP	PCT, Pruning, Chipping	Placer	154	Complete
2010 Talmont CTC1	PCT, Pruning, Chipping	Placer	9	Complete
2010 Talmont CTC2	PCT, Pruning, Chipping	Placer	6	Complete
2010 Tahoe City Private	PCT, Pruning,	Placer	20	Complete

	Chipping			
2010 Skylandia	PCT, Pruning, Chipping	Placer	15	Complete
2010 Highlands TCPUD	PCT, Pruning, Chipping	Placer	7	Complete
2010 CTC Water Tank	PCT, Pruning, Chipping	Placer	3	Complete
2010 Sierra Pacific Power	PCT, Pruning, Chipping	Placer	20	Complete
2010 Carnelian Bay	PCT, Pruning, Chipping	Placer	155	Complete
2010 Placer County KWW	PCT, Pruning, Chipping	Placer	15	Complete
2010 Woodvista CTC	PCT, Pruning, Chipping	Placer	97	Complete
2008-2009 Hazardous Fuels Reduction	Chipping	Placer	100	Complete
2009 Homewood	PCT, Pruning, Chipping	Placer	57	Complete
2009 Mark Twain	PCT, Pruning, Chipping	Placer	35	Complete
2009 Granlibakken	PCT, Pruning, Chipping	Placer	4	Complete
2009 Tahoe City CSP	PCT, Pruning, Chipping	Placer	10	Complete
2009 Old Mill Road CTC	PCT, Pruning, Chipping	Placer	2	Complete
2009 Old Mill Road Private	PCT, Pruning, Chipping	Placer	14	Complete
2009 Highlands Combo	PCT, Pruning, Chipping	Placer	110	Complete
2009 CTC Beverly	PCT, Pruning, Chipping	Placer	7	Complete
2009 OTC	PCT, Pruning,	Placer	123	Complete

	Chipping			
2009 Chinquapin	PCT, Pruning, Chipping	Placer	40	Complete
2007-2008 Hazardous Fuels Reduction	Chipping	Placer	175	Complete
2008 Mark Twain	PCT, Pruning, Chipping	Placer	5	Complete
2008 Talmont	PCT, Pruning, Chipping	Placer	7	Complete
2008 Rocky Ridge	PCT, Pruning, Chipping	Placer	22	Complete
2008 Kingswood West	PCT, Pruning, Chipping	Placer	85	Complete
2008 Kingswood East	PCT, Pruning, Chipping	Placer	6	Complete
Brockway Springs	PCT, Pruning, Chipping	Placer	24	Complete
2006-2007 Hazardous Fuels Reduction	Chipping	Placer	150	Complete
2007 Highlands TCPUD	PCT, Pruning, Chipping	Placer	8	Complete
2004 Hazardous Fuels Reduction	Chipping	Placer	200	Complete

Placer County Resource Conservation District

Project Name	Type	County	Treated Acreage	Status / Priority
Dutch Flat / Alta Fuels Treatment - Phase 3	PCT, Pruning, Chipping	Placer	0	Planning/ 1
Applegate Community Shaded Fuel Break	PCT, Pruning, Chipping	Placer	0	Active
Placer County Chipper Program	Chipping	Placer	Unknown	Active
Foresthill WUI Fuels treatment Incentive	Chipping	Placer	Unknown	Active
Thomas Street Community Fuel Break	PCT, Pruning,	Placer	0	Planning/ 1

	Chipping			
Gills Hill Fuel Break	PCT, Pruning, Chipping	Placer	0	Planning/ 1
Northstar CDC Thinning and Fuels Reduction	PCT, Pruning, Chipping	Placer	0	Planning/ 1
2004 Placer County Fuels Reduction Phase 4	Chipping	Placer	1440	Complete

Greater Auburn Area Fire Safe Council

Project Name	Type	County	Treated Acreage	Status / Priority
Upper Auburn Fuelbreak & Maintenance (233 Acres)	Hand thin, pile & burn or chip	Placer	unknown	Active
Lower Auburn Fuelbreak & Maintenance (58 acres)	Hand thin, pile & burn or chip	Placer	unknown	Active
Russell Road Community Defense (32 Acres)	Masticate,PCTpile burn, chip	Placer	N/A	Planning / 1
Kilham Road Community Defense (18 Acres)	Masticate,PCTpile burn, chip	Placer	N/A	Planning / 1
Foresthill East Fuelbreak Maintenance (29 Acres)	Hand thin, pile & burn or chip	Placer	N/A	Planning / 1
Sylvan Vista - Hammond Roads Community Defense (45 Acres)	Hand thin, pile & burn or chip	Placer	N/A	Planning / 2
Covey - Krueger Roads Community Defense (46 Acres)	Hand thin, pile & burn or chip	Placer	N/A	Planning / 2
Luther - Dairy Roads - Auburn Ravine Community Defense (308 Acres)	Hand thin, pile & burn or chip	Placer	N/A	Planning / 3
I-80 Hilltop Community Defense (32 Acres)	Hand thin, pile & burn or chip	Placer	N/A	Planning / 3
Welty Lane - Hidden Creek Community Defense (36 Acres)	Hand thin, pile & burn or chip	Placer	N/A	Planning / 4
I-80 - Ophir Road Community Defense (132 Acres)	Hand thin, pile & burn or chip	Placer	N/A	Planning / 4
Auburn Rancheria Community Defense (41 Acres)	Mow	Placer	N/A	Planning / 5
Placer County Demonstration Area (7 Acres)	Hand thin, pile & burn or chip			

Placer County Land Trust

Project Name	Type	County	Treated Acreage	Status / Priority
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2010 Canyon View Parcel Fuel Break	Hand Pile & Burn	Placer	17	Active
2010 7,000 acres Lincoln Area	Grazing	Placer	Unknown	Active

Truckee Fire Protection District

Project Name	Type	County	Treated Acreage	Status / Priority
2007 District Defensible Space	Chipping	Nevada	275	Complete
2006 District Defensible Space	Chipping	Nevada	500	Complete
2005 District Defensible Space	Chipping	Nevada	214	Complete

Northstar Fire Department

Project Name	Type	County	Treated Acreage	Status / Priority
2010 Northstar Property Owners Association NPOA	Unknown	Placer	10	Complete
2010 Northstar Mountain Properties LLC	Unknown	Placer	1	Complete
2010 Trimont Land Corporation	Unknown	Placer	69	Complete
2010 CNL Income Northstar LLC	Unknown	Placer	16	Complete
2010 Northstar at Tahoe Association	Unknown	Placer	3	Complete
2010 Northstar 5B Block 7	Unknown	Placer	1	Complete
2010 Northstar Unit 1 - B	Unknown	Placer	1	Complete
2010 Northstar Unit 1 - D	Unknown	Placer	8	Complete
2010 Northstar Unit 5 -B	Unknown	Placer	5	Complete
2009 CNL Income Northstar LLC	Unknown	Placer	32	Complete
2009 DMB Highlands	Unknown	Placer	1	Complete
2009 Highlands Central Parcel Association	Unknown	Placer	5	Complete

2009 Northstar 5B Block 7	Unknown	Placer	2	Complete
2009 Northstar Mountain Properties LLC	Unknown	Placer	4	Complete
2009 Northstar Property Owners Association NPOA	Unknown	Placer	36	Complete
2009 Northstar Unit 1 - B	Unknown	Placer	1	Complete
2009 Northstar Unit 1 - D	Unknown	Placer	24	Complete
2009 Northstar 5B Block 6	Unknown	Placer	28	Complete
2009 Trimont Land Corporation	Unknown	Placer	45	Complete
2008 Highlands Central Parcel Association	Unknown	Placer	3	Complete
2008 Northstar Property Owners Association NPOA	Unknown	Placer	49	Complete
2008 Northstar Mountain Properties LLC	Unknown	Placer	31	Complete
2008 Northstar Unit 1 - B	Unknown	Placer	2	Complete
2008 Northstar Unit 1 - D	Unknown	Placer	1	Complete
2008 Trimont Land Corporation	Unknown	Placer	43	Complete
2007 Northstar Fire Department Green Waste Defensible Space Program	Chipping	Placer	150	Complete

Placer Sierra Fire Safe Council

Project Name	Type	County	Treated Acreage	Status / Priority
Meadow Visa - McElroy Roadside Clearing (23 Acres)	Hand thin, pile & burn or chip	Placer	N/A	Planning / 1
Cerro Vista Roadside Clearing (23 Acres)	Hand thin, pile & burn or chip	Placer	N/A	Planning / 5
Boole Roadside Clearing (16 Acres)	Hand thin, pile & burn or chip	Placer	Unknown	Active
Long Point Fuelbreak (74 Acres)	Masticate,PCTpile burn, chip	Placer	N/A	Planning / 3
Canyon Rim Fuelbreak (137 Acres)	Masticate,PCTpile burn, chip	Placer	N/A	Planning / 7
Ponderosa Way Roadside Clearing (19 Acres)	Hand thin, pile & burn or chip	Placer	N/A	Planning / 6

Ponderosa Way Fuelbreak (118 Acres)	Masticate,PCTpile burn, chip	Placer	N/A	Planning / 4
Jefferson Fuelbreak	Masticate,PCTpile burn, chip	Placer	N/A	Planning / 5
Big John Ridge Fuelbreak (102 Acres)	Masticate,PCTpile burn, chip	Placer	N/A	Planning / 6
Gillis Fuelbreak (187 Acres)	Masticate,PCTpile burn, chip	Placer	N/A	Planning / 1
Gillis Fuelbreak Extension (146 Acres)	Masticate,PCTpile burn, chip	Placer	N/A	Planning / 2
Colfax Fuelbreak (50 Acres)	Masticate,PCTpile burn, chip	Placer	N/A	Planning / 8
Alpine Meadows Subdivision Roadside Clearing (31 Acres)	Hand thin, pile & burn or chip	Placer	N/A	Planning / 2
Alpine Meadows Subdivision Community Defense (40 Acres)	Hand thin, pile & burn or chip	Placer	N/A	Planning / 1
Dutch Flat / Alta Roadside Clearing (72 Acres)	Masticate,PCTpile burn, chip	Placer	N/A	Planning / 3
Moody Ridge Roadside Clearing (40 Acres)	Masticate,PCTpile burn, chip	Placer	N/A	Planning / 7
Placer Hills Roadside Clearing (52 Acres)	Masticate,PCTpile burn, chip	Placer	N/A	Planning / 4
Secret Town Fuel Break (100 Acres)	Masticate,PCTpile burn, chip	Placer	N/A	Planning / 5

Nevada County

Fire Safe Council of Nevada County

Project Name	Type	County	Treated Acreage	Status / Priority
2010-2011 Green Waste Drops	Drop Off for Chipping	Nevada	N/A	Unfunded / 1
2010-2011 Community Chipping	Chipping	Nevada	N/A	Active
2010-2011 Juniper Hill Fuel Break	PCT, Pruning, Chipping	Nevada	N/A	Unfunded / 1
2010-2011 Cascade Shores Fuel Break	PCT, Pruning, Chipping	Nevada	N/A	Unfunded / 1
2010-2011 Model Defensible Space Home Tour	Education and Outreach	Nevada	N/A	Active
2010-2011 Dear Creek Fuel Break	PCT, Pruning, Chipping	Nevada	N/A	Unfunded / 1

2010-2011 Firewise	Education and Outreach	Nevada	N/A	Active
2010-2011 Columbia Hill Fuel Break Expansion	PCT, Pruning, Chipping	Nevada	N/A	Planning
2009-2010 Scotch Broom Challenge	Scotch Broom brush pulling	Nevada	5	Complete
2009-2010 Alder Creek Fuel Break	PCT, Pruning, Chipping	Nevada	N/A	Planning
2009-2010 Dear Creek Fuel Break	PCT, Pruning, Chipping	Nevada	N/A	Planning
2009-2010 W Truckee I-80 Fuel break	PCT, Pruning, Chipping	Nevada	51	Complete
2009-2010 Firewise	Education and Outreach	Nevada	N/A	Complete
2009-2010 Defensible Space Advice	Education and Outreach	Nevada	N/A	Complete
2009-2010 Special Needs Assistance	PCT, Pruning, Chipping	Nevada	66	Complete
2009-2010 Green Waste Drops	Drop Off for Chipping	Nevada	812	Complete
2009-2010 Community Chipping	Chipping	Nevada	572	Complete
2008-2009 Scotch Broom Challenge	Scotch Broom brush pulling	Nevada	6	Complete
2008-2009 W Truckee I-80 Fuel Break	PCT, Pruning, Chipping	Nevada	N/A	Planning
2008-2009 Firewise	Education and Outreach	Nevada	N/A	Complete
2008-2009 Defensible Space Advice	Education and Outreach	Nevada	N/A	Complete
2008-2009 Special Needs Assistance	PCT, Pruning, Chipping	Nevada	41	Complete
2008-200- Green Waste Drops	Drop Off for Chipping	Nevada	598	Complete

2008-2009 Community Chipping	Chipping	Nevada	666	Complete
2007-2008 Scotch Broom Challenge	Scotch Broom brush pulling	Nevada	4	Complete
2007-2008 Washington Town Site	PCT, Pruning, Chipping	Nevada	55	Complete
2007-2008 Woodpecker Ravine Roadside	PCT, Pruning, Chipping	Nevada	27	Complete
2007-2008 Jones Ridge Neighborhood	PCT, Pruning, Chipping	Nevada	55	Complete
2007-2008 Firewise	Education and Outreach	Nevada	N/A	Complete
2007-2008 Defensible Space Advice	Education and Outreach	Nevada	N/A	Complete
2007-2008 CWPP Development	County Planning Report	Nevada	N/A	Complete
2007-2008 Special Need Assistance	PCT, Pruning, Chipping	Nevada	63	Complete
2007-2008 Green Waste Drop	Drop Off for Chipping	Nevada	641	Complete
2007-2008 Community Chipping	Chipping	Nevada	2169	Complete
2006-2007 Scotch Broom Challenge	Scotch Broom brush pulling	Nevada	2	Complete
2006-2007 Red-Dog-You Bet Roadside	PCT, Pruning, Chipping	Nevada	38	Complete
2006-2007 Columbia Hill FB Expansion	PCT, Pruning, Chipping	Nevada	42	Complete
2006-2007 Oak tree Road Demonstration	PCT, Pruning, Chipping	Nevada	29	Complete
2006-2007 Defensible Space Advice	Education and Outreach	Nevada	N/A	Complete
2006-2007 Public Education	Education and Outreach	Nevada	N/A	Complete

2006-2007 Special Needs Assistance	PCT, Pruning, Chipping	Nevada	93	Complete
2006-2007 Green Waste Drop	Drop Off for Chipping	Nevada	598	Complete
2006-2007 Community Chipping	Chipping	Nevada	1902	Complete
2005-2006 Red Dog - You Bet Roadside	PCT, Pruning, Chipping	Nevada	35	Complete
2005-2006 Columbia Hill Fuel Break	PCT, Pruning, Chipping	Nevada	200	Complete
2005-2006 Public Education	Education and Outreach	Nevada	N/A	Complete
2005-2006 Special Needs Assistance	PCT, Pruning, Chipping	Nevada	58	Complete
2005-2006 Green Waste Drops	Drop Off for Chipping	Nevada	552	Complete
2005-2006 Community Chipping	Chipping	Nevada	1716	Complete

California State Parks - Sierra District

Project Name	Type	County	Treated Acreage	Status / Priority
2004 North Bloomfield Fuel Reduction Project	PCT, Pruning, Chipping	Nevada	81	Complete
2005 Union Hill Fire reduction	PCT, Pruning, Chipping	Nevada	0	Abandoned

Yuba County

High Sierra Resource Conservation & Development Area

Project Name	Type	County	Treated Acreage	Status / Priority
2011 Pre Fire Fuel Reduction of Yuba County Communication Sites (53 acres)	unknown	Yuba	0	planning / 1

2011 Oregon Ridge Fuel Break Phase 3 (67 Acres)	PCT, Pruning, Mastication	Yuba	0	planning / 1
2011 Pendola - Davis Shaded Fuelbreak (140 Acres)	PCT, Pruning, Mastication	Yuba	0	planning / 1
2011 GIS Database Update and Data Distribution	GIS	Yuba	N/A	planning / 1
2005 Fuel Reduction on County Roads	CEQA	Yuba	N/A	Complete
2005 Fuel Reduction on Private Lands Forest Service Slapjack DFPZ	CEQA	Yuba	N/A	Complete
2005 Fuel Reduction on Private Lands Forest Service Slapjack DFPZ	CEQA	Yuba	N/A	Complete
2004 Fuel Reduction on Private Lands Forest Service Slapjack DFPZ-Middlebrook	PCT, Pruning, Chipping	Yuba	40	Complete
2004 Fuel Reduction on Private Lands Forest Service Slapjack DFPZ - CHY Co.	PCT, Pruning, Chipping	Yuba	114	Complete
2004 Fuel Reduction on County Roads	PCT, Pruning, Chipping	Yuba	15	Complete
2004 Residential Chipping Program for Yuba Foothills	Chipping	Yuba	169	Complete

Dobbins - Oregon House Fire Protection District

Project Name	Type	County	Treated Acreage	Status / Priority
2011 Ure Mountain Fire Evacuation Routes	PCT, Pruning, Chipping	Yuba	unknown	planning/1
2007 Residential Chipping Program for Yuba Foothills	Chipping	Yuba	300	Complete
2006 Residential Chipping Program for Yuba Foothills	Chipping	Yuba	212	Complete
2005 Residential Chipping Program for Yuba Foothills	Chipping	Yuba	246	Complete
2004 Yuba County Chipper Phase 1	Chipping	Yuba	169	Complete

Yuba County Public Works

Project Name	Type	County	Treated Acreage	Status / Priority
2011 Fuel Reduction Along County Roads (7.6 Miles of Road)	PCT, Pruning, Chipping	Yuba	unknown	Planning / 1
2011 Fuel Reduction Along Major Evacuation Routes (10.2 Miles of Road)	PCT, Pruning, Chipping	Yuba	unknown	Planning / 1
2011 Fuel Reduction Along County Roads (11.8 Miles of Road)	PCT, Pruning, Chipping	Yuba	unknown	Planning / 1
Fuel Reduction on County Roads	PCT, Pruning, Chipping	Yuba	52	Complete

Appendix V – Completed Projects for Placer County

- 1) Added an exit from eastbound interstate 80 onto cape horn road for use by emergency vehicles only (completed 2010)**
- 2) Develop and fund an enforceable weed abatement ordinance**
- 3) Developed the following gis layers for emergency services within placer county:**
 - **fire ignitions layer,**
 - **critical facilities layer**
 - **fire hydrants/water sources layer**

NEVADA-YUBA-PLACER LIGHTNING PLAN 2011



CONTENTS

- I. General
- II. Objectives
- III. Plan Activation
- IV. Detection
- V. Escaped or Complex Fires
- VI. Communication
- VII. Air Branch
- VIII. Ordering & Logistics
- IX. Resource Staging & Allocation
- X. Incident Dispatchers
- XI. Deactivation of Lightning Plan
- XII. Thunderstorm Safety

I. General

The purpose of the Lightning Plan is to facilitate the management of lightning caused fires within the Nevada-Yuba-Placer Unit. A two stage response is identified in the plan to meet different levels of hazard severity and lightning intensity. Activation Each Division will staff positions as needed to meet the present and expected size and/or complexity of their fires.

II. Objectives

The purpose of the NEU Lightning Plan is to organize suppression and support functions during multiple lightning fires in a timely manner. The plan specifically addresses the following:

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

III. Plan Activation

The Unit Duty Chief will authorize the activation of the NEU Lightning Plan in conjunction with the Emergency Command Center and on duty Battalion Chiefs. The ECC will notify the Unit by radio that the NEU Lightning Plan has been activated and which Battalions are affected.

The Unit will be divided in one of two following options as needed.

- ◆ Option "A" - Modify Response Plan
 - Keep Unit as a whole
 - Utilize command frequencies as needed
 - Reduce response to appropriate levels based on Reports on Conditions and fire behavior.

- ◆ Option “B”
 - The Unit will be divided into Branches as needed, North, South, and or East.
 - North Division-Branch I
 - Battalions 12-Div A, 14-Div B, 16-Div C, 19-Div D
 - South Division-Branch II
 - Battalions 11/18-Div U, 13-Div W, 10/17-Div X
 - East Division-Branch III
 - Division Y/Z

- ◆ Option “C”
 - The Unit will be divided into Branches as needed, North, South, and or East.
 - North Division-Branch I
 - Division Nevada & Yuba
 - South Division-Branch II
 - Division Placer West, Lincoln Basin
 - East Division-Branch III
 - Eastside

IV. Detection

- Lookouts
 - Lookouts will notify the ECC of all new smokes and active cells. All radio traffic will be held to emergency traffic and updates on current conditions.
 - The following information will be provided by the lookout:
 - Direction (340 degrees)
 - Distance (Mileage)
 - Landmarks
 - Legal location if known
 - Smokes spotted outside Unit Boundaries or outside of State DPA will be reported to the ECC. The ECC will contact the appropriate center to report information.

- Supplemental Detection
 - Unit and Local Government personnel will provide supplemental detection in assigned areas. Personnel will report storm activity and new fire information.
 - All aerial recon will be requested through the ECC. Depending on lightning activity, pre-planned flights will be scheduled as needed.

- Remote Detection
 - The BLM lightning detection system will be used to identify general areas affected by strikes.

V. Escaped or Complex Fires

If one or more fires develop beyond initial attack capabilities, they will be removed from the lightning plan organization. This will occur following concurrence with the Unit Duty Chief and ECC. A separate fire organization will be established under ICS and operated through the ECC under normal dispatch procedures.

VI. Communication

- Branch Directors will utilize NEU frequencies for communication with the Divisions and ECC.
- Divisions will use assigned Command and Tactical frequencies
- Divisions will use Tactical frequencies for primary communication between resources and stations.
- Branch I and Division Communications
 - See attached organization chart
- Branch II and Division Communications
 - See attached organization chart
- Reporting new fires
 - Divisions will contact the ECC as necessary to report new fires and provide updated information
 - Prior to notifying the ECC of a new fire, the following information will be recorded.
 - Location of incident address or Latitude and Longitude (degrees, min format when possible).
 - Time of incident
 - Cause
 - Resources assigned
 - Size
 - Jurisdiction
 - Company Officer responsible for report
 - The ECC will build incidents for each fire and assign an incident number.
- Significant new fires
 - Divisions will immediately notify ECC of all significant fires that will require additional resources. The ECC will process requests for additional needs.
- It is imperative that an updated acreage on each fire is reported to the ECC daily prior to 17:00.
- A determination of DPA is imperative to assign the appropriate ECC and ordering point.

VII. Air Branch

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

VIII. Ordering & Logistics

- Resource Ordering
 - The ECC will facilitate all ordering
- Logistical Support
 - The ECC will facilitate logistical support

Consider reflex time, assess resource and logistical needs and order early.

IX. Resource Staging and Allocation

- Resources will be assigned to Branches and Divisions based on current and expected needs.
- During periods of expected lightning on the eastside, one engine and one handcrew will be assigned at the request of the Battalion.
- Staging will be the responsibility of the Branch or Division.

X. Incident Dispatchers

- Each branch or division should assign personnel to coordinate and communicate with assigned resources.
- If fire activity dictates and ECC staffing allows, the ECC will provide a dispatcher for a Branch or Division.

XI. Deactivation of Lightning Plan

The Unit Duty Chief will authorize the deactivation of the NEU Lightning Plan in conjunction with the Emergency Command Center and on duty Battalion Chiefs. The ECC will notify the Unit by radio that the NEU Lightning Plan has been deactivated, which Battalions are affected, and provide effected resources with new assignments.

XII. Thunderstorm Safety

THUNDERSTORM SAFETY

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

- Do not lie down.

The best position is sitting on the pack or crouching with feet close together.

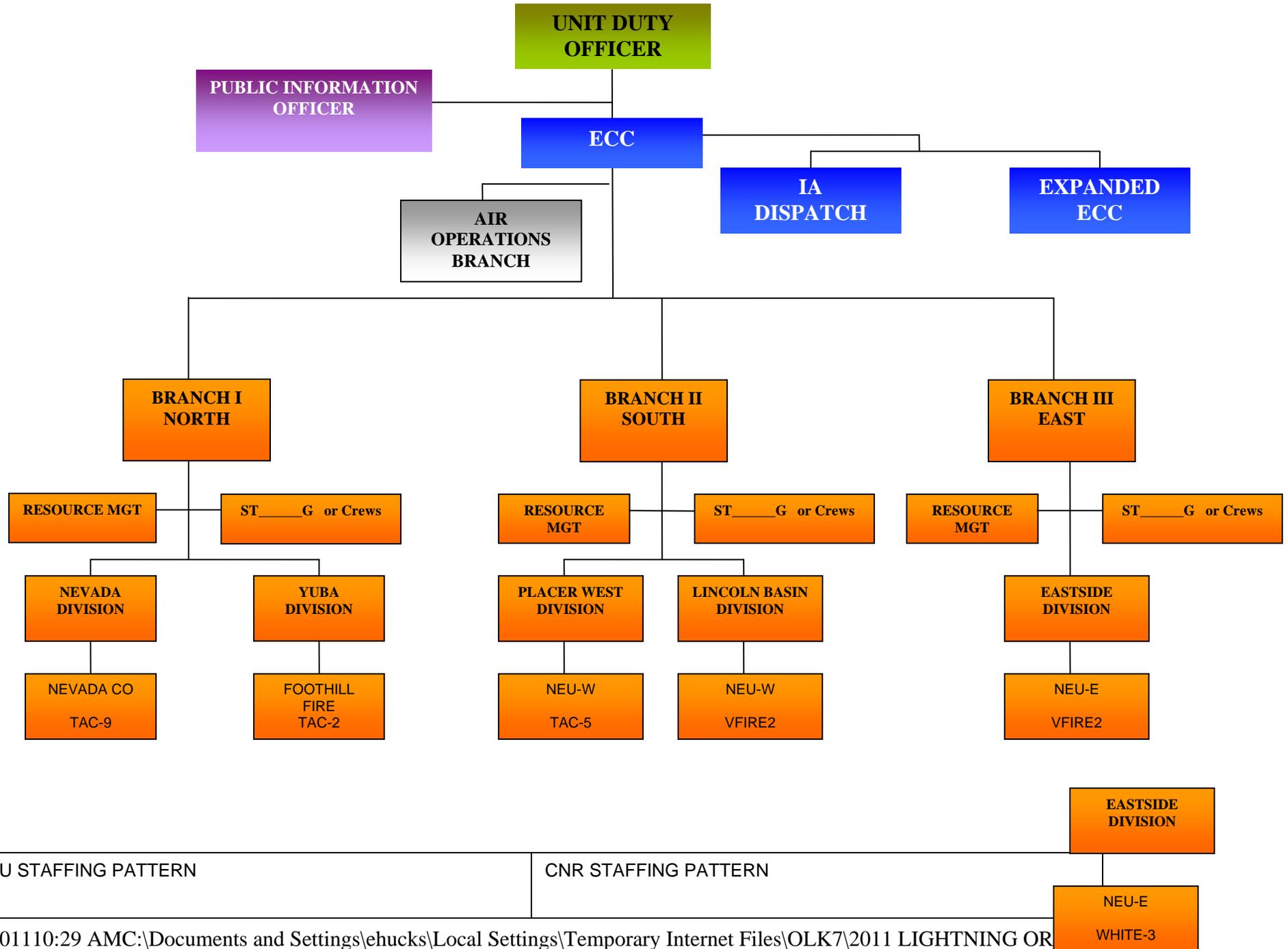
Avoid sitting directly on the ground, if possible; but, if necessary, keep feet and butt close together.

Avoid grouping together. Keep a minimum of 15 feet between people when possible.

Removing caulk boots will not provide safety if stocking covered or bare feet are then in contact with the ground--don't bother!

- "Stay out of dry creek beds" is correct for flash floods, but has nothing to do with lightning.
- Handheld radios (with short rubber antennas) or cell phones are safe to use. Communication is vital to crew safety. Do not use land line radios or radios with elevated antennas.
- Wide, open spaces are better than trees or clumps of trees in the vicinity. Ridge tops, etc., should be avoided.
- If you feel the hair on your arms or head "stand up," there is a high probability of a strike in the vicinity. Crouch or sit on a pack.
- Put down all tools.
- Take shelter in vehicles if possible.

NEVADA-YUBA-PLACER LIGHTNING PLAN



EXHIBITS:

MAPS

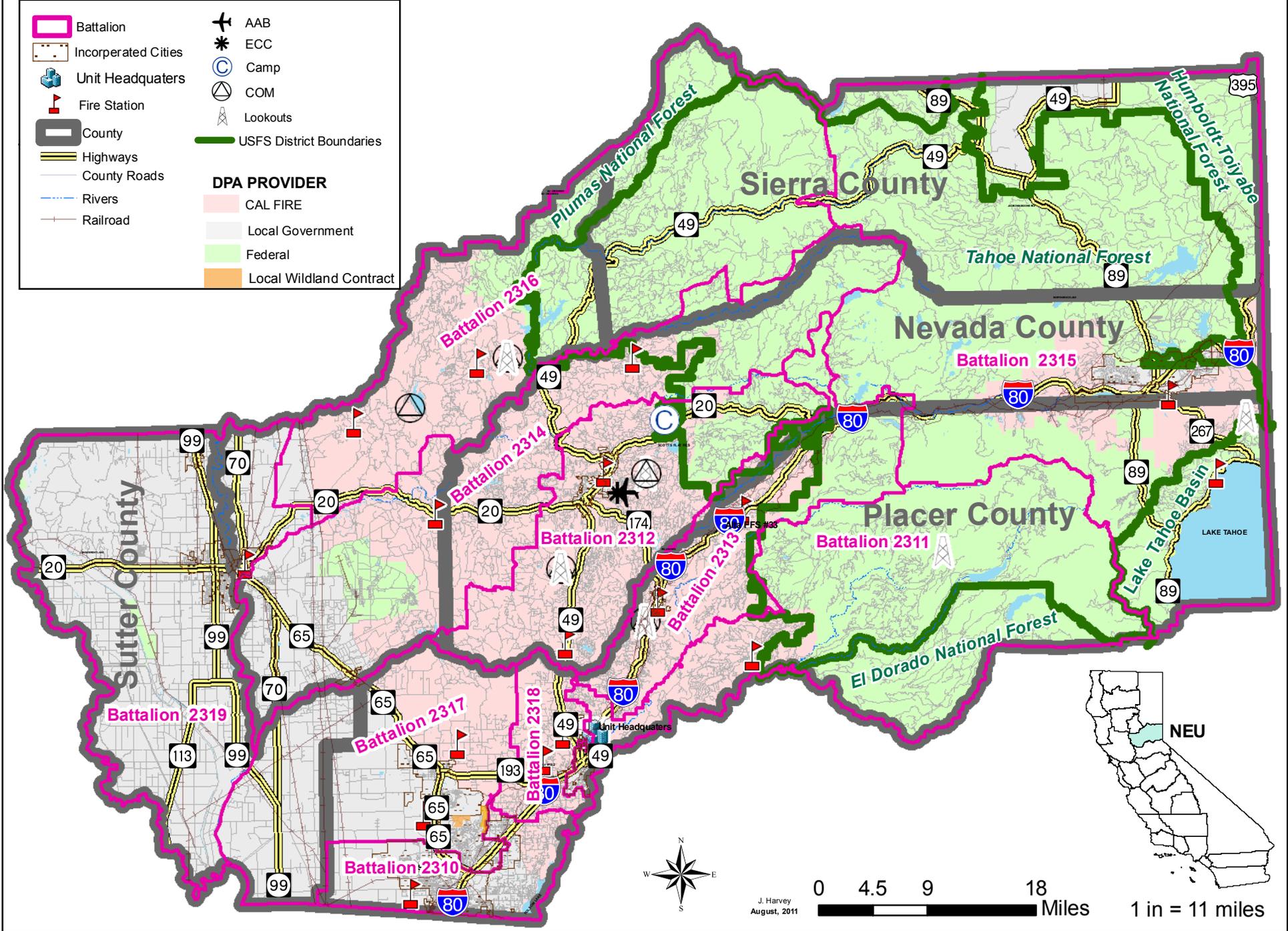
Exhibit 1 – Unit Map



NEVADA - YUBA - PLACER UNIT (NEU)

Battalions- Administrative Boundaries

Battalion	AAB
Incorporated Cities	ECC
Unit Headquarters	Camp
Fire Station	COM
County	Lookouts
Highways	USFS District Boundaries
County Roads	DPA PROVIDER
Rivers	CAL FIRE
Railroad	Local Government
	Federal
	Local Wildland Contract



J. Harvey
August, 2011

0 4.5 9 18 Miles
1 in = 11 miles

