

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.

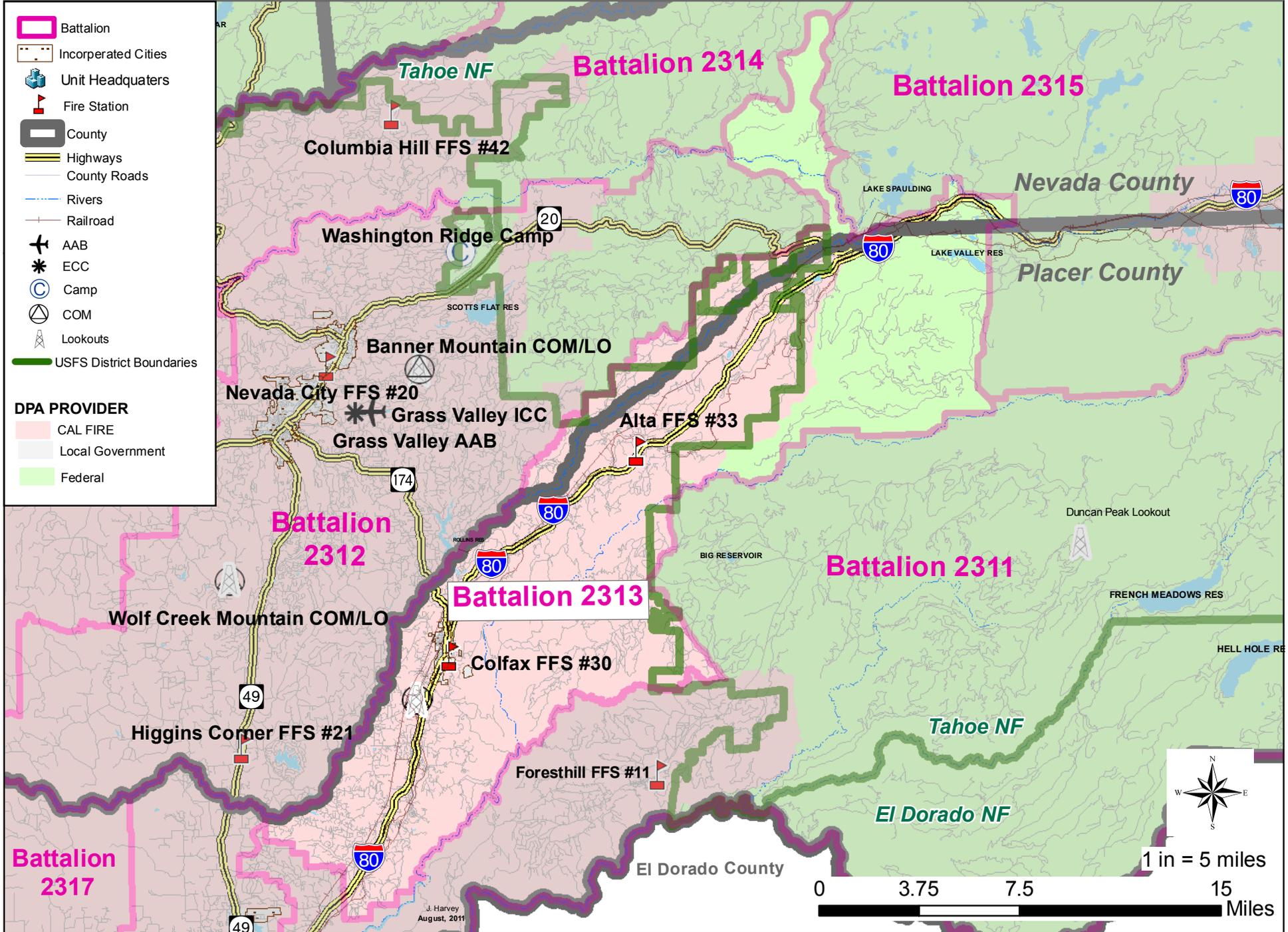
The balance of the fires is split between various causes which are considered normal accidental fires.



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



1 in = 5 miles

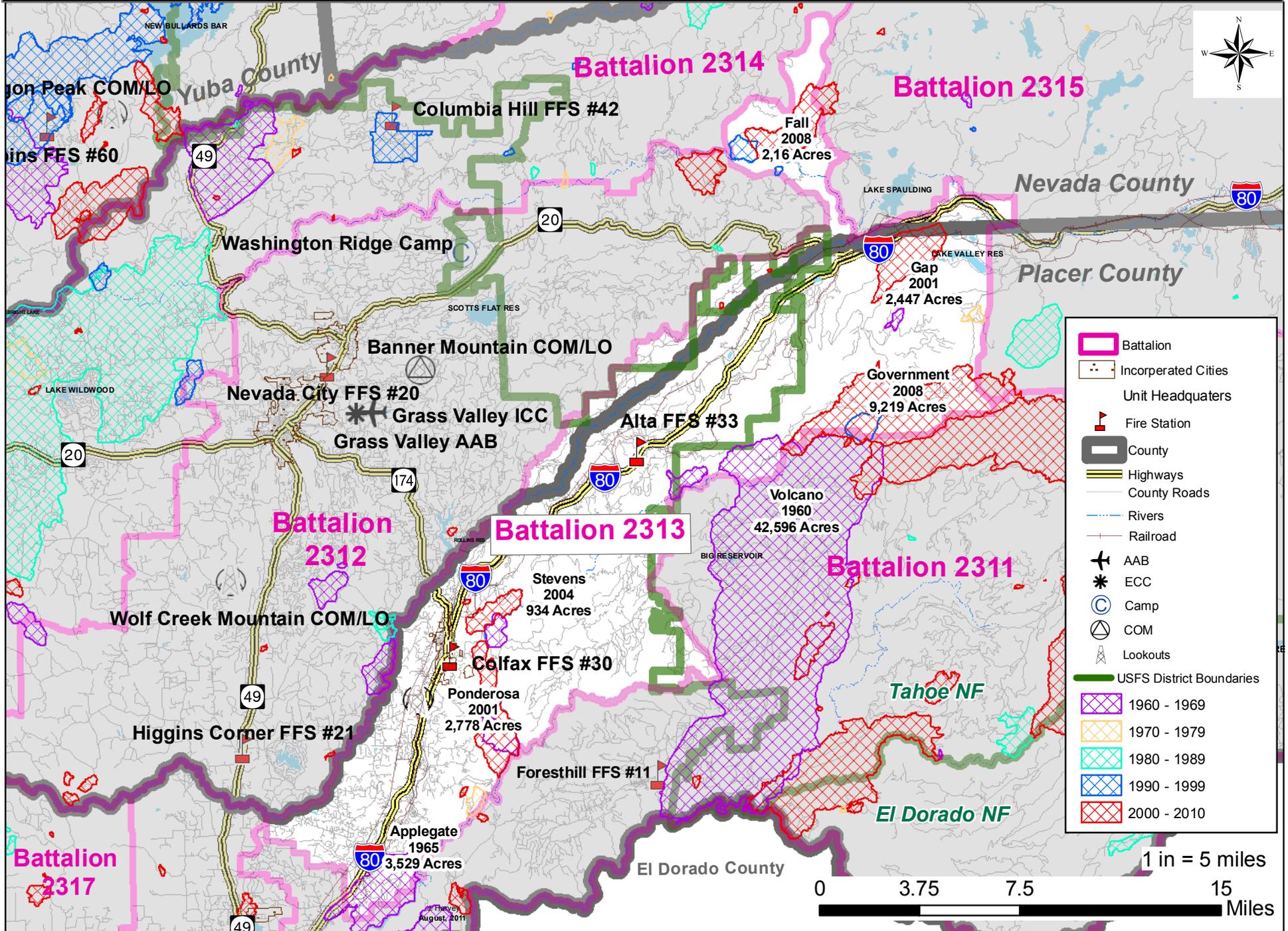
0 3.75 7.5 15 Miles

J. Harvey
August, 2011

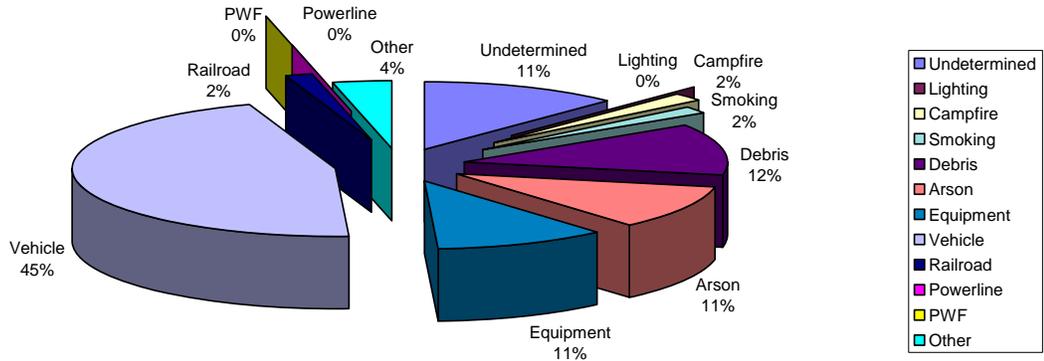


NEVADA - YUBA - PLACER UNIT (NEU)

Battalion 13- Fire History

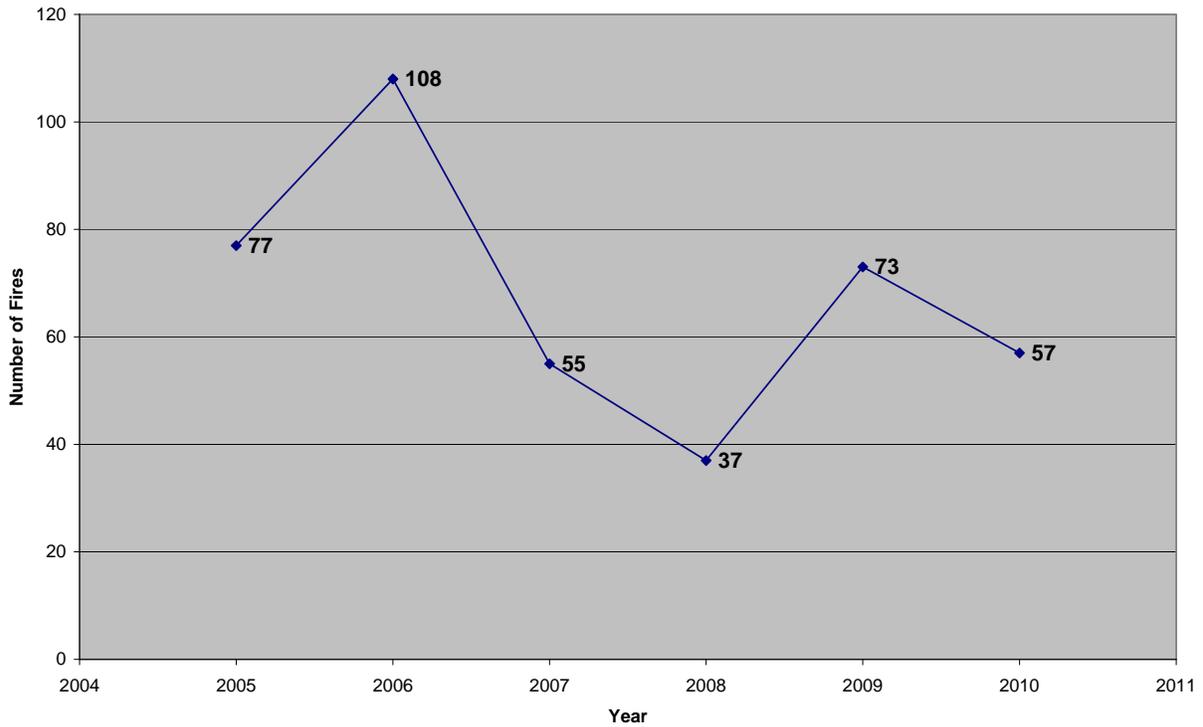


2010 Battalion 13 Fire Causes



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