Butte Fire
Pine Acres Fuelbreak
Success Story

11/9/15

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South Division Operations
Pine Grove Youth Conservation Camp
Fuelbreak Background

The Pine Acres Fuelbreak is a Community Wildfire Protection Plan (CWPP) wildland fire fuels reduction project within unincorporated Amador County that was conceived, constructed and has been maintained through the cooperative efforts of the CAL FIRE Amador-El Dorado Unit, the Amador Fire Safe Council and approximately forty private landowners.

The primary goal of this project has been to create a shaded fuelbreak, strategically placed along the rim of the Mokelumne River Canyon, utilizing topographic features intended to support fire suppression and structure defense operations in the event of a wildfire.

Begun in 2002 and funded by a variety of grant funding sources throughout its’ life, the Pine Acres Fuelbreak is approximately eight miles in length, averages three-hundred foot wide and runs along the rim of the Mokelumne River Canyon from the PG&E Tabeaud Reservoir east of the City of Jackson to Highway 88 just east of the community of Pine Grove and the Pine Acres Subdivision.
The Pine Acres Subdivision is situated on a plateau that rests directly along the north rim of Mokelumne River Canyon. The fuelbreak wraps directly around and adjacent to the Pine Acres Subdivision.

The project area consists of Oak Woodlands, low elevation pockets of Ponderosa Pine and Chaparral vegetation with a large number of homes scattered throughout. 2010 Census Data indicates that the Pine Acres Fuelbreak defends approximately 1,000 homes and 2,400 inhabitants from potential wildland fire spread northward out of the Mokelumne River Drainage.

Fuels treatment has been completed primarily by CAL FIRE hand crews from the Pine Grove Youth Conservation Camp, as well as by mechanical means with masticators and dozers. Approximately 80% has been completed by hand and 20% by mechanical treatment. Final fuels removal has been completed primarily through piling, burning and chipping on site by fire crews.
Initially completed in 2003-2004 as a three-hundred foot wide shaded fuelbreak only, the project was developed into a more comprehensive Vegetation Management Plan (VMP) project in 2005, with the intent of treating additional acres through various means and significant widening to ultimately bring the fuelbreak to the bottom of the canyon at the Mokelumne River itself.

The fuelbreak was maintained and improved again in both 2006 and 2011. The VMP was updated during the summer of 2015 and is slated for additional maintenance and improvement again in 2016.

It is interesting now to note that many property owners in 2002 were initially resistive to proposals regarding what constituted adequate fuels modification and removal of vegetation.
Another intent of continued work on the fuelbreak as a VMP is long term positive response tree growth as a result of reduction in tree density from pre-treatment and prescribed fire effects.

Past area fuels project history shows that following the introduction of prescribed fire and related fuels treatments, development of an open and park like condition of various species that is free of significant ladder fuels will follow.

In addition to reducing vegetation density and providing enhanced protection to residential structures and communities at risk from the spread of wildland fire into the Pine Grove area, the Pine Acres Fuelbreak was also designed to protect an important portion of the Mokelumne River watershed that provides water to the downstream Pardee and Camanche Reservoirs.

Pardee and Camanche Reservoirs provide 90% of the water that goes to the East Bay Municipal Utility District (EBMUD). EBMUD's water system serves approximately 1.3 million people in a 331-square-mile area of Alameda and Contra Costa Counties, including the major cities of Oakland and Berkeley and east to Walnut Creek and the San Ramon Valley.

Protection of these watershed values provide benefits that reach far beyond the boundaries of the project area and the Amador-El Dorado Unit.

**Butte Fire Background**

The Butte Fire (CA-AEU-024918) was reported on September 9, 2015 at 1425 hours.

It was dispatched as a vegetation fire approximately four acres in size located in the State Responsibility Area in southern Amador County on Butte Mountain Road near the intersection of Butte Mountain Cutoff Road southeast of Jackson and just west of the Pine Acres Fuelbreak.

The Butte Fire quickly transitioned from an extended attack into a Major Incident, crossing the Mokelumne River and burning into and primarily in Calaveras County. The Butte Fire burned a total of 70,760 acres and ultimately damaged or destroyed almost five hundred homes, resulted in two civilian deaths. It is currently listed as the seventh most destructive fire in California.
**Butte Fire Relationship to the Pine Acres Fuelbreak & VMP**

Of the Butte Fire’s 70,760 acres, approximately 3,680 acres are in Amador County.

Of the Butte Fire’s approximately 3,680 acres in Amador County, 1,458 acres are within the perimeter of the Pine Acres VMP.

Approximately 3.3 miles of the Butte Fire perimeter control line can be directly attributed to utilizing the Pine Acres Fuelbreak. There were NO structure damages or losses in this area.
Butte Fire Pine Acres Fuelbreak Successes

During the overnight hours of September 9th and into the fire’s second day on September 10th, the fire made a continual push to the east up the Mokelumne River drainage on the north and Amador County side of the river.

Initial mandatory evacuations were ordered during extended attack along the western portion of areas protected by the Pine Acres Fuelbreak west of the Ponderosa Way in the vicinity of Canyon View Drive and Fig Tree Lane.

Single track dozer line was constructed directly along areas previously treated as part of the fuelbreak the first night of the fire and held. It was later improved.

(Looking West from Bedegrew Property towards Point of Origin. See Map on Page 8)
Defensive firing was conducted with no additional pre-treatment in order to save structures directly along the fuelbreak adjacent to residences whose property owners participated as cooperators in the initial construction and on-going maintenance of the fuelbreak.

(Defensive Firing on Direct Edge of Fuelbreak to Right of Elliot Driveway. See Map Page 8.)

(Note Low Intensity Burn Firing Results on Elliot Property. See Map Page 8)
During the day and overnight hours on September 10th, fire suppression efforts including dozer operations held the fire in check along the Ponderosa Way and slowed its’ eastward progression up the Mokelumne River drainage keeping the fire low on the slope and near the river.

At approximately 1400 hours on September 10th the fire’s edge was reported to be directly below and in slope alignment with the Pine Acres Subdivision in the Clinton Bar Road area.

This prompted the large scale evacuation order for the community of Pine Grove south of Highway 88.

(Screen Shot of Field Map with Estimated Fire Perimeter on 9/10 at 1400 hours)
The efforts to hold the fire in check and slow the eastward progression on September 10th allowed dozer improvements to be made to the fuelbreak directly adjacent to the subdivision in the area of Quail Drive and Clinton Bar Road prior to 1200 hours on September 11th.

(The End of Quail Drive on the Fuelbreak on Rim of Canyon. See Map Page 12.)

The fuelbreak also provided pre-treatment opportunities for the Very Large and large Airtankers ahead of the inevitable uphill fire run towards the subdivision as noted by visible retardant.

(End of Quail Drive Looking Towards End of Clinton Bar Road. See Map Page 12)
On day three of the fire at 1217 hours on September 11th the fire made its’ run towards the Pine Acres Subdivision east of the Ponderosa Way. The community of Pine Grove had already been evacuated. Dozers had remained ahead of the fire and were able to improve the pre-existing fuelbreak due to the reduced fuel loading. Several Engine Strike Teams were in place and afforded the opportunity to scout and prep the subdivision in advance of the fire front arrival.

(Looking West from the End of Quail Drive directly in front of the House in Picture on Page 10)

(Fire Reaching Quail Drive Looking East Towards Clinton Bar Road. See Picture Page 10)
(The full force of the head fire run hit the fuelbreak at 1224 hours.)

(Same Location Looking East Towards Clinton Bar Road Approximately 4 hours later.)
The initial convective column from the fire’s run to the top of the canyon and into the fuelbreak lifted all smoke and embers vertical and likely prevented any direct impingement on those structures on the rim of the canyon along the fuelbreak’s direct edge at the end of Quail Drive.

Once the fire’s convective column cooled and collapsed, fire front following structure defense operations were conducted over several hours to seek and destroy those embers and smoldering debris now scattered throughout the subdivision near the fuelbreak.

There were no structure damages or loss in the Pine Acres Subdivision.

(Note Referenced Locations of Quail Drive and Clinton Bar Road, Fuelbreak and Fire’s Edge)
Over the following operational periods, the fire’s ultimate easternmost control line in Amador County was constructed using a check line location previously identified as an integral part of the Pine Acres Fuelbreak plan connecting the top of the ridge to the river. This pre-designated location allowed fire crews to conduct a successful firing operation, hold the line and prevent damage to Roaring Camp, a significant local landmark and tourist attraction located on the river.

(Previous Treatment Used as Final Control Line Circled in Red, Roaring Camp is Blue Star)

(Looking South from Top of Previous Treatment Area Ultimately Used as Control Line)
Summary

The Pine Acres Fuelbreak is a CWPP wildland fire fuels reduction project that was constructed and has been maintained through the cooperative efforts of the CAL FIRE Amador-El Dorado Unit, the Amador Fire Safe Council and approximately forty private landowners.

Begun in 2002 and funded by a variety of grant funding sources throughout its’ life, it was initially completed in 2003-2004. It was converted to a VMP in 2005 and maintained and improved again in both 2006 and 2011.

It stretches over seven miles and consisted of approximately 300 treated and maintained acres prior to the Butte Fire.

Fuels treatment has been completed primarily by CAL FIRE hand crews from the Pine Grove Youth Conservation Camp along the majority of its’ length adjacent to the Pine Acres Subdivision. Additional masticator and dozer treatment projects have also been coordinated by the Amador Fire Safe Council in and around the Ponderosa Way.

The primary goal of this project was to create a shaded fuelbreak intended to support fire suppression and structure defense operations in the event of a wildfire coming out of the Mokelumne River Canyon.

On the first four days of the Butte Fire September 9th through September 12th, 2015 it did just that.

The Pine Acres VMP was updated during the summer of 2015 and the remaining areas of the fuelbreak unaffected by the Butte Fire are slated for additional maintenance and improvement again beginning in 2016.
On the Day it Mattered

(Aerial Photograph Taken Before the Butte Fire. Red Arrows Point to Treatment Areas that Performed Successfully in and around Quail Drive and Clinton Bar Road on September 11th)

Credits

The following individuals were instrumental in the development, support, construction and maintenance of the Pine Acres Fuelbreak and deserve special recognition.

Tod Dorris, CAL FIRE Pine Grove Youth Conservation Camp Division Chief (Retired)
Scott Watson, CAL FIRE Pine Grove Battalion Chief (Retired)
Jim Simmons, Amador Fire Safe Council, CAL FIRE Amador-El Dorado Unit Chief (Retired)
Craig Ostergaard, Amador Fire Safe Council (Former Board Member)
Cathy Koos Brazeal, Amador Fire Safe Council, Executive Director
Eldon Rodman, Roaring Camp Mining Company & Pine Acres Development Company
Ron Monk, Registered Professional Forester
Tom Lowrie, Registered Professional Forester
Chris Waters, Registered Professional Forester, CAL FIRE Battalion Chief
Patrick McDaniel, Registered Professional Forester, CAL FIRE Forester 1
Pine Grove Camp Youth Conservation Camp, Current & Former Fire Crew Captains and Crews