

## **The Unit's Fire Safe Planning at a Glance**

### **The Problem**

The Unit has a unique wildland fire environment owing to its Mediterranean climate, highly combustible fuels, frequent interface zones, and the complexity of its terrain. Fires burn with greater intensity in this environment and are more costly and difficult to control creating a greater risk of loss of life, property, and resources.

The Unit's Direct Protection Area (DPA<sup>1</sup>) on the west slope of the Central Sierra Mountain Range is experiencing explosive population growth. Most of this growth is occurring outside the incorporated cities - the same areas that contains the most hazardous fuels and most difficult terrain. Most of the manmade values at risk from wildfire are also located in these areas.

The fire environment in the Unit is conducive to large destructive wildfires as shown by the fire history map. Over 70% of the CDF's DPA contains high to very high hazard fuels (brush and timber). These areas contain steep, rugged river canyons that can limit accessibility except on foot. Fighting fires with bulldozers is difficult, if not impossible in some locations.

#### **Key issues:**

- Increasing life, property, resources, and ecological losses
- Difficulty of fire suppression, increasing safety problems for firefighters.
- Longer periods between recurring fires in many vegetation types increasing volumes of fuel per acre
- Increasing fire intensities
- Increasing taxpayer costs and asset losses
- More people are living and recreating in wildland intermix areas, which adds to the increases ignition sources, resulting in more fires.
- The loss of funding for the two lookouts has significantly decreased the early detection ability of fires in AEU.

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<sup>1</sup> DPA are lands that CDF has contractually agreed to protect. These are usually federal lands where the federal government is fiscally and legally the protection agency but CDF resources are better positioned to provide protection. Federal agencies provide direct protection to SRA lands where the situation is reversed.

## Fire History

Unit's fire history is one of numerous small fires with large fires occurring every thirty to forty years. The last large fire was the Rancheria Creek Fire in 1961(34,104 ac.) However, over the past twenty years population growth and development in the wildland have placed many additional homes and business at risk - now small fires often create wildland/urban interface fire protection problems previously only found in the most densely populated areas of southern California. [Appendix "A"](#) contains the large fire history and the ten-year fire occurrence maps of the Unit. On these maps the fires shown prior to the 2002 fire season are 300 acres and larger. In 2002, CDF changed its fire mapping requirements to include the mapping grass fires 300 acres and over, brush fires 50 acres and over, and timber fires 10 acres and over, all wildland fires which destroy 3 or more structures or which cause \$300,000 or more in damage.

Most large fires are aligned east to west. This is particularly evident in Amador County. This orientation is due to two factors, prevailing winds, and terrain. El Dorado and Sacramento Counties are more likely to experience fires, which run from the north to the south - especially at the lower elevations. However, the historical large fires in El Dorado County follow the same east to west orientation as those in Amador County.



## Fire Weather & Terrain

Weather conditions dramatically influence fire behavior. Large costly fires are frequently, though not always, associated with severe fire weather conditions. Severe fire weather is typified by high temperatures, low humidity, and strong surface winds. The normal summer weather pattern is an onshore flow (marine flow) which last several days followed by a northerly flow as the high-pressure system reasserts itself. As the marine flow moves through the Carquinez Straits, it pushes the warm valley air mass ahead of it. The resulting west winds are brisk and push fires in a west to east direction. The major canyons in the Unit are also orientated west to east. This orientation tends to channel wind into canyons in a way that increases its upslope velocity. This combination of terrain and wind creates the potential for fast moving fires running up canyon towards the areas of high hazard fuels and greater concentrations of structures at risk. If the marine flow is strong enough, it will bring cooler temperatures and higher humidity in a few hours thus reducing the timeframe where a large fire can occur.

Occasionally the marine flow is weak and overtaken by a quick reestablishment of a high-pressure system. If the high is located slightly north of its normal location a strong, dry, down slope, east wind develops. This is what drove the Rancheria Creek fire after its initial run to the east. It reversed itself in a matter of minutes and crossed over Highway 49 on its way to lone. It was also the primary factor in the spread of the Eight Mile Fire in El Dorado County. The fire history map shows several large fires coming off the national forest that have burn patterns that suggest an east wind presumably as a result of the high being slightly north of its usual location. The most recent fire following this pattern occurred in 2004. The Power Fire extended almost seventeen miles in an east to west direction from its point of origin.

What does all this mean? Simply put there are a few days each summer where weather will be the dominant factor in the spread of a wildfire. There are certain weather and terrain factors that combine to produce the potential for catastrophic losses. The threat is greatest in those identified high hazard areas of the Unit. The potential for large damaging fires is significantly less in the lower elevations where the fuels and wind patterns are different.

## Geographic / Ownership

AEU is located in the Northern Central Sierras. It includes Amador, El Dorado, Alpine and portions of Sacramento and San Joaquin counties. AEU encompasses 2,667,860 acres of that the unit's DPA serves 903,803 acres. The United State Forest Service, Bureau of Indian Affairs, Bureau of Land Management, and Bureau of Reclamation manage lands that are protected by AEU. Conversely, in addition to national forest lands, the Forest Service provides direct wildland fire protection to private lands within the El Dorado and Toiyabe National Forest. Even with the USFS providing that protection the Unit is still actively engaged in pre-fire project outside of its DPA.

The major landowners within the AEU include:

- Private 1,530,600 acres
- State of California 50,974 acres
- United States Forest Service (USFS) 1,065,065 acres
- Bureau of Land Management (BLM) 32,921 acres
- Bureau of Reclamation (BOR) 4,432 acres
- Bureau of Indian Affairs (BIA) 700 acres
- US Military 9,892 acres

Within AEU there are two all season trans-Sierra highways, State Highway 50 in El Dorado County, and State Highway 88 in Amador County. Bisecting the Unit north to south is historic State Highway 49, on the west side of the Sierras, and State Highway 89 in the Lake Tahoe Basin on the east side of the Sierras. Most population growth has historically occurred along the two east-west highways. With the influx of high-tech industry in Sacramento County, growth is occurring north and south from the major population centers creating new areas of urban wildland interface.

AEU contains all or part of three major watersheds, the Middle and South Forks of the American, the North Fork of the Mokelumne, the Cosumnes River basin. Numerous water agencies and power companies utilize the resources of these rivers and their tributaries for generation of hydroelectric power, acquisition of drinking and irrigation water.

## Socioeconomic

The approximate resident population in AEU's DPA is 320,053. El Dorado County's highest population densities are found along the Highway 50 corridor from El Dorado Hills to Pollock Pines. The areas of Pleasant Valley and along State Highway 49 south of the community of El Dorado are also experiencing a rapid population growth. In Amador County, the population densities are greatest along the State Highway 88 corridor from Jackson to the Pioneer area.

<b>County</b>	<b>Population<sup>2</sup></b>
Alpine	281
Amador	81,572
El Dorado	279,129
Sacramento	1,377,193
San Joaquin	281
<b>Unit Total</b>	<b>1,738,456</b>

A significant seasonal population increase occurs in mid-spring and continues to gradually increase due to the influx of seasonal workers seeking employment during the apple and grape harvest in the late fall.

With the easy access to the Lake Tahoe Basin and the many other recreational areas and summer homes, tourism and recreation are also major factors that influence the population during fire season. Even though most of these areas are located within the El Dorado National Forest, visitors must transit through the CDF's DPA to reach them. Since the majority of the fires are human caused, this increase in population usually results in more wildland fire ignitions.

The major industries that support the local economy includes timber, tourism, recreation, wine and fruit production, construction, service oriented businesses and to a lesser extent, light industry. All of these industries have at one time or another been affected by wildfires. Hundreds of thousands of dollars have been lost both directly and indirectly due to wildfires. It has been estimated that a closure of Highway 50 during the summer months, would result in a loss of between 1.5 and 2 million dollars a day in the South Lake Tahoe Basin (including Nevada interests). Additionally, an estimated \$150,000 would be lost to the west slope communities due to a closure of Highway 50 from the west county line to Echo summit.

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<sup>2</sup> 2002 census data

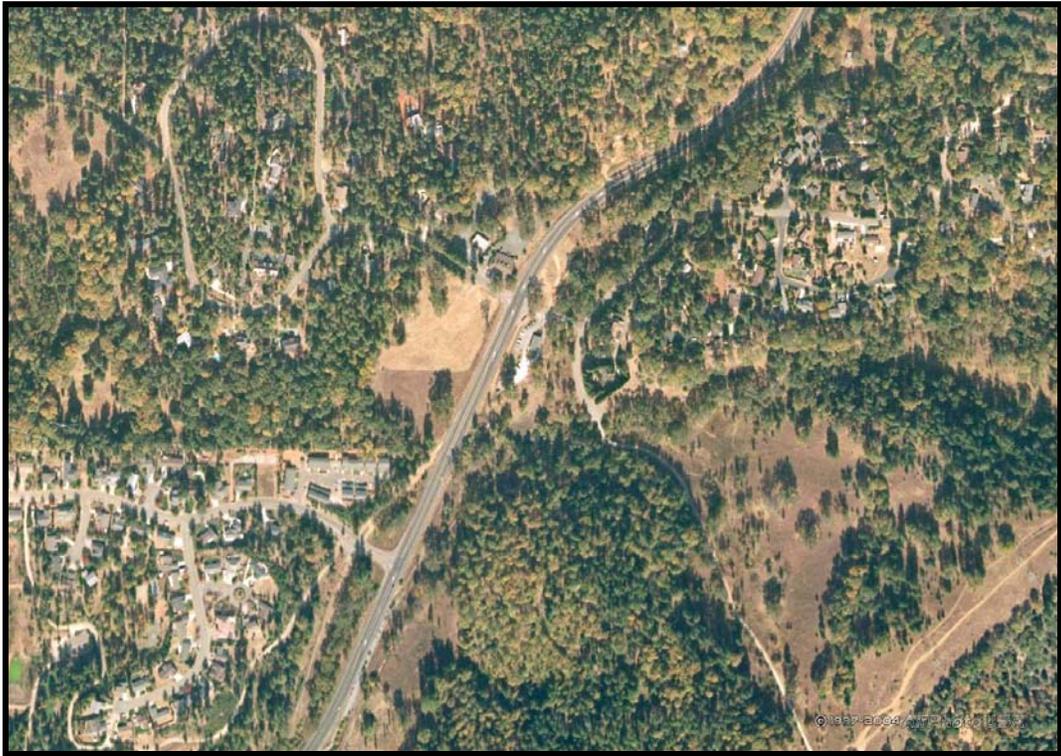
## California Fire Alliance Communities at Risk

Wildfires burn millions of acres throughout the United States each year. These fires dramatically illustrate the threat to human lives and development.

A fundamental step in realizing this was the identification of areas that are at high risk of damage from wildfire. Federal fire managers authorized State Foresters to determine which communities were under significant risk from wildland fire on Federal lands.

The California Department of Forestry and Fire Protection undertook the task of generating the State's list of communities at risk. With California's extensive urban Wildland-Urban Interface situation the list of communities extends beyond just those on Federal lands.

AEU contains thirty-nine communities classified at risk from wildfire. Of those, thirty-three are adjacent to federal lands. These are indicated with an "F" in the "federal threat" column of the following chart. The Hazard Level Code included on the list designates a community's fire threat level where 3 indicates the highest threat.



## California Fire Alliance communities at risk

<b>Communities</b>	<b>COUNTY NAME</b>	<b>FEDERAL THREAT</b>	<b>HAZARD LEVEL</b>
Bear Valley	ALPINE	F	3
Kirkwood	ALPINE	F	2
Markleeville	ALPINE	F	3
Paynesville	ALPINE	F	3
Tamarack	ALPINE	F	3
Woodfords	ALPINE	F	3
Woodfords Community (Indian Reservation)	ALPINE	F	3
Amador City	AMADOR	F	3
Fiddletown	AMADOR	F	3
Ione	AMADOR		3
Jackson	AMADOR	F	3
Pine Grove	AMADOR	F	3
Pioneer	AMADOR	F	3
Plymouth	AMADOR	F	3
River Pines	AMADOR		3
Sutter Creek	AMADOR	F	3
Volcano	AMADOR	F	3
Wallace	AMADOR	F	3
Cameron Park	EL DORADO	F	3
Coloma	EL DORADO	F	3
Cool	EL DORADO	F	3
Diamond Springs	EL DORADO	F	3
El Dorado Hills	EL DORADO	F	3
Foresthill	EL DORADO	F	3
Georgetown	EL DORADO	F	3
Grizzly Flat	EL DORADO	F	3
Kelsey	EL DORADO	F	3
Latrobe	EL DORADO	F	3
Omo Ranch	EL DORADO	F	3
Outingdale	EL DORADO	F	3
Placerville	EL DORADO	F	3
Pleasant Valley	EL DORADO	F	3
Pollock Pines	EL DORADO	F	3
Shingle Springs	EL DORADO	F	3
South Lake Tahoe	EL DORADO	F	3
Rancho Murieta	SACRAMENTO		3

## **AEU Action Plan**



The Unit's Fire Management Plan was developed to address fire safe planning and hazardous fuel reduction concerns of federal, state, and local fire agencies, fire safe councils and other collaborators. The Fire Plan incorporates an across the board approach to reducing the occurrence and impact of wildland fire through a coordinated effort involving law enforcement, for instance PRC-4291 defensible

space requirements, education and information, community fire safe and evacuation planning and hazardous fuel reduction with emphasis upon the urban wildland interface and in particular the homeowner and creating defensible space.

Shaded fuel breaks are also a large component of the overall fuel reduction effort with the Unit focusing on those fuel breaks that support the safe ingress of fire suppression forces and egress of civilians in and around communities.



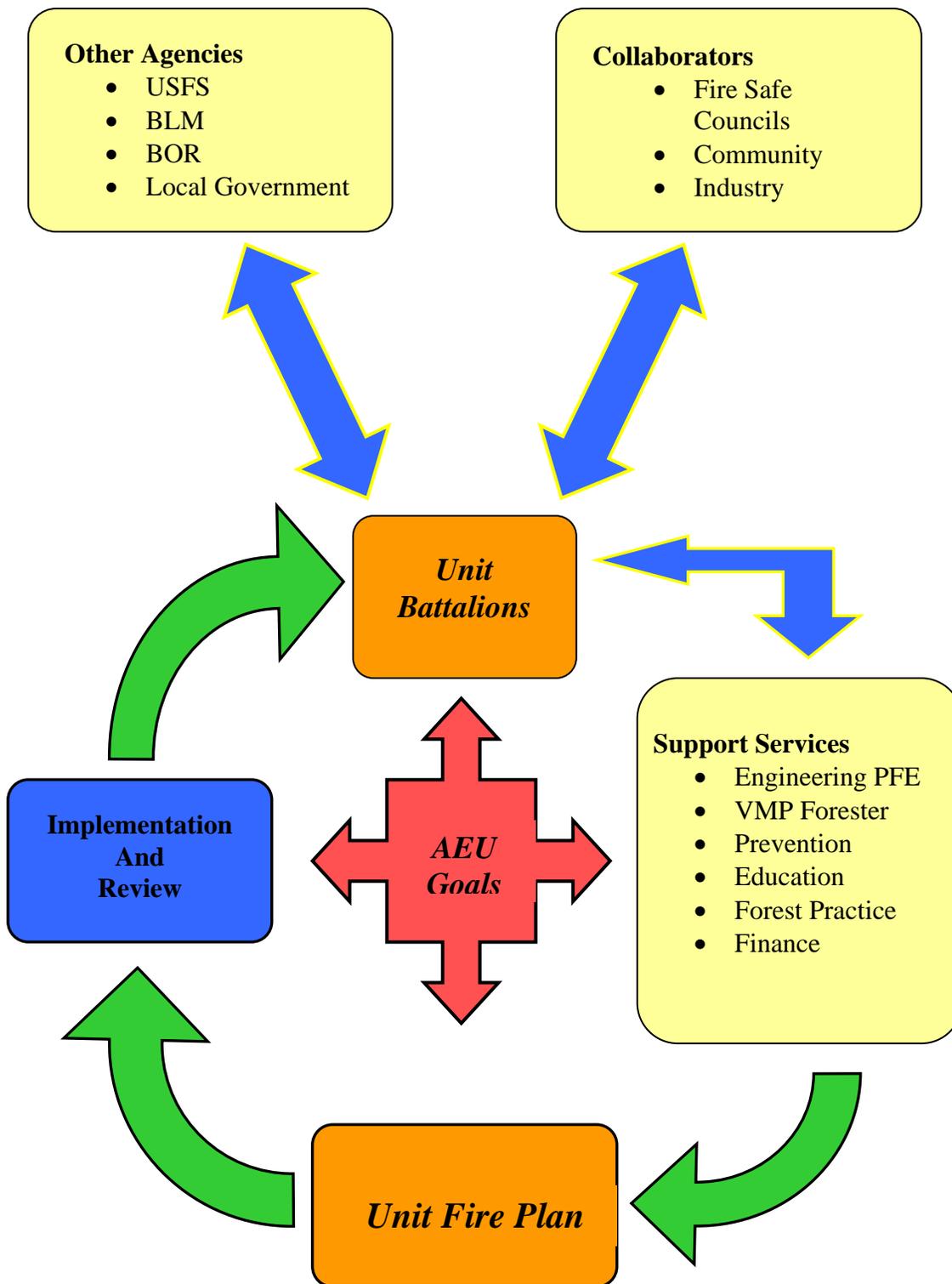
The Unit considers collaborator support extremely important. Lack of collaborators may eliminate otherwise important projects from consideration. To gain community support, the Unit works closely with the Fire Safe Councils, local governments, and Federal agencies. These Fire Safe Councils provide a forum for creating support for all kinds of projects. This resource has proven so effective

that the Unit now accomplishes projects it could not accomplish in the past.

These Fire Safe Councils also closely link their projects with projects in the Unit's Fire Plan. This linkage allows greater progress towards the ultimate goal of reducing damage from wildfire.

The key to effective fire planning is the battalion's acting as community wildfire leaders. Consequently, as community wildland leaders, the battalions can only achieve the Unit and Department goals with support from the community. On the following page is a flow chart of this process.

## Fire Plan Process



## Summary of Projects

The following tables describe fuels reduction, fire safe project, and proposed projects for this planning cycle. These projects are categorized into five areas.

1. **Current:** Currently active
2. **Future:** In the planning process
3. **Past:** Inputted into the Unit's maintenance program
4. **Training / Range improvement**
5. **Prop-40 Projects**
  - a. Present
  - b. Pending approval
  - c. Planning- Future

Priority	Project Name	Funding	Year	Batt.	Cost
<b>Current</b>					
High	Independence Fuel Break	USFS	2002	1	\$150,000
High	Independence II	USFS	2004	1	\$100,000
High	Folsom Lake El Dorado Hills	WUI	2004	1	\$98,000
High	Auburn Lake Trails Fire Safe Project 2	Title III	2004	2	\$30,000
High	Auburn Lake Trails 2	WUI	2004	2	\$85,000
High	Omo Ranch Fuel Break	Title III	2004	3	\$60,000
High	Shake Ridge/Antelope Fuel Break	Prop 40	2005	3	\$26,000
High	Last Chance Fuels Reduction Project	USFS	2005	3	\$198,000
High	Pine Acres Fire Safe Project 2	WUI	2004	3	\$85,000
High	Cameron Park Fire Safe Project	Title III	2004	5	\$70,000
High	Cameron Park Fire Safe Project 2	Title III	2003	5	\$70,000
High	Cameron Park Fire Safe Project 3	WUI	2004	5	\$95,000
				Total	\$1,067,000

Priority	Project Name	Funding	Year	Batt.	Cost
<b>Future</b>					
High	Pine Acres III	WUI	2005	3	\$81,650
High	Sly Park II	WUI	2005	1	\$85,000
High	Shake Omo Ranch Fire Safe Project	WUI	2005	3	\$63,000
High	Divide Fire Safe Project	N/A	2005	2	\$300,000
High	Auburn Lake Trails III	WUI	2005	2	\$81,650
				Total	\$611,300

Priority	Project Name	Funding	Year	Batt.	Cost
<b>Past</b>					
Medium	Sly Park Fire Safe Project	Prop 204	1998	1	\$265,000
Medium	Auburn Lake Trails Fire Safe Plan	USFS	2002	2	\$22,000
Medium	Pine Acres Fire Safe Plan	USFS	2002	1	\$22,000
Medium	Amador Pines Fire Safe Project	Prop 204	2000	3	\$265,000
Medium	Sutter Highlands	FEMA	1999	3	\$130,000
Medium	El Dorado Fire Safe Council Chipper	FSC	2002	1,2,5	\$63,000
Medium	Auburn Lake Trails Fire Safe Project	WUI	2002	2	\$44,088
Medium	Folsom Lake El Dorado Hills Fire Safe Project	Title III	2003	1	\$60,000
Medium	Cameron Park Fire Safe Project	Title III	2005	5	\$35,000
Medium	Pine Acres Fire Safe Project	WUI	2002	3	\$44,562
				Total	\$950,650

Priority	Project Name	Funding	Year	Batt.	Cost
<b>Training / Range improvement</b>					
High	Cosumnes River Preserve / VMP	n/a	All	4	n/a
Medium	HFEO dozer training / VMP	n/a	All	4	n/a
Low	Prairie City training / VMP	n/a	All	1	n/a

**Prop-40 Projects:**

Priority	Project Name	Funding	Year	Value
<b>Present</b>				
High	CFIP 04-CSR-AEU-High8(Antipa)	Prop 40	Fiscal 04	\$48,935
High	CFIP 04-CSR-AMA 2High (Genovesio)	Prop 40	Fiscal 04	\$15,079
High	CFIP 04-CSR-AMA-22 (Magee)	Prop 40	Fiscal 04	\$18,605
High	CFIP 04-CSR-ELD-24 (Trevarthen)	Prop 40	Fiscal 04	\$49,972
Med	CFIP 04-CSR-AEU-19(Stewart Union hill)	Prop 40	Fiscal 04	\$27,656
Med	CFIP 04-CSR-ELD-23 (Buchholz)	Prop 40	Fiscal 04	\$49,932
Med	CFIP 04-CSR-AMA-25 (DuBois#2)	Prop 40	Fiscal 04	\$19,797
Low	CFIP 04-CSR-AEU-20(Lewis)	?	Fiscal 04	\$27,614
			Total	\$257,590

Priority	Project Name	Funding	Year	Value
<b>Pending Approval</b>				
High	CFIP 04-CSR-ELD-26 (McMinn)	Prop 40	Fiscal 04	\$49,860
High	CFIP 04-CSR-ELD-27 (Hempling)	Prop 40	Fiscal 04	\$48,114
High	CFIP 04-ELD-30 (Ramey)	Prop 40	Fiscal 04	\$24,990
High	Mosquito Fire Safe Council	Prop 40	Fiscal 05	\$141,865
High	El Dorado RCD - Sly Park Pre-Fire Mgmt Area II	Prop 40	Fiscal 05	\$19,000
High	El Dorado RCD - Sly Park Pre-Fire Mgmt Area II	Prop 40	Fiscal 05	\$41,000
High	El Dorado RCD - Uncle Toms Pre Fire mgmt area I	Prop 40	Fiscal 05	\$50,000
High	AFSC Fiddletown #1	Prop 40	Fiscal 05	\$49,999
High	AFSC Fiddletown #2	Prop 40	Fiscal 05	\$49,999
High	AFSC Rams Horn #1	Prop 40	Fiscal 05	\$49,999
High	AFSC Rams Horn #2	Prop 40	Fiscal 05	\$49,999
High	AFSC Rams Horn #3	Prop 40	Fiscal 05	\$49,999
High	AFSC Shake Ridge 2	Prop 40	Fiscal 05	\$49,999
High	AFSC Shake Ridge 3	Prop 40	Fiscal 05	\$49,999
High	Auburn Lake trails	Prop 40	Fiscal 05	\$47,996
			<b>Total</b>	<b>\$772,818</b>

<b>Planning-Future</b>				
Priority	Project Name	Funding	Year	Value
High	CFIP 05-CSR-ELD-01 (Ehman)	Prop 40	Fiscal 05	\$49,312
High	CFIP 05-CSR-ELD-02 (Throne / Hayden)	Prop 40	Fiscal 05	\$31,388
High	CFIP 05-CSR-ELD-03 (Fiekens/Miller/Hallmark/Ruiz/Haydem)	Prop 40	Fiscal 05	\$49,710
			<b>Total</b>	<b>\$130,410</b>

**Funding:**

FSC = Fire Safe Council funding  
 Management Agency  
 WUI = Western Urban Interface funding  
 CFIP = California Forest Improvement Program

FEMA = Federal Emergency  
 Prop 40 = State grant funds  
 Title III = Federal funds

