



KERN COUNTY FIRE DEPARTMENT
WILDLAND FIRE MANAGEMENT PLAN

2004



SIGNATURE PAGE

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KERN COUNTY FIRE DEPARTMENT

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Kern County Fire Department Wildland Fire Management Plan 2004

The Kern County Fire Department Wildland Fire Management Plan documents the assessment of the wildland fire situation throughout the State Responsibility Area (SRA) within the county. It includes stakeholder contributions and priorities, and identifies strategic targets for pre-fire solutions as defined by the people who live and work with the local fire problem.

The goal of the Plan is to reduce costs and losses from wildfire by protecting assets at risk through focused pre-fire management prescriptions and increasing initial attack success.

Utilization of computer-based data and Geographic Information Systems (GIS) provides for a comprehensive analysis of fire hazards, assets at risk, and level of service to be included in the Wildland Fire Management Plan. In short, the Kern County Fire Department Wildland Fire Management Plan will systematically assess the existing levels of wildland protection services, and identify high-risk and high-value areas that are potential locations for costly and damaging wildfires. The Plan will then rank the areas in terms of priority needs, and prescribe what can be done to reduce future costs and losses.

Applications of the Fire Plan Framework

- Identify for state, federal, and local officials and the public those areas of concentrated assets and high risk.
- Allow the KCFD to create a more efficient wildland fire protection system, focused on meaningful solutions for identified problem areas.
- Give citizens an opportunity to identify public and private assets to design and carry out projects to protect those assets.
- Identify, before fires start, where the most cost-effective fire management investments can be implemented.
- Encourage an intergovernmental public/private approach to reducing costs and losses.
- Enable policy makers and the public to focus on what can be done to reduce future costs and losses from wildfire.

The intent of the Kern County Fire Department Wildland Fire Management Plan is to document the findings of the assessment and communicate the intent of the KCFD management and the stakeholders toward solving a mutually agreed on fire problem within Kern County. This fire plan would also be used to communicate with adjacent administrative units. Coordinated projects that make sense in a regional perspective, as well as a local perspective, can gain additional support. This plan will be especially helpful when explaining funding requests to control agencies, i.e., the Board of Supervisors and committees, and in explaining the Kern County Fire Department's activities to the general public.

Citizen advisory groups, and appointed and elected officials, prepare long-range plans that reflect local community desires for public safety, public health, public welfare, and environmental quality of life. Many areas of Kern County have more localized community plans or area plans containing safety and conservation elements. Wildland fire issues and county land use zoning and development will be considered in the Wildland Fire Management Plan.

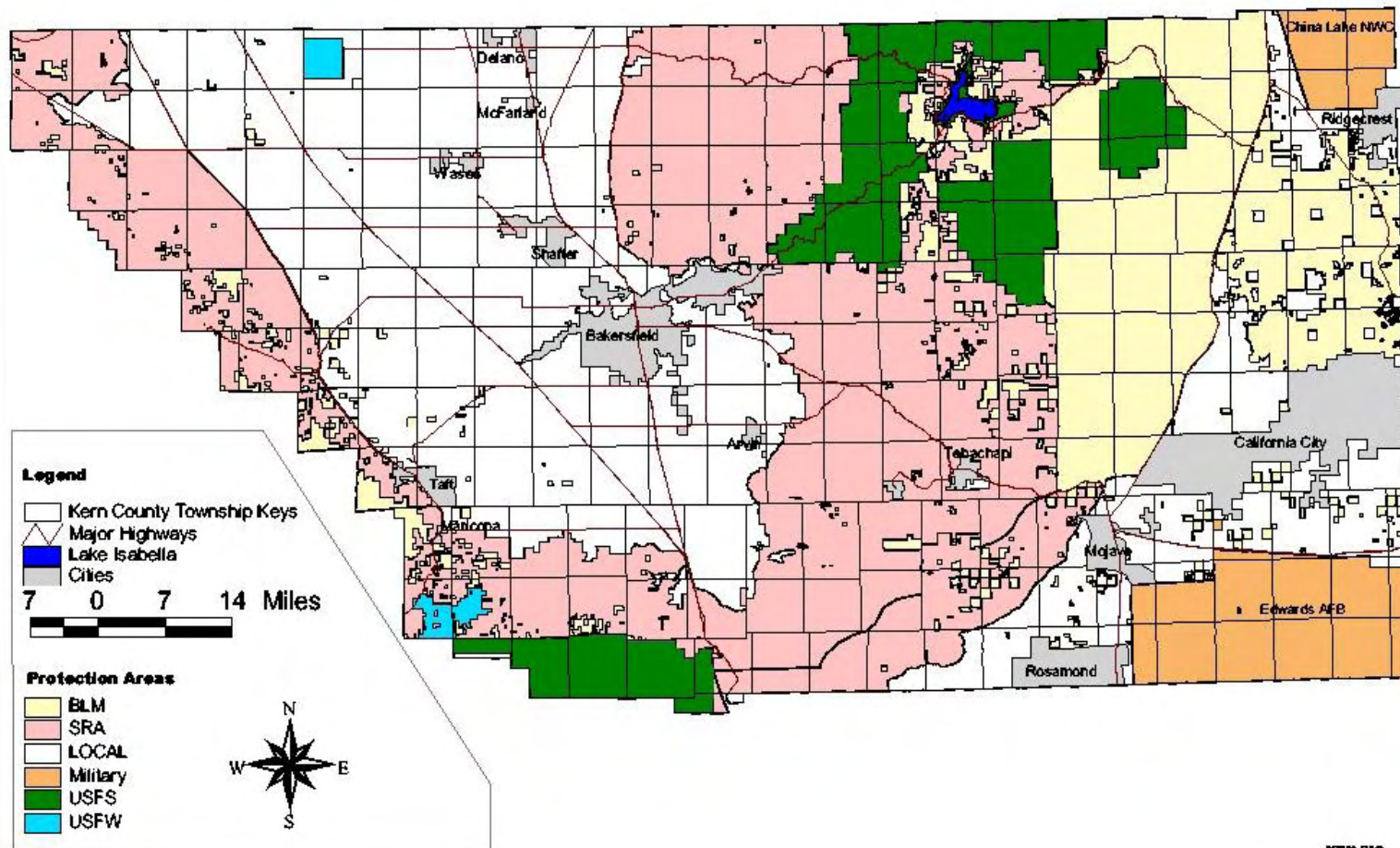
The intent of this document is to have a simple, easy to understand report that gets used. Annual (or more frequent) monitoring will be included when elements of the Wildland Fire Management Plan are implemented. This will help determine effectiveness of the projects in reducing costs and losses to the wildland fire protection system. Monitoring will be tested against pre-project conditions and will allow for adjustments for initial attack fires. These results will be used to adjust project design and priorities over time.

The Kern County Fire Department Wildland Fire Management Plan is intended to be a dynamic document that will continue to develop and evolve over time.

Kern County Fire Department



Direct Protection Areas



KRM GIS
cld 112403

Stakeholders

Stakeholders are defined as any person, agency, or organization with a particular interest – a stake – in fire safety and protection of assets from wildfires. The Kern County Fire Department has made a considerable attempt at involving stakeholders and many of their interests in the development of the KCFD Wildland Fire Management Plan. The process of identifying stakeholders and their interests is an ongoing process, and will be evaluated continuously through the evolution of future fire management plans. It is the goal of the Kern County Fire Department to participate with as many stakeholders as possible and to continually update planning efforts involving stakeholder input.

Fire Safe Councils are instrumental in bringing a representative group of stakeholders to “the table.” The councils shed light on many concerns within communities and expose information relating to the effectiveness of the Kern County Fire Department’s fire safe efforts. The department is able to respond and adapt activities to address many of the concerns from the different stakeholders involved with the fire safe councils. Through the councils' diversity, agencies have been able to develop pre-fire and fire prevention projects that otherwise may never have been developed.

There are three Fire Safe Councils in existence within Kern County. The Kern River Valley Fire Safe Council has been in existence for approximately four years, and the other two are in the initial stages of development.

Fire Safe Councils

Kern River Valley Fire Safe Council

www.krvfiresafecouncil.org

Robin Wyatt-Little, Chair

PO Box 633

Kernville, CA 93238

(760) 376-6842

The Kern River Valley Fire Safe Council is one of three councils in Kern County. It was established in January 1999. The council represents an area which includes 20 unincorporated mountain communities, all of which have some degree of wildland/urban interface. Seven of these communities are listed by the California Fire Alliance as “high risk” to wild fire.

The Kern River Valley Fire Safe Council is a consortium of fire agency personnel and representatives of the property owners associations that surround Lake Isabella. This council has been very successful at conducting fire safe presentations, fuels reduction projects, and the development of a Fire Safe Plan for the Kern River Valley.

Pine Mountain Communities Fire Safe Council

Arlene O’Neil, Chair

PO Box P

Pine Mountain Club, CA 93222

(661) 242-3788

The Pine Mountain Communities Fire Safe Council is located in the Pine Mountain Club, Pinon Pines, Lake of the Woods, Frazier Park, and Lebec areas. The major participants of this council are the Pine Mountain Club POA, the Pinon Pine POA, the Frazier Park Town Council, the Chuchupate District of the Los Padres National Forest, the Kern County Parks Department, and the Kern County Fire Department. This council has had several meetings and is preparing a grant concept paper for a community fire safe plan.

Additionally, due to the proximity of Los Angeles and Ventura Counties, both have expressed an interest in participation.

Greater Tehachapi Fire Safe Council

Ken Stevens, Kern County Fire Department

5642 Victor Street

Bakersfield, CA 93308

(661) 330-0136

The Greater Tehachapi Fire Safe Council has had one organizational meeting, with a tremendous response. Over 30 individuals participated in this first meeting comprised of a number of Community Service Districts representing thousands of property owners. Additionally, the Resource Conservation District is involved, along with the Tehachapi City Fire Department, the Kern County Parks Department, and the Kern County Fire Department.

The communities that will be represented by this council will include Tehachapi, Golden Hills, Alpine Forest Park, Bear Valley Springs, Old West Ranch, and Stallion Springs.

Assets at Risk

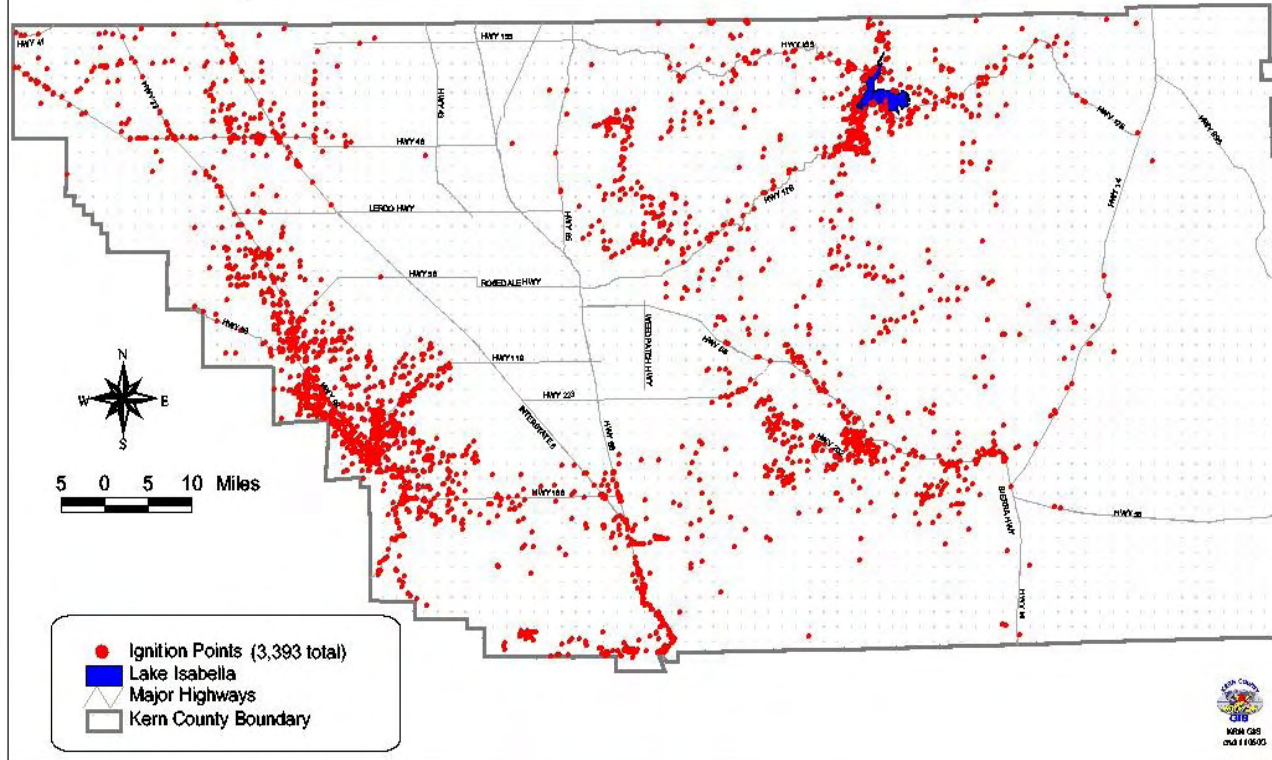
The primary goal of wildland fire protection in Kern County is to preserve the variety of assets found within the county. The assets at risk are both public and private and interplay with one another to provide the quality of life we experience within the county. These assets include:

- Structures – residential and commercial
- Air Quality – degradation due to smoke from fires
- Rangelands – loss of grazing
- Timber – loss of timber resources
- Scenic – viewscape
- Recreation – loss of recreational facilities or open areas
- Wildlife – loss of critical habitat or game
- Hydroelectric power – damage to watersheds that support plants

The value of the assets at risk determines the commitment of resources and the prioritization of program funds and projects.



Kern County Fire Department Vegetation Fires within State Response Area 1982-2003



Level of Service

Fighting fire in Kern County is truly a cooperative effort. Kern County Fire Department provides fire protection by contract to the cities of Delano, McFarland, Wasco, Shafter, Arvin, and Ridgecrest. Kern also cooperates fully with the other incorporated cities within the county: Bakersfield, Taft, and California City. Additionally, Kern County Fire Department actively participates in the State Master Mutual Aid system and has operating agreements with the USDA Forest Service Sequoia and Los Padres National Forests, the Bakersfield and Cal Desert Districts of the USDI Bureau of Land Management, the California Department of Forestry and Fire Protection, and the Fish and Wildlife Service. The cooperation between all the above-listed agencies comprises the fire protection delivery system within the County of Kern.

The legislature has charged the California fire service with providing an equal level of fire protection to lands of similar type (PRC 4130). To do this, we must have a system to analyze the level of service being provided to the wildland areas. This rating is expressed as the percentage of fires that are successfully attacked. Success is defined as those fires that are controlled before unacceptable damage or cost is incurred.

Success Rate =

$$\frac{\text{Annual number of fires that were small and extinguished by initial}}{\text{Total number of fires}}$$

Multiplied by 100 = the success rate in percent

The result is an initial attack success rate in percentage. **For our purposes, and as defined by CDF (State Board of Forestry), any fire suppressed at less than 10 acres was considered an initial attack success.**

The following tables express the State Responsibility Area fires for 2001-2003. Shown are the number of fires by cause, acres burned by cause, the number of fires by size class, and the acres burned by vegetation type.

STATE RESPONSIBILITY WILDFIRES KERN COUNTY

January-December **2002**

NUMBER BY CAUSE

LIGHTNING	CAMPFIRE	SMOKING	DEBRIS	ARSON	EQUIPMENT USE	PLAYING W/ FIRE	MISC	TOTAL
5	1	7	8	4	28	6	15	74

Second row of boxes represents year to date totals

ACRES BURNED BY CAUSE

LIGHTNING	CAMPFIRE	SMOKING	DEBRIS	ARSON	EQUIPMENT USE	PLAYING W/ FIRE	MISC	TOTAL
3.65	0.1	8.6	0.8	423.1	86.95	4.6	937.3	1465.1

Second row of boxes represents year to date totals

NUMBER BY SIZE CLASS (acres)

< .25	.26-9	10-99	100-299	300-999	1,000-4,999	5,000+	TOTAL
46	23	3	0	2	0	0	74

Second row of boxes represents year to date totals

ACRES BY VEGETATION TYPE

COMMERCIAL FOREST	NON-COMMERCIAL FOREST	NON-FORESTED WATERSHED	TOTAL
0	0	1465.1	1465.1

Second row of boxes represents year to date totals

Success evaluation

Total number of fires less than 10 acres: 69

Divided by the total number of fires: 74

93.2432 Percent success

state responsibility wildfires_2002.doc

Wildland Fire Management Plan Priorities by Battalion

Battalion 1

OVERVIEW

Battalion 1 includes the southeastern portion of Kern County. It is divided by State Highway 58 that runs east/west and by State Highway 14 that runs north/south. The California Aqueduct, running north and south, establishes the eastern edge of the State Responsibility Area (SRA) in Battalion 1. The western edge of the SRA in Battalion 1 is defined by the toe of the slope along the southeastern edge of the San Joaquin Valley. The total SRA acreage in Battalion 1 is 351,276 acres. Of the incorporated cities within Battalion 1, Tehachapi is surrounded by SRA and Arvin has SRA to the south and east. The town of Rosamond has SRA to the west. There is also a substantial amount of Bureau of Land Management (BLM) Direct Protection Area (DPA) to the north and west.

The fuel models that predominate are grass (FM1 and 2), brush (FM4 and 6), and some areas of timber in the higher elevations (FM8). Additionally, there has been a substantial amount of bug kill in the larger trees in the Tehachapi and Bear Valley Springs areas. Historically, many of the larger fires in the County have originated in this area, however, an influx of residential development have reduced the number of large fires in recent years. The reduction in the number of fires is a positive aspect, however, the negative side of this growth is that any fires that become established in this area will immediately threaten high value/high risk exposures.

Alpine Forest Park

Alpine Forest Park is a series of winding streets with scattered housing. The predominant fuel model is grass and sage with some pines and oaks. The sage is the main concern relative to fire spread and intensity. Efforts have begun to reduce the volume of sage through creating small areas that could be burned under controlled conditions. To enhance the control factor, processes to crush much of the sage over several acre blocks have begun with the intent of burning the crushed vegetation under low intensity conditions. Property owner support has been mostly positive, with a few people that choose not to participate. A comprehensive plan needs to be developed to identify locations and the sequence that this project will follow. Additionally, a project to increase the brush clearance along the subdivision roads needs to be implemented with the property owners association

West Ranch/Blackburn Canyon

This area is located southeast of the City of Tehachapi. There are approximately 65 homes in the area that are served by narrow, twisting dirt roads with entrance/exit to the community made through two locations, one to the north, the other to the east. The most significant fire threat feature of this area is the volume and condition of the vegetation. The fuel models range from grass to brush to heavy concentrations of trees (oaks, pinions, gray pine, and others).

There is substantial tree mortality in this area due to a combination of bug kill and dwarf mistletoe. There is a significant volume of hazardous fuels reduction work that needs to be done in this area. The residents that live in the area on a full-time basis are making progress toward reducing the total fuel volume, however, there are large numbers of absentee landowners that are not as committed to the fuel reduction. The number one priority for this area would be to reduce the number of dead and down trees that constitute a major portion of the existing fuel load. Secondly, establishing a system of shaded fuel breaks would reduce the intensity and spread rate of any fire that became established.

Hart Flat

Hart Flat has had some fuels reduction work done as a result of the FEMA Bear Valley Grant. The main focus of work here was in brushing Clear Creek Loop Road. Additionally, on an annual basis the community receives some pre-suppression protection through the maintenance of a fuel break that runs along the south side of eastbound Highway 58. This break inhibits fires that start on the freeway from spreading uphill into the Hart Flat community.

Bear Valley

Bear Valley has had extensive fuels reduction work done as a result of the FEMA Bear Valley Grant. All of Skyline Road has been brushed, and shaded fuel breaks have been established connecting Skyline Road with Fargo Ct. and Amberwood with Lower Valley Road. There is still a substantial volume of work that could be accomplished in the Sycamore Canyon area and other areas identified in the Bear Valley Springs Fire Safety Plan. Bear Valley Springs property owners have initiated a program to eliminate a number of trees that have fallen victim to the bark beetle. This project needs to be continued and an additional project initiated to reduce the fuel load along the roadways in the northern portion of the subdivision.

Battalion 2

OVERVIEW

Battalion 2 comprises most of the west side of the County of Kern. West of State Highway 33 and most of what is south of State Highway 166 is either SRA or Federal Responsibility Area (FRA). The FRA is predominantly Los Padres National Forest, with some Fish and Wildlife Service area in the Bitter Creek Wildlife Refuge. Interstate Highway 5 runs through the west central part of the County and bisects the south portion of Battalion 2. There are no large, incorporated cities within Battalion 2 that impact the SRA, however, Tejon Ranch does make up a large portion of the southeast part of the battalion. The total SRA acreage within Battalion 2 is 406,220 acres.

The fuel model that covers most of the west side of the battalion is grass (FM1) with a scattering of brush and some oak trees. As the elevation increases in the southern end of the battalion there is more sage and pine (FM2). Moving into the Frazier Park, Pinon Pines, and Pine Mountain Club areas the predominant fuel model is Pinyon-juniper (FM6) until it becomes mixed with a timber model (FM8) in Pine Mountain Club.

Most of the mountain areas of Battalion 2 are sparsely populated with the exceptions of the pockets created by Lebec, Frazier Park, Lake of the Woods, Pinon Pines, and Pine Mountain Club. Fires that become established in or immediately adjacent to these areas will threaten lives and property in a short time.

Historically, fires in Battalion 2 in the grasslands reach large acreage in a short period of time, however, they are fairly easy to control unless there is a significant wind component associated with the spread. Fires in the higher elevations are generally much smaller, but are much more resistant to control due to the heavy fuels.

Digier Canyon

Digier Canyon is a predominantly residential area north of Lebec on the west side of Interstate Highway 5. The subdivision is partially within the Los Padres National Forest, with Fort Tejon State Park on the south and Wild Wolves Preserve on the west. The only access/egress is on Digier Rd. The subdivision is comprised of approximately 30 structures, both commercial and residential. The fuel model is predominantly grass and oak trees (FM1) with a scattering of brush. The main fire concern with Digier Canyon is not the fuel, but with the egress issues and its proximity to fires starting on I-5. The priority project for this area would be to explore options for secondary egress or the development of a community safety zone.

Frazier Park (south side)*

Frazier Park is a series of streets that hop and skip from one location to another, apparently with little or no planning/development standards or guidelines. Many of the dirt roads have brush intruding into the right-of-way and little maintenance has been done. The fuel types range from grass and light brush mixed with conifers (FM1) to heavy brush (FM4). Around the south side of the subdivision is predominantly brush with scattered pines and juniper, and some oak. A grant proposal has been written and tentatively approved to construct a shaded fuel break around the south side tying into Frazier Mountain Park Road on the east and west sides. This break would be approximately 100' wide, providing a buffer for the subdivision from a fire approaching out of the forest or a fire emanating from the homes spreading into the forest.

Pine Mountain Club*

Pine Mountain Club is a planned community surrounded by the Los Padres National Forest. It has approximately 3,000 parcels. Approximately 2,000 of these parcels have been developed. For the past five years the Kern County Fire Department has been performing hazard reduction inspections in Pine Mountain Club. The fuel loading is heavy predominantly live oak, sage, and pine. KCFD and LPF personnel and the Property Owners Association have made great efforts, but the sheer volume of material has made for slow progress. The property owners commissioned a contractor to develop a vegetation management plan (which has been done) and have received a hazardous fuels reduction grant to begin implementation of the plan. Some work has already begun to construct shaded fuel breaks in the greenbelt areas of the tract.

Pinon Pines*

Pinon Pines is a small community between Frazier Park and Pine Mountain Club, surrounded by Los Padres National Forest. Four years ago a wildland fire destroyed one home and damaged another. This incident raised local awareness to the dangers of current fuel conditions. Residents have been fairly active in projects around their homes, but much work remains to be done. A shaded fuel break was constructed on the northeast, east, and south sides of the subdivision in 2001. The northwest and west sides remain to be done. The fuel model is mainly pinyon/juniper with a moderate fuel load.

*SRA within LPF DPA - USFS has wildland fire protection responsibility; KCFD has fire protection responsibility for structures and improvements.

Battalion 3

OVERVIEW

Battalion 3 includes the north central portion of the county out to the western edge of the county. Relative to the State Responsibility Area, the most important feature is State Highway 65. Highway 65 is the western boundary for most of the SRA in Battalion 3. The other main road through the area is State Highway 155 that runs east and west from Lake Isabella to Delano. To the east of the SRA in the battalion is Sequoia National Forest. There is a large portion of SRA (193,450 acres) in Station 26's area in the northwest corner of the County. The total SRA acreage for Battalion 3 is 409,566 acres. The fuel model is predominantly grass and oak trees (FM1), with some pockets of brush. Much of the area is rangeland utilized for cattle grazing, with very little public access.

There are presently no identified projects within the Urban Interface areas of Battalion 3 that would take a higher priority than projects identified in other battalions.

Battalion 4

OVERVIEW

Battalion 4 is predominantly Local Responsibility Area (LRA) on the south and east sides of Bakersfield. There is some SRA in the eastern portion of the battalion that adjoins the Sequoia National Forest. There are 96,023 SRA acres in Battalion 4. The main accesses to the State Responsibility area within Battalion 4 is along State Highway 58 which runs east and west through the battalion and Breckenridge Road, which runs northeast out of Bakersfield up into the National Forest on top of Breckenridge Mountain. Within the SRA of Battalion 4, there are no towns or cities, incorporated or unincorporated, and only one subdivision of consequence.

Breckenridge Subdivision

The Breckenridge subdivision is entirely within the boundaries of the Sequoia National Forest. It is comprised of between 35-40 cabins, with very few full-time residents. The fuels are a timber model (FM8) with heavy concentrations of down, dead fuel. Access to the subdivision is also an issue in that the paved portion is single-lane, paved forest road with dirt roads within the subdivision itself. The priority project for this area would be a general reduction of the accumulated dead and down material that is pervasive throughout the subdivision. The private properties within the subdivision are intermixed with Forestland. This creates a problem in that the private lands have had some clearing done but are immediately adjacent to Forest property, which has had no treatment. A project to reduce the fuel loading within the boundaries of the subdivision would require close coordination between the property owners and the National Forest. Additionally, a general widening of the roads within the subdivision would provide better access to the cabins and the water tanks.

Battalion 7

OVERVIEW

Battalion 7 includes the northeast portion of Kern County. It is a diverse mixture of Direct Protection Areas with Federal Responsibility Areas, both Forest Service and Bureau of Land Management and SRA (253,776 acres). North/south highways include State Highways 178 and 14 and the main east/west highway being State Highway 155. There are numerous unincorporated towns within the battalion, including Havilah, Lake Isabella, Bodfish, Wofford Heights, Kernville, and Southlake. All of these towns are listed by the California Fire Alliance as being at high risk to wildfire.

Battalion 7 has a history of large, damaging wildfires. Included recently are the King (2000), Borel (2002; five residences lost), and the Deer Fire (2002; 47 residences lost). The Manter (2000) and the McNally (2002) Fires also burned just north of the Kern County line in this same area.

The fuel models range from grass (FM1) to brush (FM4) to timber (FM8), with large areas of pinyon/juniper (FM6).

Alta Sierra - SRA within SQF DPA

Alta Sierra is within the boundaries of the Sequoia National Forest. It has substantial fuel buildup on the private properties within the County Park that is located there and on the Forest Service property surrounding the subdivision. There are currently two Forest Service grants in effect for the Alta Sierra area. One is to establish a 100-150' shaded fuel break around the entire community. The second grant is to create a "community fire safe" analysis and plan to improve the defensibility of the structures and analyze data relative to the community safety. Both these projects should be completed by November 2004.

Isabella Highlands

This area is west of Lake Isabella at the top of a narrow, steep, twisting one-lane road. It has been a victim of wild fire on a number of occasions, most recently June of 2003, with the loss of five homes. The roads within the subdivision are also narrow and encroached by vegetation throughout the area. There is currently a BLM-funded grant in effect to reduce the volume of fuel both along the roads and in the drainages leading up to the subdivision and some areas above the homes. There are additional needs within the community. Street signs, house numbers, and water source identification are among the current needs.

Frontier Homes/Rogers Road

This area is west and immediately adjacent to Kernville. Rogers Road serves about a dozen homes and leads up to the Frontier Homes subdivision. Frontier Homes has a north side and a south side. A single-lane, dead-end road serves each side. The fuel load is mainly grass with scattered California gray pine. Some pockets of brush exist in the drainage bottoms and/or on north aspects. The main threat to this subdivision is not from the fuel within the subdivision, but from the neighborhoods below. The Rogers Road area presents one of the hazards to the Frontier Homes area. A Forest Service Grant is currently in place to do a hazardous fuel reduction project in the drainage bottom to the south of Rogers Road.

Upper Bodfish/Meyers Canyon

The upper Bodfish/Meyers Canyon area has a history of frequent fires, some of which have become quite large. The "Bodfish" fire in 1984 grew to greater than 35,000 acres. The fuel models in the area vary from grass to heavy brush to trees. The property owners have done much work, however, there are a large number of parcels that are owned by out-of-area owners. These properties represent a large fire hazard and it has been difficult to achieve successful hazard reduction code compliance. There is currently a proposed BLM-funded grant for the west side of Meyers Canyon to create a shaded fuel break. This would protect approximately 100 homes from a fire starting down canyon from the Meyers Canyon subdivision.