

Fresno-Kings Ignition Summary				
Cause	2007	2008	2009	2010
Arson	311	355	307	235
Debris burning	85	71	57	49
Equipment use	157	114	137	96
Miscellaneous	226	153	90	84
Playing with fire	182	219	191	158
Powerline	20	14	16	13
Railroad	0	2	1	4
Smoking	74	102	86	52
Undetermined	185	203	151	180
Unknown	199	160	185	128
Vehicle	114	115	98	88
Lightning	10	2	2	0
Campfire	1	0	0	0
Total	1564	1510	1321	1087
Local Responsibility Area				
Cause	2007	2008	2009	2010
Arson	300	338	306	231
Debris burning	60	52	47	45
Equipment use	126	79	123	90
Miscellaneous	192	132	76	72
Playing with fire	157	194	186	150
Powerline	16	10	12	9
Railroad	0	2	1	4
Smoking	67	95	83	51
Undetermined	166	184	144	160
Unknown	162	124	160	110
Vehicle	95	96	92	83
Lightning	10	2	1	0
Campfire	1	0	0	0
Total	1352	1308	1231	1005
State Responsibility Area				
Cause	2007	2008	2009	2010
Arson	11	17	1	4
Debris burning	25	19	10	4
Equipment use	31	35	14	6
Miscellaneous	34	21	14	12
Playing with fire	25	25	5	8
Powerline	4	4	4	4
Railroad	0	0	0	0
Smoking	7	7	3	1
Undetermined	19	19	7	20
Unknown	37	36	25	18
Vehicle	19	19	6	5
Lightning	0	0	1	0
Campfire	0	0	0	0
Total	212	202	90	82

1. ENGINEERING & STRUCTURE IGNITABILITY

Fire Prevention Bureau Goals

Based on the previous identified information the Fire Prevention Bureau has adopted the following actions to provide efforts of ignition mitigation to protect property, natural resource loss, and loss of life or injuries.

- **Protection and Planning**
 - The protection and planning section will continue efforts of plans checking in accordance with California Fire Code Requirements to provide for public safety. School programs and care facilities inspection will continue to be a high priority.
 - The Public Resource Code 4290/Fresno County Fire Safe Ordinance (Chapter 15.60) plans check and inspections program will continue to provide homes with defensible space and construction. This program is essential with the expansion of single family homes into the WUI environment throughout primarily the east side of the Unit
- **Defensible Space**
 - Managing and reducing the flammable vegetation around structures will also reduce the number of structure ignitions from wildland fires. Clearing vegetation and maintaining that clearance is required by section 4291 of the Public Resources Code (PRC 4291). In 2005 PRC 4291 was amended to increase the minimum vegetation clearance requirement from 30 feet to 100 feet around structures. Although this law requires it, many landowners fail to maintain adequate clearance around their structures. CAL FIRE's fire safe inspection program is used to enforce compliance with PRC-4291. Additionally, the fuel reduction projects within the Unit, are aimed at reducing wildland fuels and educating the public on what they can do for themselves to protect their homes from wildfires and reducing structure ignitability.

- **Law Enforcement**

- The enforcement of forest and fire laws will continue to be proactive in efforts to pursue and prosecute violators of statute. Efforts to reduce the miscellaneous category on the ignition statistics has improved. Fires must continue to be investigated in more detail. This may require some additional education/training of our fire personnel to assist them in origin and cause investigation and report writing. Our efforts to collect suppression cost on fires of negligent or criminal nature has improved. Emergency incidents are costly and the ability to collect suppression cost and punitive damages will remain active.
- Lastly, the law enforcement staff is given the authority and responsibility to identify, investigate and arrest subjects involved in criminal related acts. These incidents will be investigated and documented through proper case management. The management of these cases will be conducted with detail of documentation and proper evidence security. Finally, given the correct legal circumstances the cases will be actively pursued and prosecuted.
- Creation and development of new processes relating to Safe and Sane fireworks permitting and use within the District to ensure the safety of public and their properties from fire.

Fire Protection/Planning Statement

- **Mission Statement** – The mission of the fire protection/planning bureau is to reduce losses and cost from fires within the Fresno-Kings Unit in both the SRA and LRA by enforcement and public education of applicable fire and public resource codes. It is additionally the mission of the bureau to be proactive in its approach to preventing ignition, loss and cost of all types of fires.
- **Priorities** – The priority areas for both SRA and LRA are any area, within the Unit, with substantial residential and industrial development that has the potential to affect the Unit's resources. Although new developments have the potential to impact the Unit's resources, a Community Facilities District was established and adopted to generate funds to ensure staffing and equipment are available to handle increased impacts of development. Continue to improve fireworks permitting and use processes to ensure the safety of the public and their properties from fire.

- **Existing Fire Plan Projects**

- **Web Based Protection and Planning:** Develop and implement web based access to protection and planning requirements for contractors and individual developers. Build efficiency for staff by having available on the District web site all codes and requirements for new and existing construction and PRC 4290 standards.
- **Develop Inspector Guidelines:** Develop and implement standard operating guidelines for inspectors. Develop and implement of new hire training and personnel standards.
- **NFPA 1142 Rural Water Supplies:** Developed and implemented the use of NFPA 1142 as an alternative guide for calculation of fire protection water systems for developments within the SRA or LRA areas of the Unit. The guide provides alternative methods while still considering fire and life safety factors.
- **Business Inspections:** Establish standard operating procedures for staff to conduct annual business inspection for compliance with California Fire Code Standards. Develop standards for conducting mandated inspections.
- **Sub-division Fire Protection System Maintenance:** Monitor new agreements established by Fresno County Planning and Development for new subdivisions within the County of Fresno to provide ongoing maintenance of fire protection systems. This agreement provides language for establishment of a Homeowner's Association to provide maintenance of these systems.

- **Potential Fire Plan Opportunities, Needs & Problems:** The Unit protection and planning department within the Unit works closely with the Fresno County Planning and Development Department. This relationship is critical for new projects in the county ensuring the implementation of California Fire Code standards. The process of project submission at the county level is complicated and requires the Unit to provide ongoing education of the fire code standards as it applies to projects.

- **Prioritization Of Existing And Potential Projects/Opportunities**

- Web based Protection and Planning
- Develop Inspector Guidelines
- Sub-division Fire Protection System Maintenance

- **Objectives**

- **Objective #1** – Develop and implement web based access to protection and planning requirements for contractors and individual developers. Build efficiency for staff by having available on the District web site all codes and requirements for new and existing construction and PRC 4290 standards.
- **Objective #2** – Develop guidelines for new hire and existing inspectors for training and standard operating procedures for protection and planning services. Develop new hire handbook for tracking of training, gear issuance and office procedures.
- **Objective #3** – Monitor new Sub Division System Maintenance agreement with Planning and Development Department for Fresno County. This will be accomplished through annual inspections conducted by engine companies providing feedback to Prevention staff. Prevention staff will ensure maintenance is completed by Homeowner Associations and will work with these groups to ensure compliance with the new agreement.

2. INFORMATION AND EDUCATION

- **Public Information and Education**

- The information and public education outreach programs provide the Department the ability to educate the public. These efforts will continue to be proactive in providing information to residents that reside in the WUI within the Fresno-Kings Unit. The program will also present homeowners with how they may participate as a shareholder in the Fresno and Kings Counties. This information will continue to be proactive through safety messages, community groups, townhall meetings, fire safe councils and through local media outlets.
- The information and education bureau strive to reduce ignitions in the Unit. Through a collaborative effort with local allied fire agencies, Fire Inspectors, road side public education signs, fire prevention education programs, and participation in various community venues has assisted in reducing the overall fire ignitions within the Unit.

B: VEGETATION MANAGEMENT

Program Framework

The current Vegetation Management Program (VMP) is the continuation of the Range Improvement Program that existed in California from the 1950's to the 1970's. The Range Improvement Program was carried out by cooperative groups of ranchers who would band together to conduct prescribed burns primarily for range improvement objectives. These cooperatives had the equipment and expertise to conduct burn projects with limited to no assistance from fire agencies. These groups continued until the mid to late 1970's. At this time, liability issues, available cooperators and air quality restrictions all came together to essentially stop all non-governmental range improvement burning. This led to the passage of Senate Bill 1704, which was signed by Governor Brown Jr. on July 16, 1980. This bill authorized CAL FIRE to assume the liability and project implementation for prescribed burns on private property and thus created the Vegetation Management Program that is utilized by CAL FIRE today. The program became operational with the adoption of the Final Environmental Impact Report for the Chaparral Management Program on May 18, 1981.

The Vegetation Management Program provides CAL FIRE the authority to cooperatively treat vegetation and fuels on private lands. While a vegetation management project obviously improves private property values through reducing accumulated vegetation and increasing land management options, it also has benefits to the general public. The benefits to the general public include wildlife habitat improvement, increased water yield, air quality benefits of controlled releases of smoke during a prescribed project versus the uncontrolled release of smoke during a wildfire and most importantly the potential savings of significant taxpayers funds through increased success of fire suppression in areas treated with vegetation management projects versus areas not treated.

For additional information, see the "California Department of Forestry Chaparral Management Program Final Environmental Impact Report," May 18, 1981.

A specific example of the public benefit of VMP within the Fresno-Kings Unit is the Beal Fuelbreak. The Beal Fuelbreak is located in the Pine Ridge area of Fresno County along Highway 168. The Beal Fuelbreak is a segment of the historic 650-mile long Ponderosa Way Fuelbreak that was constructed by the Civilian Conservation Corps in the 1930's. This project has been maintained periodically over the years to include brushing and road grading. The most recent significant maintenance activity treated in excess of 100 acres funded by a federal grant beginning in the fall of 2010 and continuing into the 2011/2012 winter. The arson caused Highway Fire, which burned from August 13-18, 2000, was ignited down-slope of the Beal, and eventually burned into the fuelbreak. The fire was controlled at the fuelbreak.

Under the Vegetation Management Program, CAL FIRE utilizes a standardized program to address vegetation and fuels projects. Prior to project implementation a standardized formula is utilized to determine the private benefit versus the public benefit of a given

project. Based on the formula, CAL FIRE may pay up to a maximum of ninety percent of a project's costs if it has a high public benefit. The participating landowner(s) and/or other cooperator(s) pay the remainder of the project's cost. The following categories are evaluated in determining private versus public benefits: Fire Hazard Reduction; Water Yields; Watershed Stabilization; Wildlife Habitat Improvement; Fisheries Habitat Improvement; Air Quality Improvement; and Range Forage Improvement.

For additional information on specific VMP implementation, see the "Vegetation Management Program Handbook and Field Guide," California Department of Forestry and Fire Protection, June 2001.

The Environmental Impact Report for the Chaparral Management Program, which was adopted in 1981, provides the statewide California Environmental Quality Act (CEQA) clearance for VMP projects. This environmental clearance means that project that comply with the techniques and mitigations found in the Environmental Impact Report will not have a significant impact on the environment. The environmental analysis for the Chaparral Management Program was specific to lands containing "shrub formations" of all types. The term "Chaparral Management" was used because it was felt that a majority of the public understands that term as meaning "brush lands." Due to the fact that the environmental analysis for the Chaparral Management Program was specific to "lands containing shrub formations," the Vegetation Management Program cannot be utilized on tree-dominated landscapes. In the mid 1990's, CAL FIRE recognizing the need to expand the Vegetation Management Program to other than lands containing "shrub formations" under took development of a Program

Environmental Impact Report (PEIR) to expand the use of Vegetation Management Program. This new PEIR was approved in June 2000. In January of 2002, the newly adopted PEIR was enjoined by the Superior Court of San Francisco County based on a lawsuit by Californians for Alternatives to Toxics and the Environmental Protection Information Center (EPIC). At this time, for vegetation and fuels projects on lands other than those containing "shrub formations" CEQA must be met on an individual project basis.

For additional information on the PEIR see "Environmental Impact Report Handbook for Vegetation Management Program, California Department of Forestry and Fire Protection", Prepared by Jones and Stokes, Sacramento, CA, July 2000.

Fiscal Framework

The state funding support of the Vegetation Management Program recognizes the fact that many of the needed CAL FIRE resources to carry out a vegetation management project are in place and funded for fire suppression activities. Thus, there are minimal added expenses to CAL FIRE to carry out projects. The Fresno-Kings Unit is provided from \$5 - \$30 per acre, in augmented funding, to complete vegetation projects. This funding is intended to cover project expenses over and beyond normal operating expenses. This funding process was established when most VMP projects were large-scale (several hundred to several thousand acre) range improvement projects. Due to the minimal amount of fire control line work needed versus the amount of acres that could be treated in a single prescribed fire project, the augmented funding was

appropriate. In response to the WUI issue and the high assets at risk; CAL Fire's Vegetation Management Program is now focusing more on small scale, intensive treatment projects adjacent to homes. These types of projects require intensive use of personnel and/or mechanical equipment. The result is small areas treated at high expenses compared to large-scale range improvement projects. The \$5 -\$30 per acre augmented funding is insufficient to cover these types of projects. Within the Fresno-Kings Unit, as well as the Madera-Mariposa-Merced Unit, Tulare Unit and the Contract County Kern, the San Joaquin Valley Unified Air Pollution Control District is now charging up to \$5.84 per acre smoke mitigation fee for all non-hazard reduction (PRC 4291) burn projects. This \$5.84 fee offsets much of the augmented funding for vegetation management projects. Additional funding sources are needed to implement WUI vegetation management projects, or individual Units will need to choose to fund projects with operational dollars.

Program Setting

The Fresno-Kings Unit covers a very diverse geographic area. It extends from approximately the 4,000-foot elevation in the Coastal Range on the western side of the Unit then drops to near sea level through the San Joaquin Valley and then climbs again to approximately the 7,300-foot elevation in the Sierra Nevada Range, on the eastern side of the Unit. The vegetation complexes and corresponding fuel types change as one travels across this diverse topography.

Within the Unit, all Fire Behavior Fuel Models can be found. The grass models can be found on the valley floor and the eastern and western foothills. The brush models can be found at the mid to upper elevations on the western side of the Unit and between the oak woodlands and conifer forests on the eastern side of the Unit. The timber models can be found at the highest elevations in the Coastal Range and in the upper elevations on the eastern side of the Unit. The slash models can be found primarily in the northeastern portion of the Unit. This is where the majority of the commercial timber harvesting occurs within the CAL FIRE DPA. However, limited harvesting does occur within the Coastal Range and the southeastern portions of the Unit.

As well as topography and fuels, land ownership patterns vary greatly across the Unit. Within the Coastal Range portion of the Unit, ownerships are primarily large single owners. These ownerships range from several hundred acres to many thousands of acres. The owners are generally long-term owners who are very knowledgeable of their lands and alternatives for land management. A large percentage of the CAL FIRE DPA in this area consists of public lands managed by BLM. As you descend out of the Coastal Range and onto the valley floor the ownership pattern changes to a mixture of smaller rural residential ownerships (less than an acre to several hundred acres) and agricultural production lands. Within the eastern portion of the Unit, as you leave the valley floor there is a mixture of smaller dispersed rural residential ownerships (two (2) to five (5) acre parcels), several hundred to several thousand acre rangeland ownerships and now new subdivisions with lot sizes under two (2) acres. At the mid elevations, on the eastern side, there is a mixture of dispersed rural residential

ownerships and mid sized parcels up to approximately several hundred acres. At the upper portions of the DPA, there is a mixture of small residential parcels (less than an acre); mid sized parcels up to approximately several hundred acres and the largest parcels are industrial timberlands up to several thousand acres. The following communities are all located within the DPA in the eastern portion of the Unit: Friant, Prather, Auberry, Tollhouse, Meadow Lakes, Shaver Lake, Piedra, Squaw Valley, Dunlap, Miramonte, and Pinehurst. These communities all have high population concentrations and very small parcel sizes.

Within the DPA in the eastern portion of the Unit are public lands managed by the California Department of Parks and Recreation, USDA Forest Service (Sierra and Sequoia National Forests) and the BLM.

Program History in the Unit

The combination of diverse topography, fuels, and ownerships results in a diverse Vegetation Management Program for the Fresno-Kings Unit. Within the Unit, most VMP projects have focused on the western portion of the Unit. These projects were a mixture of range improvement and fuels reduction. The eastern portion of the Unit historically has had limited VMP projects. Many that did occur were cooperative with the National Forests. Cressmans Road and Beale Fire Control road fuelbreaks are examples of two recently completed fuels reduction projects in the eastern portion of the Fresno Kings Unit. Both of these projects have had the benefit of being done in collaboration with the Sierra National Forest and the Highway 168 Fire Safe Council. For a complete list of fuels reduction projects either planned, in progress or completed see appendix A

Future Program Direction

With the continuing development of the Unit's Pre-Fire Management Plan, the Unit's Vegetation Management Program and fire suppression repair priorities will be evolving also. Vegetation Management Projects will be responsive to the integrated planning approach of Prefire, Prevention, and Vegetation Management. Projects will be developed and implemented to coordinate with Pre-fire objectives. Fire suppression repair priorities will be based not only on best management practices (BMPs) for resource protections, but on tactical suppression needs in coordination with the Unit's strategic fuels reduction plan. It is anticipated new projects will focus on wildland urban interface (WUI) areas. This will result in an increase in projects within the eastern portion of the Unit. However, as CAL FIRE vegetation management projects occur on private property unexpected interest in the program by landowners may alter immediate priorities.