



Office of the State Fire Marshal



# 2007 Annual Report





## Office of the State Fire Marshal

**Arnold Schwarzenegger**  
Governor

**Michael Chrisman**  
Secretary for Resources  
The Resources Agency

**Ruben D. Grijalva**  
Director  
California Department of Forestry and Fire Protection – CAL FIRE

**Kate Dargan**  
State Fire Marshal  
California Department of Forestry and Fire Protection – CAL FIRE

Office of the California State Fire Marshal  
P.O. Box 944246  
Sacramento, CA 94244-2460  
(916) 445-8200

<http://OSFM.fire.ca.gov>



## Office of the State Fire Marshal

The Office of the State Fire Marshal (OSFM) is small by comparison to most of California's departments, but our impact is wide-spread and our responsibilities are varied and diverse. There are 136 full time employees working for the OSFM throughout the state.

The OFSM was established in 1923. The current State Fire Marshal is Kate Dargan. She is the 14<sup>th</sup> person and the first woman to serve in the position.

The OSFM is part of the California Department of Forestry and Fire Protection, also known as CAL FIRE. The two departments merged in 1996 due to their similar and complementary missions. The State Headquarters is located just a few blocks from the Capitol in downtown Sacramento.

In the years since the merger, the two organizations have joined forces to provide Californians with a wide variety of public safety services including fire protection, fire prevention, law enforcement, code enforcement, arson and bomb response, hazardous liquid pipeline safety and product safety.

OSFM employees possess a wide range of professional skills and qualifications. They may be firefighters, law enforcement officers, pyrotechnic experts, arson investigators, bomb experts or engineers. They may inspect a public building for adequate fire safety or supervise explosive devices on a Hollywood movie set. They may approve a public display of fireworks or teach firefighters the latest techniques to keep them effective and safe. No matter what their individual role within the department may be, the employees of the Office of the State Fire Marshal are dedicated to the safety and well-being of the people of California.

# State Fire Marshal Kate Dargan



Disastrous conflagration fires and loss shook the state again in 2007. Repeating the sad events of 2003, California broke the record in the number and intensity of fires igniting and burning simultaneously in Southern California last October. Prior to that in June, we all witnessed the first major conflagration fire in the Lake Tahoe Basin in decades. If you have heard me speak this past year, you know that I believe the two largest fire safety issues in this state are Wildland Urban Interface Fires and Residential Sprinklers. I believe both have solutions in the code and planning processes and hope to advance the education of building and fire officials, planners, and builders alike in these areas.

2007 has a number of successes and accomplishments that we share with you in this report. The purpose of this 3rd Annual Report is two-fold: It serves to show those that fund, depend on, or support us what we are doing with the resources we have. It also demonstrates to our own staff the power of setting goals and working quietly and diligently toward them, month after month, year after year. I came across a new (to me) saying recently and I share it with you: "Never underestimate the power of small agreements". This small piece of wisdom demonstrates for us, especially in these times of post-disaster critiques or budget challenges, that there is value in the small, incremental, steady effort - that a plan, executed methodically can take you a long way over time.

This report is one of the ways we provide feedback to the methodical execution of our CAL FIRE State Fire Marshal Plan that we update annually. This plan is available each spring on our website and clearly describes what we are trying to accomplish and our benchmarks for success. We pay real attention to our 'customers' - the public we protect, the fire service, the building community, state facilities and partner agencies, and the concept of training, planning and prevention as a whole. Our best investment of scarce resources is the investment that eliminates or reduces the disaster - and that's the mission every day for the Office of the State Fire Marshal.

See you out there.

A handwritten signature in black ink, appearing to read "Kate Dargan". The signature is fluid and cursive, written over a white background.

## Assistant State Fire Marshal Tonya L. Hoover



On September 4, 2007 it was my honor to be sworn in as the Assistant State Fire Marshal. Since that date the experience has been a whirlwind.

The strategic plan that was started in 2006 continued in 2007 with the State Fire Marshal staff in high gear and always striving for excellence. They completed the enormous job of adopting the fire and building codes in 2007 which will guide us to a more fire safe future in California.

I was very proud to see State Fire Training complete several important projects this year. The strategic training plan Blueprint 2020 has been completed and approved by the State Board of Fire Services and is accepted by all stakeholders. The Certification Training Standards were created for Fire Officer, Chief Officer, Training Officer and Arson Investigator. Regional training centers and local academies' accreditations were started in 2007. Staff re-worked fire investigation, driver operator, fire command, rapid intervention, level 2 command, fire control 3, trench rescue, and rescue systems classes and much more.

The Fire and Life Safety Division is working hard on programs to implement photovoltaic panels, Green Building Standards and fire and life safety regulations.

The consolidation of CAL FIRE and the Office of the State Fire Marshal was very successfully demonstrated in 2007. During the Southern California fires of October and November, our experts in exterior and interior fire participated in important post-fire evaluations of structure damage. These efforts will prove to be critical in evaluating the success of defensible space and new building techniques within the wildland-urban interface.

Being the Assistant State Fire Marshal is an honor. It is also a special privilege to work for CAL FIRE and the dedicated staff within the Office of the State Fire Marshal. The entire staff continues to support the mission of the Office of the State Fire Marshal and moving fire prevention and risk mitigation to the forefront.

A handwritten signature in blue ink that reads "Tonya L. Hoover". The signature is written in a cursive, flowing style.

# Planning & Risk Analysis

## Research Manager Dean Cromwell

One of the most significant topics in 2007 was the Fire Hazard Severity Zone Mapping Project. Our fire behavior specialists mapped virtually every parcel in California where either the State or local government has responsibility for providing fire protection. These maps designate moderate, high and very high fire hazard conditions. These designations are important because they relate to other firesafe requirements, including implementation of California's new firesafe building codes.

These maps were meticulously produced and then displayed to the public for response. For areas where the state has financial responsibility for fire protection, CAL FIRE staff held 58 public hearings around the state to allow residents in the mapped areas to present their comments and ask their questions. Their remarks were noted and forwarded to CAL FIRE Director Ruben Grijalva who then approved changes and forwarded the regulations and maps to the Office of Administrative Law for final approval.

For areas where local government has the responsibility for fire protection, CAL FIRE is preparing recommendations for Very High Fire Hazard Severity Zones. Draft maps have been sent to more than 200 cities and a number of counties for review. In the spring of 2008, local governments will make comments and CAL FIRE will develop final recommendations. Local agencies will then adopt these and other areas specifying very high fire hazard severity zones.

All along this process, public input has been invited. Our website has featured active links and regular updates to keep the general public and a variety of stakeholders connected to this process.



<http://osfm.fire.ca.gov>

# Fire and Resource Assessment Program

As part of the reorganization of CAL FIRE, the Fire and Resources Assessment Program (FRAP) was moved to the Office of the State Fire Marshal in 2007. FRAP has a number of duties, including preparing a periodic assessment of California's forest and range resources, doing wildfire-related modeling and mapping, conducting Geographic Information System (GIS) work, and performing policy analysis at the landscape and watershed level. FRAP also works on special projects such as analysis for the CAL FIRE Vegetation Treatment Program Environmental Impact Report and various Departmental climate change initiatives. Highlights of the year include:

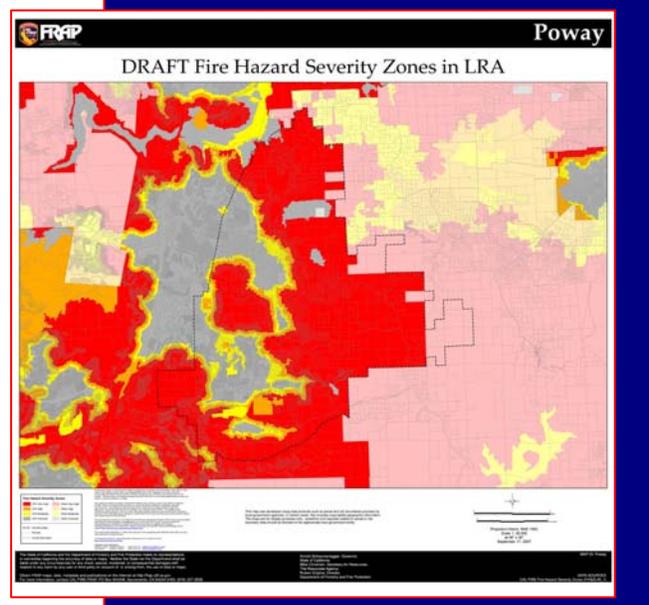
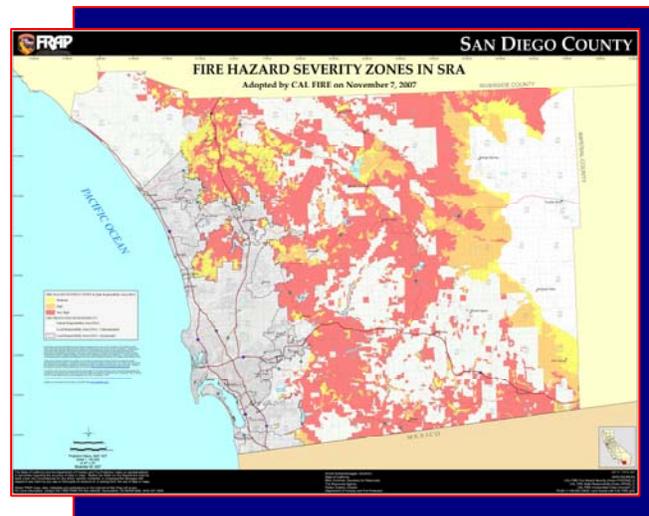
## Fire Hazard Severity Zone Revisions

Staff was busy for much of 2007 with mapping and modeling related to Fire Hazard Severity Zones (FHSZ) <http://www.fire.ca.gov/wildland.php>

CAL FIRE has re-mapped FHSZ for lands where the State has fiscal responsibility for wildland fire protection - State Responsibility Area (SRA). Revisions include **56 counties** that have SRA. CAL FIRE also is preparing Very High Fire Hazard Severity recommendations for Local Responsibility Areas (LRA). This covers more than **200 cities** and portions of unincorporated areas in several counties.

FRAP did the fire modeling behind the revised FHSZ designations with input from CAL FIRE field personnel. The modeling incorporates improved wildland fire behavior science, data sets, and understanding of structure ignition mechanisms during conflagrations.

The revisions to FHSZ boundaries are significant because the California Building Commission adopted the Wildland-Urban Interface codes in late 2005. New requirements are tied to Fire Hazard Severity Zone and related designations. The majority of the new

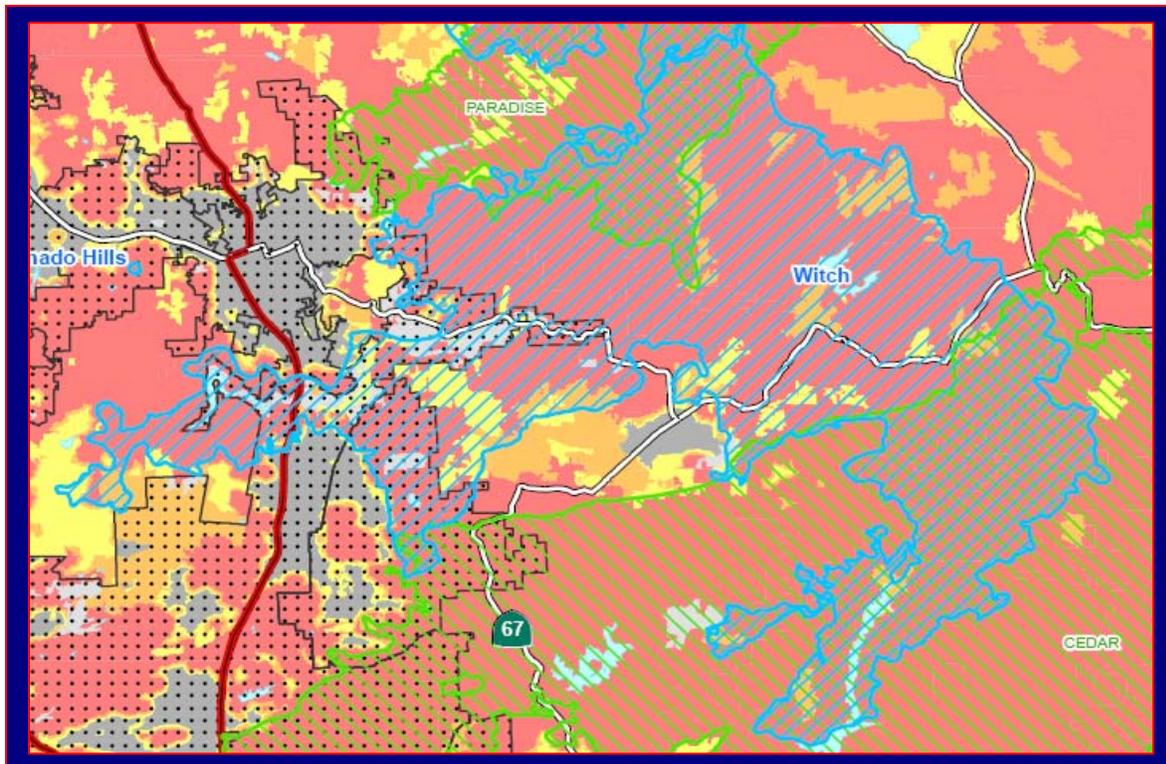


requirements take effect in 2008 (January in SRA and July in Very High FHSZ LRA). These new codes include provisions for ignition-resistant construction standards in the wildland urban interface. **The updated fire hazard severity zones will be used by building officials to determine appropriate construction materials for new buildings in the wildland urban interface.** The updated zones will also be used by property owners to comply with natural hazards disclosure requirements at time of sale. It is likely that the fire hazard severity zones will be used by local government as they update the safety element of general plans.

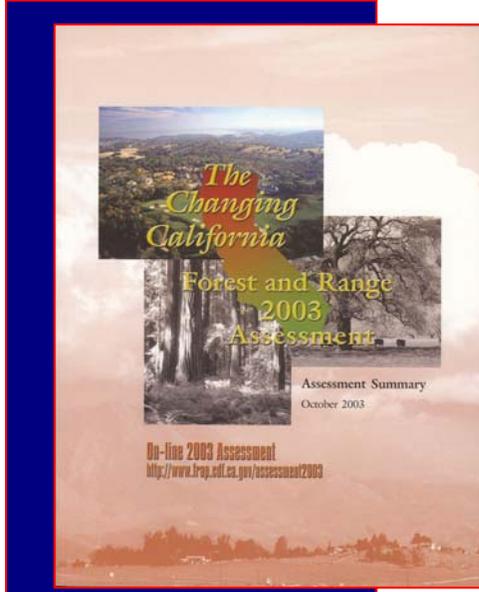
## FIRE HAZARD SEVERITY ZONE MAP OVERLAY San Diego County (Witch Fire Area)



The Cedar Fire of 2003 and the Witch Fire of 2007 burned in the manner and the direction that was predicted by the computer models.



## The Forest and Range Assessment and Forest Policy



Every five years, CAL FIRE (FRAP) is required to produce an assessment of California's forest and range resources. The last assessment was produced in 2003. (<http://frap.cdf.ca.gov/assessment2003/>). By law the Board of Forestry and Fire Protection is required to adopt a forest policy statement based on the assessment. Over the past several years, FRAP has been working with the Board to develop the required statement.

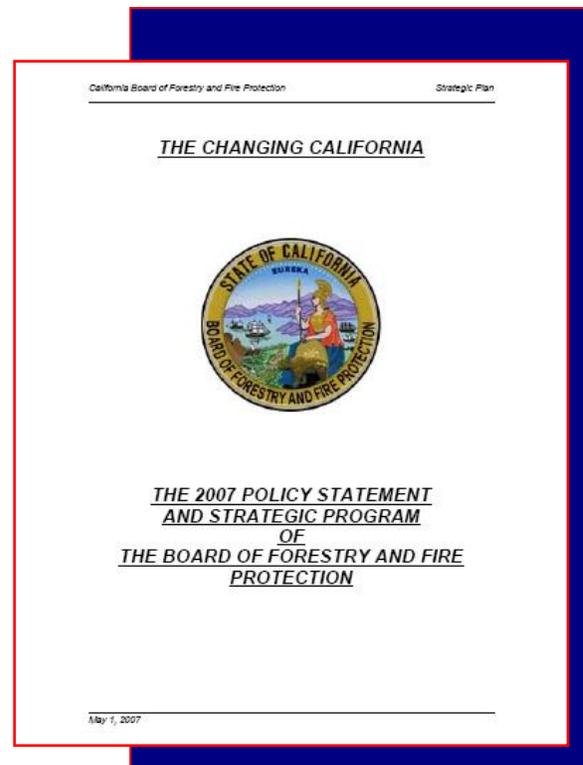
In May of 2007, the Board of Forestry and Fire Protection adopted a document entitled *Changing California, The 2007 Policy Statement and Strategic Program*. This document lays out policies and program direction by the Department for CAL FIRE and California's forestry sector.

The statement includes goals, objectives, potential indices to measure trends and success, and strategies to reach goals and objectives. FRAP is involved in tracking the indicators and in preparing policy analysis as requested by the Board of Forestry and Fire Protection.

[http://www.bof.fire.ca.gov/PDFS/PolicyProgram\\_050107.pdf](http://www.bof.fire.ca.gov/PDFS/PolicyProgram_050107.pdf)

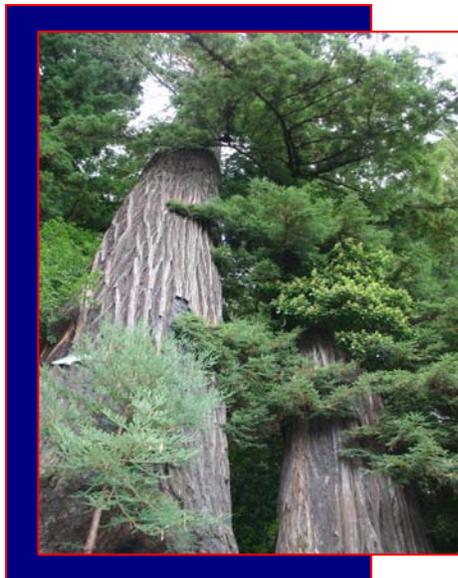
### Vegetation Treatment Program Environmental Impact Report

FRAP assisted the Board of Forestry and Fire Protection in the preparation and review of an important Environmental Impact Report in 2007. The Board (the administrative arm of CAL FIRE) is the lead agency for preparation of a program environmental impact report (EIR) for the Department's Vegetation Treatment Programs. Programs and actions dealt with by the EIR include the Vegetation Management Program, the Pre Fire Management Program, the California Forest Improvement Program, the Proposition 40 Program, and the Range Improvement Program. **The EIR examines the various techniques we can use to reduce vegetation in fire prone areas: mechanical, hand treatments, prescribed fire, grazing animals, and chemical treatments.** The draft EIR is currently under review prior to circulation.



## Sierra Watershed and Fire Project

In the 2007-08 Budget, the Legislature authorized the Sierra Watershed and Fire Project to improve the planning and prioritization of fuel reduction projects in central Sierra watersheds which include the American, Yuba, Bear, and Feather River watersheds. The project has initial funding for three years and is being implemented through a partnership between CAL FIRE (FRAP), UC Berkeley, and the Sierra Nevada Conservancy.



There are also a number of project stakeholders that include: local Resource Conservation Districts, the United States Forest Service Sierra Nevada Adaptive Management Project, Firesafe Councils, and other community based groups. The project will develop and enhance existing fire behavior models so that fuels treatment projects can be more strategically placed.

## Urban Greening Program

In the 2007-08 Budget, the Legislature authorized an Urban Greening Program. Funded by Proposition 84, the program funds and implements urban greening projects for the next decade. FRAP will do data gathering, analysis, and reporting for the program. It will also assist in analysis of urban-related climate change reduction strategies.



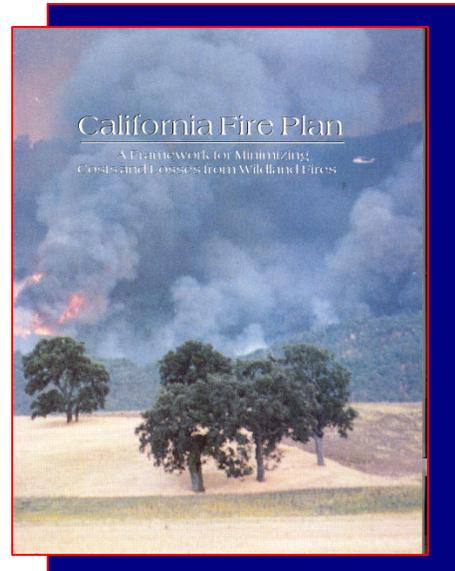
# The Fire Plan

## Staff Chief Wayne Mitchell

The goal of the Fire Plan is to **reduce the costs and losses of large damaging fires**. The plan outlines “Pre Fire Projects” to meet this goal. These projects might include controlled burns, mechanical removal of dry grass and brush, or grazing animals. A greenbelt might be created with a park or golf course, which would then be a fire break between the wildlands and a community. Whatever projects are recommended, they are based on the best science available to predict fire behavior.

### Pre Fire Projects:

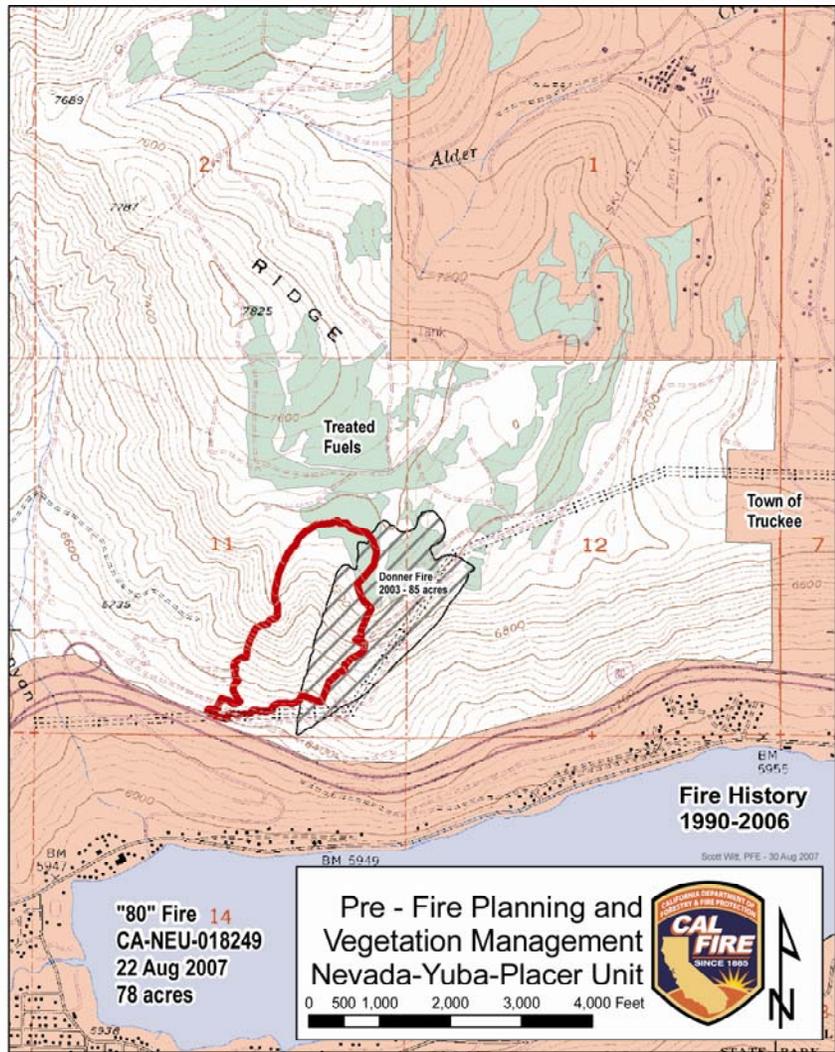
Pre Fire Projects are implemented in strategic areas to provide protection to assets at risk and increase the department’s initial attack success. The Fire Plan uses assessments developed by the department’s Fire and Resource Assessment Program, also known as FRAP. These assessments evaluate assets at risk, such as improved property, natural resources, historical landmarks etc. They compile information about historic weather patterns, the “fuels” on the land such as grass, brush, timber, and the level of fire service near-by. The Fire Plan also maintains data in a Geographic Information Systems format for ignition and fire history for vegetation fires. The CAL FIRE Pre Fire Engineer is responsible for completing the assessments, and verifying the accuracy of the data. CAL FIRE staff work closely with local Firesafe Councils, homeowners’ associations, and local fire departments in developing recommendations for the Fire Plan. The Fire Plan lists and prioritizes the Pre Fire Management Projects, Fire Prevention Education programs, and inspections relating to Public Resource Code 4291 (defensible space around structures).



## The Tahoe Donner Fuel Break and the 80 Fire -A Success Story-

The 80 Fire started near Highway 80 on August 22, 2007 and quickly advanced up the slope toward the Tahoe/Donner subdivision. **The fire burned into an existing fuel break as it advanced toward the subdivision. The fuel break stopped the spread of the fire.** The Tahoe/Donner Homeowners Association and the Truckee Fire District established the fuel break several years ago with CAL FIRE providing financial assistance through its California Forest Improvement Program (CFIP) and Proposition 40 Fuels Reduction Program.

The map below shows the 80 Fire and the Tahoe/Donner fuel break.



# Picture Perfect Fuel Break



**The 80 Fire burned into the Tahoe/Donner fuel break then slowed down**



**The 80 Fire came perilously close to houses in the Tahoe/Donner subdivision**



**The 80 Fire's final perimeter**

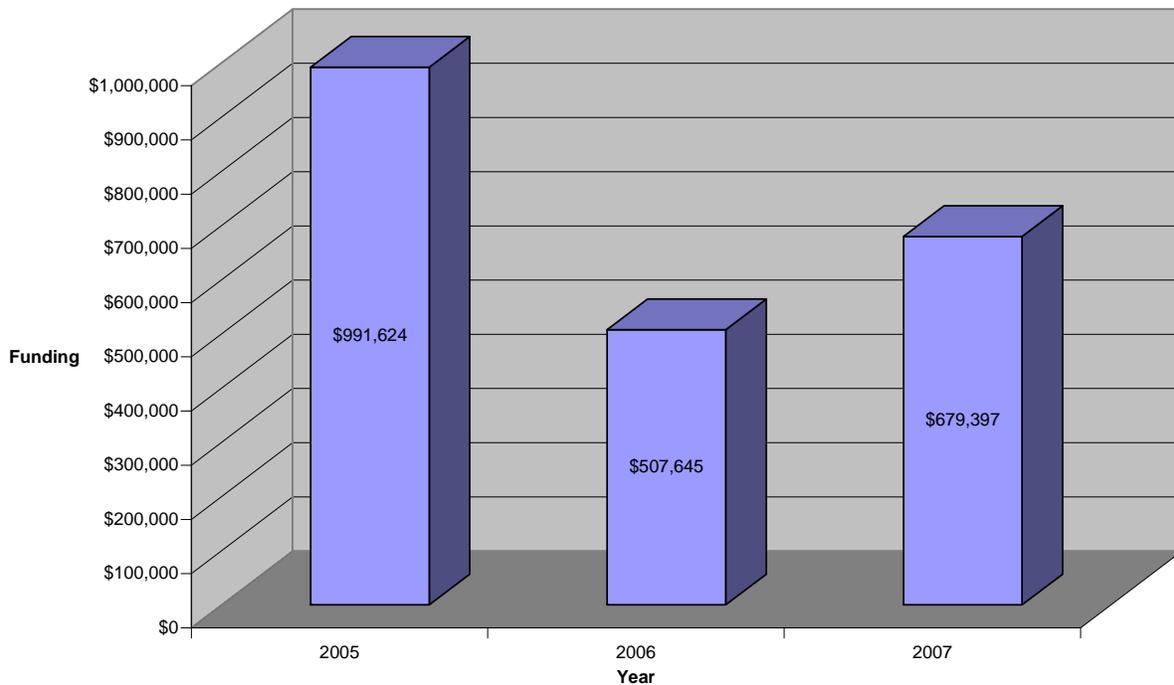
## Western States Fire Managers Wildland Urban Interface Grant

The Western States Fire Managers (WSFM) is a working group of the Council of Western States Foresters, which in turn is a regional subcommittee of the National Association of State Foresters. OSFM is responsible for distributing **grant funds to 17 western states** and Pacific Island Territories. The OSFM grant review committee meets in October to score and rank applications received from the state forestry agencies. Applications must fall into one of three project criteria: fuels, education, and planning. The goals of the grant are:

- Improve fire prevention in the interface
- Reduce hazardous fuels
- Restore fire adaptive ecosystems
- Promote community assistance

OSFM received 190 applications requesting \$24 million in financial assistance during the 2007 grant application process. California submitted 35 applications requesting \$3,082,986 in federal assistance. OSFM distributed \$17.242 million in federal assistance during the 2007 grant process with California receiving \$679,397, which funded seven projects.

Chart 1 Funding Received From The WSFM WUI Grant



# California All Incident Reporting System

California fire departments report statistical information on all fires (wildland and structure), medical aid incidents, and hazardous materials incidents to the OSFM through the California All Incident Reporting System (CAIRS). CAIRS complies with the National Fire Incident Reporting System (NFIRS) 5.0 format developed by the United States Fire Administration (USFA) in partnership with the National Fire Information Council (NFIC) and is designed as an all-incident reporting system to capture the full range of fire service incident types.



The data collected is used for compiling and analyzing summaries of statewide fire incident reports and includes numbers of fires, along with causes, types and locations of fires, as well as fire service and civilian casualties. Additionally, ad hoc reports, showing various relationships between fire causes, effects, contributing factors, etc., are compiled and available: <http://osfm.fire.ca.gov/NFIRSreports.html>.



## Benefits of CAIRS Reporting:

**“Fighting Fires with Facts”** Fire agencies use this valuable information to plan their training and risk-reduction programs, thereby making their firefighters safer and more effective. They can use the information to support budget requests by comparing their own districts with others with similar responsibilities. Local agencies use the data to target their resources and education programs, while State fire service managers develop and support fire safety codes and ordinances, guide legislation, and set training standards. At the federal level, data is used to identify consumer product failures, support federal legislation, develop national codes and standards, and guide allocation of federal funds.

Additionally, under the U.S. Department of Homeland Security – Assistance to Firefighters Grants (AFG) program, eligibility for grant funds can be tied directly to participation in this reporting system. <http://www.firegrantsupport.com/afg>.

In California, the established NFIRS reporting channel is through CAIRS. For assistance in reporting in CAIRS, please contact Penny Nichols at (916) 445-8435 or [penny.nichols@fire.ca.gov](mailto:penny.nichols@fire.ca.gov). In 2007 CAIRS staff reported 1,272,766 incidents that had been submitted to the OSFM by participating departments.

In December of 2007, CAIRS staff attended the National Fire Information Council Training course on NFIRS at the National Emergency Training Center in Emmetsburg, Maryland. This proved to be a very productive and valuable training course on NFIRS and the collection of fire department data and included an overview of what is new or planned for NFIRS, incident coding questions and answers, and additional tools for the continued improvement of the quality of data entered into NFIRS.

Subject-matter statistical reports, utilizing statewide CAIRS data, are now available at <http://osfm.fire.ca.gov/NFIRSreports.html>. These reports are periodically updated and posted.

“Frequently Asked Questions” regarding CAIRS are updated and posted at <http://osfm.fire.ca.gov/cfirs.html>. Additionally, the format of the report entitled, “California Fire Departments Submitting NFIRS 5.0 Data to OSFM” has been revised to include detailed information about the number of valid/invalid incidents submitted by each department.

### **Data and Correlated Trends in the California Fire Service:**

As of January 7<sup>th</sup>, 2008, CAIRS data reported to OSFM for 2007 included information on more than 1.2 million incidents submitted by approximately 44% of the 960 fire entities throughout the State. This data is used to identify the current fire trends in California, as reported through CAIRS:

<b>2007 Summary of Responses by Incident Type</b>	
<u>Incident Type</u>	<u>Incident Count</u>
Fire (Incident Types 100-173)	63,343
Overpressure Rupture, Explosion, Overheat, No Fire (200-251)	2,207
Rescue and Emergency Medical Service Incident (300-381)	904,427
Hazardous Condition, No Fire (400-482)	28,439
Service Call (500-571)	76,306
Good Intent Call (600-672)	85,253
False Alarm and False Call (700-751)	98,881
Severe Weather and Natural Disaster (800-815)	327
Special Incident Type (900-911)	5,985
<b>2007 Grand Total (as of 01/07/08)</b>	<b>1,265,168</b>

## ALL FIRES REPORTED IN CAIRS/NFIRS, 2007

(Data as of 1/24/08)

Incident Type	Number of Incidents	Property Losses	Contents Losses	Fires Service Injuries	Fire Service Deaths	Civilian Injuries	Civilian Deaths
Structure Fire	21,199	\$ 640,947,126	\$ 291,014,152	158	0	342	63
Fire in Mobile Property used as Fixed Structure	650	7,102,804	2,402,606	7	0	9	5
Vehicle Fire	14,089	392,988,356	112,690,569	12	0	42	23
Natural Vegetation Fire (excludes crops/plants)	15,855	251,205,350	6,305,339	50	1	12	1
Outside Rubbish Fire	13,489	2,676,932	1,028,107	5	0	6	0
Special Outside Fire (includes outside fires with definable value)	2,427	9,534,290	10,089,728	5	0	18	3
Cultivated Vegetation, crop Fire	499	2,723,830	1,759,633	0	0	0	0
Fire, Other	3,697	456,799,287	19,965,115	16	0	10	1
<b>2007 Total</b>	<b>71,905</b>	<b>\$ 1,763,977,975</b>	<b>\$ 445,255,249</b>	<b>253</b>	<b>1</b>	<b>439</b>	<b>96</b>

The data contained in these reports comes from the OSFM's CAIRS data warehouse. Property and contents loss figures, if included herein, are estimates only. These emergency incident statistics, including injury and death counts, are based only upon information submitted to the OSFM by participating California fire departments. Please note that apparent variations in incident counts and associated losses shown in these reports may be solely due to fluctuations in the amount of data submitted to the OSFM. And while the incoming data is validated according to logical data rules, individual data elements are not always verified for accuracy.



# Engineering, Fire Prevention and Law Enforcement

## Deputy Director Dave Hillman



This large and complex component of the OSFM, has several distinct units and mandates, all directed at preventing fires and limiting the damage of those fires that do occur.

Our Wildland Fire Prevention Engineering Section determines why some structures survive a wildfire, and others don't. In 2007 they applied those lessons learned to new building codes (effective January 2008) which require increased fire resistance in building materials and building methods.

One way to stop a wildfire is to deny it fuel. Our investigators often report success stories when a wildfire settled down as it approached a house surrounded by defensible space. In 2007, we inspected a record number of properties for fire safe conditions.



However, clearance cannot stop an ember that flies a mile through the air and lands on a dry wooden roof or blows into an attic through an open eave. The new building codes will prevent many ember-caused fires.

Our Law Enforcement Section specializes in bringing arsonists to justice. They also confiscate and destroy tons of illegal fireworks every year.



The Fire Engineering Division oversees the listing and certification of fire alarm equipment, fire extinguishers, building materials, flame retardant chemicals, vapor recovery components and fabrics, and firesafe cigarettes as well as licensing of fire extinguisher technicians, and flame retardant applicators.

I am proud of them all.

*Dave Hillman*

# Law Enforcement

## Chief of Law Enforcement Tom Hoffman

### Arson



**One serial arsonist can be accountable for dozens, sometimes hundreds of fires.** This year five serial arsonists were captured by CAL FIRE investigators.

Within the Law Enforcement Unit, there are 228 P.O.S.T. (Peace Officers Standards and Training) Certified Peace Officers (weapons qualified), 47 Deputy State Fire Marshal peace officers (non-weapon) and 211 Public Officers with limited enforcement authority.

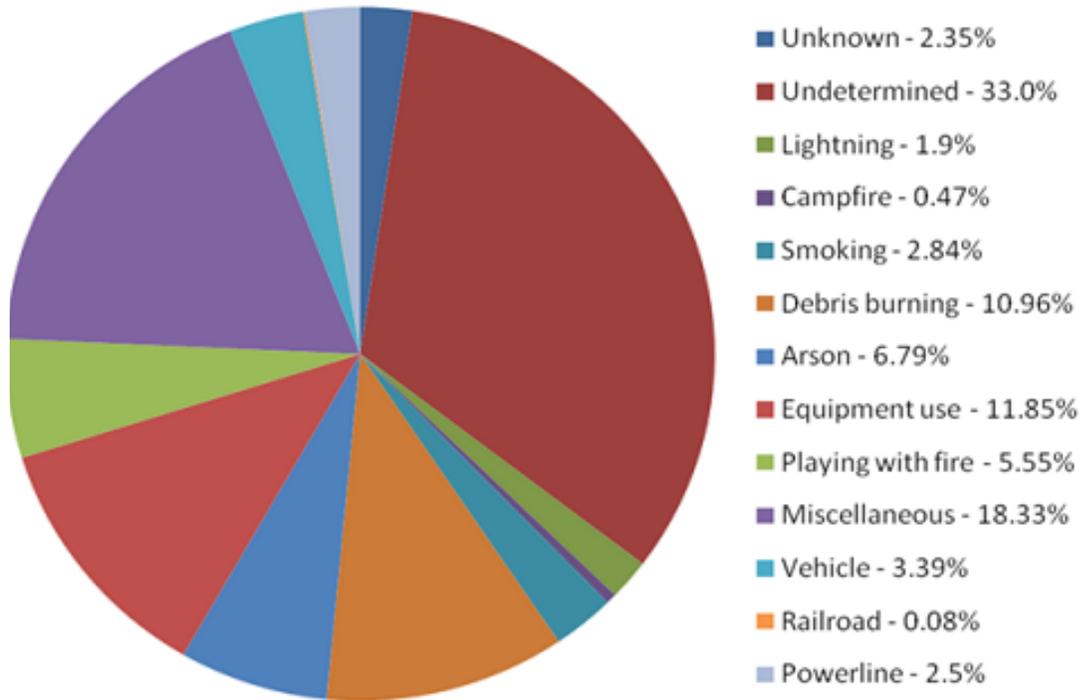
In order to identify an arson suspect, investigators collect evidence from the scene and interview witnesses in the area of the fire. With this information a suspect can be developed. When the investigators have enough evidence to arrest a suspect, they develop an arrest strategy and, as soon as possible, they get the arsonist off the street.

In 2007, approximately 7% of all fires were attributed to arson. But the damage arson fires do is disproportionate to their numbers. In other words, arsonists often set their fires when and where they will do the most harm. Millions of dollars in property and natural resources have been destroyed by arson fires.



Burned trees and brush from the Colby fire near Paradise, set by a serial arsonist

# Fire Causes for 2007



## Fireworks

The State Fire Marshal is responsible for protecting the people and property of California from harm due to fireworks. The OSFM seal is on the package of all **Safe and Sane** fireworks for private use. Safe and Sane fireworks do not explode or fly through the air. They are considered safe if used according to directions and with adult supervision. In 2007 the OSFM **approved 3,373 licenses** for retail sales of Safe and Sane Fireworks.



**Tested Safe and Sane**



OSFM officers also inspect and approve permits for **fireworks at public displays**. Each display operator must be properly licensed and must remain in compliance with specific safety standards. **The OSFM licensed 1,493 pyrotechnic operators in 2007.**

**Safe Public Displays**



## Confiscating Illegal Fireworks

Criminals frequently attempt to bring illegal fireworks into California, often selling them out of the back of a truck or car. OSFM law enforcement officers seize **tons of illegal fireworks** every year at checkpoints placed strategically around the state. The offender is arrested and their product is confiscated and eventually destroyed. Managing and incinerating these explosives is a dangerous and expensive job. It requires highly trained personnel at properly secured locations.



## Destroying Illegal Fireworks

The Office of the State Fire Marshal, with the assistance of public and private cooperators, facilitated passage of the first significant fireworks legislation in many years. **Senate Bill 839 recognized the serious threat of injuries and fires from illegally imported fireworks into the State of California.** The bill will make it easier to prosecute violators and increase criminal monetary fines. SB 839 also provides for an administrative civil penalty process for violators with small quantities of illegal fireworks, and provides for a criminal and civil fine revenue sharing with local government to compensate them for enforcing illegal fireworks laws. SB 839 also authorizes the State Fire Marshal to acquire four mobile fireworks disposal units (shown below - currently in the development phase).

## Mobile Fireworks Destruction Units

**Fireworks are loaded onto a conveyer belt, fed through the chopper and then into the burn chamber**



## Arson Bomb Investigative Unit

The Arson Bomb Investigative (ABI) Unit provides bomb squad services to local governments who don't have their own bomb squads. They also assist local responders by investigating arson fires or explosions. Our officers are directly responsible for investigating all fires and explosions that occur in any state facility.



Bomb technicians are trained at the FBI Hazardous Devices School at Redstone Arsenal in Huntsville, Alabama. These technicians are experts with basic explosives, disposal techniques, and advanced render-safe procedures for post blast explosions. They can quickly respond to suicide attacks, large vehicle bombs, weapons of mass destruction, and mortar attacks. They are also trained to use state-of-the-art robots.



A Homeland Security Grant provided three **Vanguard Remotely Operated Vehicles** in 2007. These robots are equipped with three color cameras including infra-red for night incidents. Each camera transmits video to a single command console to view objects at the scene. The telescopic arm can reach an object up to 2.2 meters away and lift approximately 40 pounds, allowing the officers to determine whether a suspicious object is a real threat. The robots can go up stairs and under vehicles.



## Motion Picture and Entertainment

The Motion Picture and Entertainment (MPE) office works closely with the California Film Commission and the California Fire Service to ensure that fireworks and explosives are used safely within **California's motion picture and television industry**. In cooperation with the Screen Actors' Guild, MPE provides safety training to the stunt community working with pyrotechnics.



To ensure a safe set for everyone involved in the production, this unit must work closely with the Alliance of Motion Picture and Television Producers, the Motion Picture Association of America and the Alliance of Special Effects and Pyrotechnic Operators.



The OSFM representative serves as Chair of the Safety Advisory for Fire and FX in Entertainment (SAFFE) committee. This committee **works to ensure a safe environment for motion pictures, television and theatrical productions**.

In 2007 the MPE unit issued **42 special effects permits and 51 open flame permits** on state property for filming and **reviewed over 1000 filming permits** issued by the California Film Commission.



## Fire Engineering Division Chief Ben Ho

The Fire Engineering Division provides licensing, listing and certification services to our stakeholders. It administers licensing programs and performs engineering functions affecting consumer services and product evaluation, approval and listing. The staff, within Fire Engineering's eight distinct program functions, is trained in fire protection engineering and hazardous materials.

They have technical expertise in a variety of laboratory testing procedures. The programs within Fire Engineering are: Automatic Extinguishing Systems, Building Materials Listing, Flame Retardant, Laboratory Accreditation, Portable Fire Extinguishers, Vapor Recovery, Fire Safe Cigarette, and Certified Unified Program Agencies (CUPA).



### Portable Fire Extinguisher Program

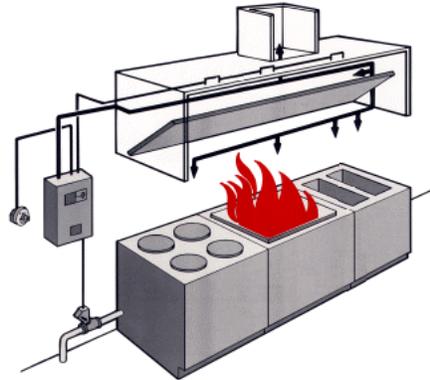


The OSFM is responsible for the examination and licensing of companies and individuals who inspect and/or service portable fire extinguishers. Fire extinguishers must meet specific manufacturing and performance standards and bear the label of a laboratory **approved by the OSFM before they may be sold in California.** The servicing of portable fire extinguishers is limited to those individuals or businesses that have been issued a license or certificate of registration. In cooperation with local fire and law enforcement officials, OSFM law enforcement officers investigate each company or individual suspected of improper practices.

During 2007 staff streamlined their testing procedures, updated laws and regulations manuals, took enforcement actions on illegal manufacturers, coordinated the recall of defective extinguishers, and **processed more than 600 certifications and renewals.**

## Automatic Fire Extinguishing Systems Program

The OSFM is responsible for the licensing of companies that test and service automatic fire extinguishing systems such as automatic fire sprinklers and commercial kitchen cooking hood/duct systems, etc. Staff recently implemented newly adopted NFPA-25 regulations and issued various OSFM Information Bulletins for stakeholders. In 2007, they **coordinated NFPA-25 workshops with local fire departments to train more than 400 fire prevention personnel.**



## Vapor Recovery Program



OSFM is responsible for evaluating and certifying vapor recovery systems and components manufactured to **control vapor by-products from gasoline fuel tanks.** The purpose of the program is to assist the California Air Resources Board (CARB) in maintaining minimum standards for the prevention of fire and/or explosion resulting from unsafe vapor recovery systems or components (e.g., processors, nozzles, valves, swivels, hoses, etc.). OSFM is the only agency responsible for determining whether any vapor recovery system or component poses a greater-than-normal fire hazard. In 2007 staff **certified 7 new products and revised 9 certifications.**

## Flame Retardant Chemicals and Fabrics Program

OSFM is responsible for the laboratory testing and certification of fire retardant chemicals, fabrics and decorative materials sold and used in California. Additionally, OSFM is responsible for licensing companies and individuals who apply fire retardant chemicals, such as those in the drapery and Christmas tree industries. Registrations are issued for flame retardant chemicals and fabrics that have been subjected to laboratory testing and satisfactorily demonstrated their flame retardant capabilities. In 2007 staff tested and **certified 52 new flame retardant products and issued 1,024 Flame Retardant Certificates.**

## Building Materials Listings Program

**California Health and Safety Code mandates that all fire alarm devices, wood roof shakes and shingles, and portable fuel containers be approved and listed by the State Fire Marshal.**

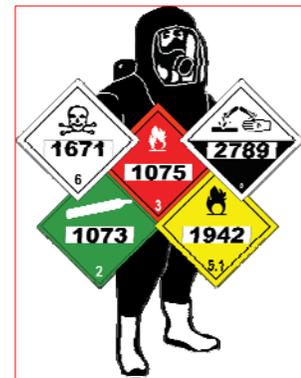
Section 220 of Title 19, California Code of Regulations, requires the listing of other construction materials, methods of construction, and automatic fire sprinkler systems. The Building Materials Listing Program (BML) assures that “listed” products used throughout California meet recognized fire-safety performance standards. It also provides valuable information to OSFM plan review and inspection staff, architects, engineers, local fire and building officials, and other State agencies. Staff fully implemented the OSFM “Fast Track” listing procedure as required by Health & Safety Code Section (AB 2177). The BML program created and published the Wildland Urban Interface (WUI) Products Handbook to provide home owners, industries, designers, local fire and building officials a list of building products which comply with new WUI code requirements. **In 2007, staff approved and listed 303 products, processed 2,792 renewals and approved 6 WUI products.**



Staff fully implemented the OSFM “Fast Track” listing procedure as required by Health & Safety Code Section (AB 2177). The BML program created and published the Wildland Urban Interface (WUI) Products Handbook to provide home owners, industries, designers, local fire and building officials a list of building products which comply with new WUI code requirements. **In 2007, staff approved and listed 303 products, processed 2,792 renewals and approved 6 WUI products.**

## Certified Unified Program Agency (CUPA)

The California Environmental Protection Agency (Cal/EPA) established CUPA (California Unified Program Agency) to manage and regulate hazardous waste and hazardous materials as required in the California Health and Safety Code. Under this statute, the OSFM is responsible for the oversight of CUPA elements pertaining to the California Fire Code. As the lead agency, Cal/EPA coordinates all CUPA activities such as conferences, local CUPA program evaluations, training, and local program assistance with the Governor’s Office of Emergency Services (OES), Department of Toxic Substance Control



(DTSC), State Water Resources Control Board (SWRCB), and OSFM. In 2007, staff completed 12 scheduled county environmental health department and local fire agency CUPA evaluations, completed 12 CUPA county evaluation reports, and participated in 28 State, regional board, local agency advisory, policy group and training committee meetings.

## Firesafe Cigarette Program

A firesafe cigarette will self-extinguish if left unattended. The California Cigarette Fire Safety and Firefighter Protection Act (AB 178, Koretz) was passed in 2006 and is effective on January 1, 2007. This statute establishes Sections 14950-14960, California Health and Safety Code, and is patterned after the New York Fire Safety Standards for Cigarettes. The law specifies that, in order to sell, offer, or possess for sale a cigarette product in California, all cigarette manufacturers must meet specified testing and performance standards, meet package marking requirements, and have a written certification that has been filed with the OSFM. **In 2007, staff approved 21 Fire Safe Cigarette (FSC) products.**



## Laboratory Accreditation

The Office of the State Fire Marshal (OSFM) has accredited more than 30 laboratories to perform tests on various products using OSFM adopted and/or nationally recognized standards. Whether they are testing portable fire extinguishers or fire-resistant wall-ceiling-floor assemblies, these laboratories must be accurate and dependable, since the results determine the fire-resistance approval of the product. Improperly tested products can have disastrous effects on the safety of individuals using them or within a building where they are installed should a fire occur.



**To be accredited, the laboratories must be evaluated by OSFM-approved staff.** Evaluations include the review of specific test equipment and laboratory personnel. This accreditation process ensures that all products submitted to the Office of the State Fire Marshal for evaluation have been tested by qualified people using accurately calibrated and constructed equipment. **In 2007 staff accredited three new laboratories to test Wildland Urban Interface building products.**

## Wildland Fire Prevention Engineering Staff Chief Ernylee Chamlee

The new Wildland Fire Prevention Engineering program completed its first year in the Office of the State Fire Marshal.

### New California Building Code for Wildland Urban Interface Construction

The highest priority in 2007 was preparing the new Chapter 7A of the **California Building Code**, which went into effect January 1, 2008. A team of fire and building officials provided training to local government building and fire officials, building industry personnel, architects, and CAL FIRE staff. Since June 2007, **40 classes have been completed with more than 1,500 participants.**



California is the first state in the nation to implement such fire safe building standards. The new building standards require **ignition-resistant construction** focused on preventing embers from entering buildings through vents, windows, roofs, and walls. Studies show that during wildland conflagrations caused by high winds, **ember intrusion** is often the cause of the structure fire. These new building standards coupled with the recently increased requirement of **100 feet of defensible space**, create the two-pronged approach which will reduce structure loss during California's inevitable wildland fires.



Some jurisdictions have already implemented these standards and evidence shows that they work. Rancho Santa Fe in San Diego County has several subdivisions in the Wildland Urban Interface (WUI) that were threatened by the Witch Fire in October 2007. Although there was some damage in the communities, it was minor, and no structures were destroyed.

## Assessing the Damage of the 2007 Fires

During the October Fire Siege in Southern California, OSFM investigators inspected the burn sites where block after block of houses were burned to the ground. They documented burn patterns which told the story about why some houses burned and some survived. **The Damage Assessment Response Team (DART) partnered in San Diego, with the National Institute of Standards and Technology (NIST) to do an in-depth study in Rancho Bernardo.** NIST, formerly the National Bureau of Standards (NBS), is a non-regulatory agency of the [United States Department of Commerce](#).



**Rancho Bernardo** is in the wildland urban interface area near Interstate 15. The two agencies pooled their resources and worked side-by-side looking at building standards and defensible space effects on structure survivability. They interviewed homeowners and fire responders.



The investigators tracked down reports that some houses started burning 24 hours after the wildfire burned through the neighborhood. They compared 9-1-1 calls and dispatch records. This helped **determine if embers had entered** the structure, causing a smoldering fire which flared up much later.

**Aerial view of a house that flared up long after other homes around it had burned**

**In San Diego County, the Witch Fire destroyed 1,624 structures.** Investigators determined that many homes burned because embers had intruded under the roof tiles into attics, through window or wall vents, and into the structure. Again confirming that protecting structures is a two-pronged process; clearance around the structure and fire-resistant building practices.



### **Did Removing Bug-Killed Trees Make a Difference?**



The answer to the question is yes. In San Bernardino County, the Green Valley Fire and the Slide Fire burned through areas where thousands of trees had been killed by bark beetles. **Where the dead trees had been removed, the fires burned low to the ground and with much less intensity** than a crown fire which turns standing trees into giant torches. The inspections showed that proper clearance and fuel modification made a big difference in fire damage.

In San Bernardino County, ember intrusion was apparent in many of the homes that burned, thereby **confirming that fire-resistant building materials and building practices are just as important as having clearance around the structures.** Many areas had good defensible space. But the burn patterns around the houses showed that the vegetation caught fire from the house fire. The vegetation did not conduct the flames to the house. Additionally, it appeared that the embers which caused these structure fires actually came from another burning house, not from burning trees or brush.

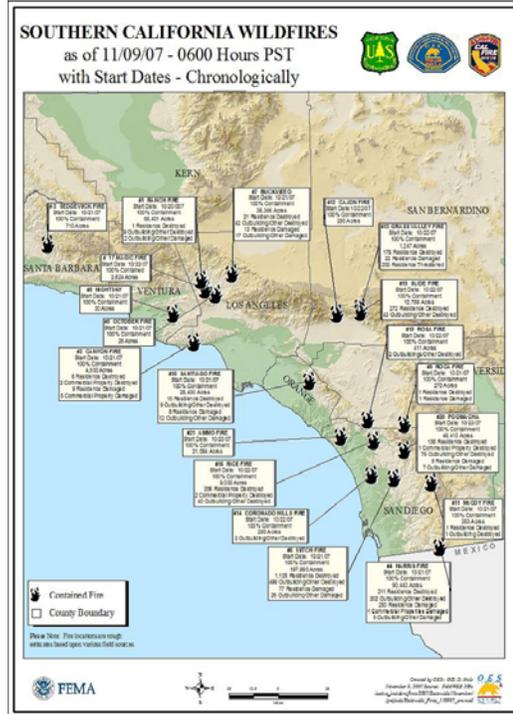


## Recording History

OSFM staff worked with several other responding agencies to compile the complete report on the devastating fire siege of 2007. The report will be distributed in the spring of 2008.

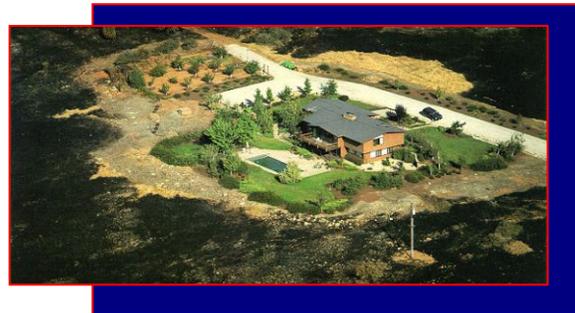
### Southern California Fire Siege of 2007

518,000 Acres  
 800 Square Miles  
 900,000 Evacuated  
 3,069 Homes Destroyed  
 10 Fatalities (directly attributed to the fires)



## Defensible Space Inspections

In support of our **two-pronged approach** to fire safety, CAL FIRE beefed up fire resistant building standards and made a huge commitment in 2007 to increase defensible space inspections. **We inspected more than 87,000 properties** up from 55,000 in 2006. By law, property owners must remove flammable material from 100 ft. around each structure.



## Powerline Guide



The OSFM works in cooperation with a variety of community groups, organizations and public agencies to create a safe environment for the public and for firefighters. Our utility company partners are printing a new Powerline Field Guide. It should be available to all CAL FIRE staff soon. The publication will also be available online. Firefighters will use it as a guide for conducting inspections on transmission and service lines.

# Code Development and Analysis

## State Fire and Building Codes Title – 24

The Office of the State Fire Marshal (OSFM) is responsible for approving regulations that promote fire and life safety for inclusion into the State Building Codes including the California Building Code, California Fire Code, California Electrical Code, California Mechanical Code, California Plumbing Code, and California Historical Building Code. These documents are also referred to as California Code of Regulations, Title 24. The process incorporates much public participation and is guided by the State Building Standards Law.



**The State Fire Marshal develops building standards affecting several industries.** OSFM works with local government, fire officials, building officials, and the private sector to develop fire and life safety building standards addressing: roof coverings, fire alarm systems, motion picture production facilities, and hazardous materials. OSFM also regulates the adoption of building standards in assembly, institutional, educational, and residential buildings as well as high-rises and any building containing State employees.

## 2007 California Building and California Fire Codes effective January 1, 2008

In 2006 and 2007 the California Code Adoption was a top priority. OSFM worked with several state agencies to prepare the new International Building Code (IBC) and the International Fire Code (IFC) for adoption by the State Building Standards Commission. This was an enormous task requiring months of work and extensive coordination between the OSFM, local fire and building officials from around the state, Housing and Community Development (HCD), Division of the State Architect (DSA), Office of Statewide Health Planning and Development (OSHPD), and private industry.



It was a team effort with local and state government, fire service building officials, and private industry stakeholders working together. **The codes reflect new technologies, new terms, and a new direction for construction --- all while maintaining the highest levels of Fire and Life Safety.**

The Building Standards Commission approved the OSFM's Building and Fire Code adoption packages at their hearing on January 29, 2007. **The 2007 California Building Standards Codes were published July 1, 2007, having an effective date of January 1, 2008.**

## Public Safety – Title 19

In addition to the building standards adopted by the State Fire Marshal in Title 24, OSFM is responsible for other regulations contained in California Code of Regulations, Title 19. These regulations (sometimes referred to as “non-building standards”) promote fire and panic safety, apply throughout the State and are enforced by the local Fire Chief. Regulations contained in Title 19 govern the maintenance of OSFM-regulated buildings and fire protection systems in all buildings in the State. Regulations adopted by OSFM for inclusion in Title 19 undergo an adoption process similar to that used for building standards in that **public participation is always the rule.**



Code Development and Analysis (CDA) supports the other sections of the State Fire Marshal's Office in many ways. In 2007 several pieces of legislation affecting OSFM programs required that regulations be published. **CDA published codes for pipeline operator fee increases, fire alarm testing reports, wood roof coverings listing, gasoline fuel containers listings, and more.**

In 2007 CDA convened an Access Task Force to address fire safety and access provisions of the California Codes for the disabled. **Regulations are now in the works to make California buildings safer for persons with disabilities.**

Staff is working with North and South Fire Prevention Officers Association to create a code book for local enforcement agencies that is “inspector friendly.”

Code Development staff also assisted in developing curriculum for the training of the California Building and Fire Codes. These workshops were held around the state throughout the summer and fall of 2007 and will continue well into 2008.

# Fire and Life Safety

## Division Chief South Ernie Paez

## Division Chief North Vickie Sakamoto

The Fire and Life Safety (FLS) Division is responsible for applying laws and regulations pertaining to preventing fires and saving lives and property as mandated by the California Health and Safety Code Sections 13108, 13143, 13145, and 13146. FLS is responsible for plan review and inspection in **more than 28,000 State-owned, State-leased and State-occupied facilities**. This includes 32 State prisons, 40 correctional conservation camps, 12 community correctional facilities, 5 return-to-custody facilities, 8 mental hospitals, 7 developmental centers, 29 California State University campuses, 11 University of California campuses, and 54 California District Agricultural Association (DAA) fairs.

The program is responsible for fire and life safety in areas where there is no local fire jurisdiction or where there is a Fire Warden (e.g. Mendocino County, South Santa Clara Fire Protection District, and Mariposa Utilities District). This additional responsibility includes local jails, hospitals, nursing homes, schools, places of public assembly, day care centers, and licensed residential care facilities.



FLS also provides **assistance to local fire authorities** in the interpretation and application of the regulations they are required to enforce per California Health and Safety Code Section 13146. In order to effectively carry out these duties statewide, FLS staff is assigned geographically throughout the State based on workload and demographics.

FLS North Region office is located in the State Fire Marshal's headquarters at 1131 S Street in Sacramento. The North Region includes 42 counties: San Benito, Mariposa, Merced, Tuolumne, Santa Clara, Monterey, Santa Cruz, Stanislaus, Amador, Alameda, San Mateo, Contra Costa, Solano, San Joaquin, San Francisco, Sacramento, El Dorado, Alpine, Placer, Yolo, Marin, Sonoma, Napa, Lake, Mendocino, Nevada, Sierra, Yuba, Sutter, Colusa, Butte, Glenn, Plumas, Tehama, Lassen, Modoc, Shasta, Trinity, Humboldt, Del Norte, Calaveras and Siskiyou.





The FLS South Region office is at 602 E. Huntington Drive #A, in Monrovia. South Region provides fire and life safety for counties in the southern and central parts of the State including Madera, Fresno, Kings, San Luis Obispo, Kern, Tulare, Santa Barbara, Ventura, Los Angeles, Orange, San Bernardino, Inyo, Mono, Riverside, Imperial, and San Diego.

**FLS staff assists local fire officials with training, code interpretation, code consultation, joint inspections, code development, and participation**

**in local fire prevention associations.** Staff also work with other State agencies such as the Division of State Architect, Office of Statewide Health Planning and Development, Department of General Services and Caltrans.

FLS coordinates and manages the **State Fire Marshal Code Interpretation program.** In 2007, the program received **168 code interpretation requests.** These resulted in the issuance of 34 formal written code interpretations and 134 were handled as code applications directly with the requesting parties.

FLS is responsible for delivering the **State Fire Marshal's Statutes and Regulations classes** to local fire and building officials throughout the State.

Staff maintained a **30-day turnaround** for review of construction plans for all state-owned and state-leased buildings and for California State University buildings. For example, staff completed the plan review and inspections of the 2,800-bed student housing project at Cal Poly San Luis Obispo.



In 2007, FLS staff completed **more than 1,300 building plan reviews.** FLS staff inspected **several billion dollars worth of construction projects** at universities, state hospitals, residential facilities, jails, courthouses, state prisons and state owned/state leased facilities.

## Southern California Wildfires

FLS staff responded to the **2007 Southern California fire siege** as part of the disaster assessment team to determine the extent of the damage, and equally important, to determine why some structures were destroyed and why some survived. This information will be used to develop fire prevention programs and firesafe building codes for the future.



FLS staff also served in the Joint Information Center, providing critical public safety information in cooperation with local emergency responders.

## Solar Power and Safety



In July 2007 the OSFM established a task force to develop a **Photovoltaic Solar Installation Guideline**, working with the California Solar Energy Industries Association (CAL SEIA) and the fire service. The guideline will ensure fire service **access to perform rescue and fire suppression operations** and, to the extent possible, allow solar photovoltaic system installations on residential and commercial buildings. The final Photovoltaic Solar Installation Guideline will be finished in March 2008.



# Pipeline Safety Division

## Division Chief Bob Gorham

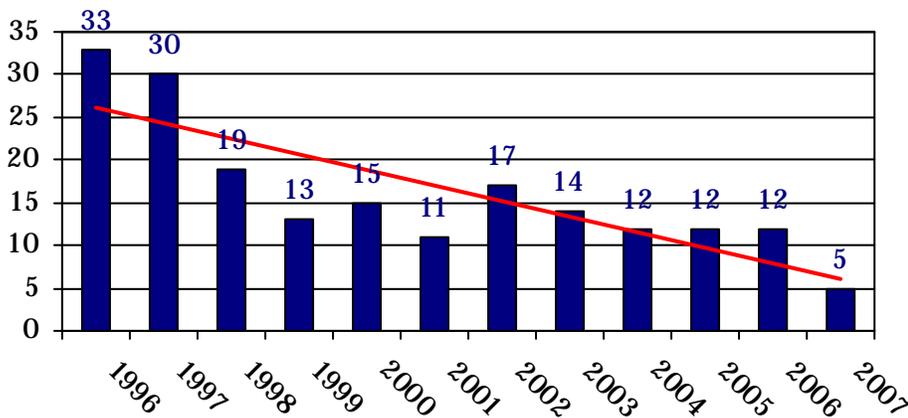
The State Fire Marshal is directly responsible for regulating the safety of approximately **5,500 miles of hazardous liquid transportation pipelines within California.** The Pipeline Safety Division (PSD) includes engineers, analytical staff, and clerical support located in both northern and southern California. The Division is mandated by State law to exercise exclusive safety regulatory and enforcement authority over intrastate hazardous liquid pipelines and also acts as an agent of the federal Office of Pipeline Safety in the inspection of over **2,000 miles of interstate pipelines.**



### Pipeline Leaks at *All Time Low*

The PSD investigated 5 public pipeline incidents in 2007. This is the lowest number of leaks on pipelines located in public rights-of-way in California since recording began in 1985. Prior to 1985 the state averaged 55 pipeline leaks per year. The charts below provide specific data on each of these incidents and show a decade-long trend of decrease in the number of pipeline related incidents. This tremendous achievement is indicative of the progress industry and government has made **to improve public safety and to limit environmental damage.** Significantly, there were no leaks directly attributable to third party damage.

**Pipeline Leaks in Public Rights-of-Way**



## Pipeline Incident Summary January 2007 to December 2007

Incident Date	Location	Operator	Cause/Description	Est. Property Damage
01-09-07	Fresno County	Chevron	External Corrosion – 5 bbls crude oil	\$5,300
04-01-07	San Joaquin County	Shell	External Corrosion – 438 bbls crude oil	\$1.6 million
04-24-07	Fresno County	Shell	Gasket failure on Pump – 7 bbls crude oil	\$25,000
04-26-07	Los Angeles County	Paramount	External Corrosion – 5 bbls crude oil	\$1,075,300
07-07-07	Los Angeles County	Vopak	Tank overflow – operator error– 1350 bbls crude oil	\$84,000
07-19-07	Los Angeles County	BP	External Corrosion in casing – 39 bbls crude oil	\$153,000
07-23-07	Kern County	Plains All American	External Corrosion – 400 bbls crude oil	\$95,000
08-11-07	Kern County	Exxon Mobil	Pump seal failure - 8 barrels crude oil	\$26,000
09-08-07	Contra Costa County	Plains All American	Storage tank overflow – Operator Error– 95 bbls crude oil	\$104,000
10-12-07	Los Angeles County	BP	Valve left open - Operator error – 22 bbls. gasoline	\$10,000

Note: Industrial Leaks are spills from DOT-OSFM regulated facilities where hazardous liquid is contained on the operator's property. Public rights-of-way leaks occur outside the operator's facility in the public domain.

### Pipeline Safety Program Rated A+ by Federal Office of Pipeline Safety



In accordance with federal law, no state may regulate hazardous liquid pipelines unless their program is certified by the **US Department of Transportation's (USDOT) Office of Pipeline Safety**. The California State Fire Marshal's program has been certified since 1981. This certification assures that the program complies with minimum federal standards for inspector qualifications, program procedures, documentation and recordkeeping, inspector training, and code enforcement. A detailed program audit is conducted by USDOT each year and the State Fire Marshal receives a rating based upon set program standards. In 2007, the California State Fire Marshal's program received a rating of 98%.

## Pipeline User Fees Increased

For the first time in 20 years, an increase in the pipeline operator user fees was needed to cover projected operating expenditures and to fill vacant engineering positions. With the concurrence of the Pipeline Safety Advisory Committee, the explanation and reasoning for the user fee increase was presented to the pipeline industry at the OSFM May 2007 spring workshop. The new fees rates passed through the regulatory process without comment and were **approved by the Office of Administrative Law** in October. This new fee schedule beginning July 1, 2008 will be as follows:



### Title 19, Division 1, Chapter 14

#### § 2040. Fees

In order to implement Chapter 5.5, of the Government Code, California Pipeline Safety Act of 1981, the following fees will be assessed on a fiscal year basis:

Intrastate Pipelines	
Pipeline Operator	\$6,000
Charge per mile of pipeline operated	\$ 550
Independent Hydrostatic Testing Firm	\$1,500
Interstate Pipelines	
Pipeline Operator	\$6,000
Charge Per Mile of Pipeline Operated	\$ 300

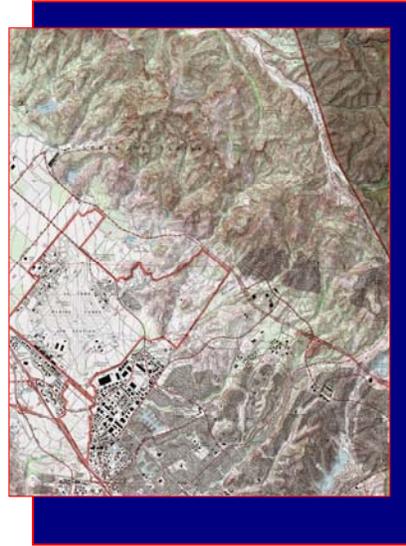
Note: Authority cited: Sections 51019 and 51019.05, Government Code. Reference: Sections 51010, 51013.5, 51014.5, 51019 and 51019.05, Government Code.

### Construction

The pipeline industry has embarked on an aggressive rehabilitation and replacement program to improve and create new infrastructure to meet the petroleum demands of California. **In 2007, OSFM engineers inspected 36 projects – consisting of 36 miles of new pipeline.**

## Pipeline Mapping

To fulfill its mission of assuring the protection of people and the environment, the State Fire Marshal must have access to accurate information concerning the **location of jurisdictional pipelines**. The State Fire Marshal administers the California Pipeline Mapping System. This system was developed as a joint effort of the California State Fire Marshal, federal Office of Pipeline Safety, and the pipeline industry. It is a fully-featured **geographic information system [GIS]** data base containing the locations and selected attributes of all interstate and intrastate hazardous liquid pipelines operating onshore and offshore in California. During 2007, OSFM Pipeline Mapping staff responded to more than 1,000 pipeline location requests from property developers, school districts, and the public.



## Educational Workshop

The OSFM hosted a workshop for the pipeline operators in May 2007 in Bakersfield to the **largest attendance in recent history**. This workshop is conducted annually to share information on new technology, OSFM policies and procedures, new and proposed regulations and to provide training on existing state and federal safety regulations.

## Notable Incidents



On February 6th, a **natural gas pipeline leak** and fire occurred at Elk Hills injuring 4 employees. OSFM determined that the two regulated Highly Volatile Liquid pipelines were not affected by the blast or fire. Cal-OSHA is investigating.



On February 13<sup>th</sup>, a **Union Pacific Railroad derailment** occurred near Glamis in Imperial County. A pipeline safety engineer responded to the site to ensure that the nearby 20" gasoline pipeline was not damaged.

## Notable Incidents (cont.)

On February 21<sup>st</sup>, 2007, a petroleum products pipeline providing gasoline and diesel to the Sacramento area was **shutdown** after underwater inspectors at the Old River crossing west of Stockton found an unsupported span. The pipeline has been supported and is **back in operation**. Pipeline staff inspected the permanent repair work.



On July 7<sup>th</sup> 2007, a pipeline safety engineer responded to an **overflow tank incident** at the Vopak Marine Bulk Liquid Terminal in the Port of Long Beach. Crude oil was released to a secondary containment area during the transfer from one tank to another. Tank 601 was overfilled and about **8,400 barrels were spilled**. No waterways were affected. The cause of the incident was operator error. An employee miscalculated the remaining space in the tank.



On July 9<sup>th</sup>, 2007, OSFM inspectors responded to a **pipeline trestle fire** above the L.A. River in the city of Long Beach. The cause of the fire is under investigation by the Long Beach Fire Department. The wooden bridge pier on the westerly side of the bridge was badly damaged as well as parts of the steel bridge structure. All of the pipeline supports were badly damaged by the fire, causing the pipelines to sag. The bridge superstructure was reinforced and permanent repairs are planned. While the pipelines did not leak, they were damaged by the fire and sections of pipeline were replaced prior to returning to service.

# STATE FIRE TRAINING DIVISION

## Division Chief Mike Richwine

It was a busy year for State Fire Training (SFT) as staff supported existing classes and amended and upgraded certification tracks with long overdue improvements. **The most noteworthy was the creation of Certification Training Standards (formerly Career Development Guides) for the Fire Officer, Chief Officer, Training Officer and Arson Investigator.** Some of the components in these programs were more than 20 years old. These training standards provide validation for the certification and they identify the tasks and responsibilities of that position. **These certification training standards now meet or exceed the respective NFPA standards.**



## Role and Mission

The role of the State Training Division is to administer the statewide certification and course delivery system. This is accomplished in cooperation with accredited academies and registered instructors. Our mission, as the statutory lead agency for fire service training, is to work in collaboration with fire service organizations and stakeholders to provide the highest level of quality fire service training and education.

## California Fire Service Training and Education System



The California Fire Service Training and Education System (CFSTES) coordinates development, delivery, and administration of training for the California fire service. Through the years, CFSTES has become synonymous with CERTIFICATION.

### Objective

The objective of CFSTES is to provide a single statewide focus for fire service training in California. General functions of the system include:

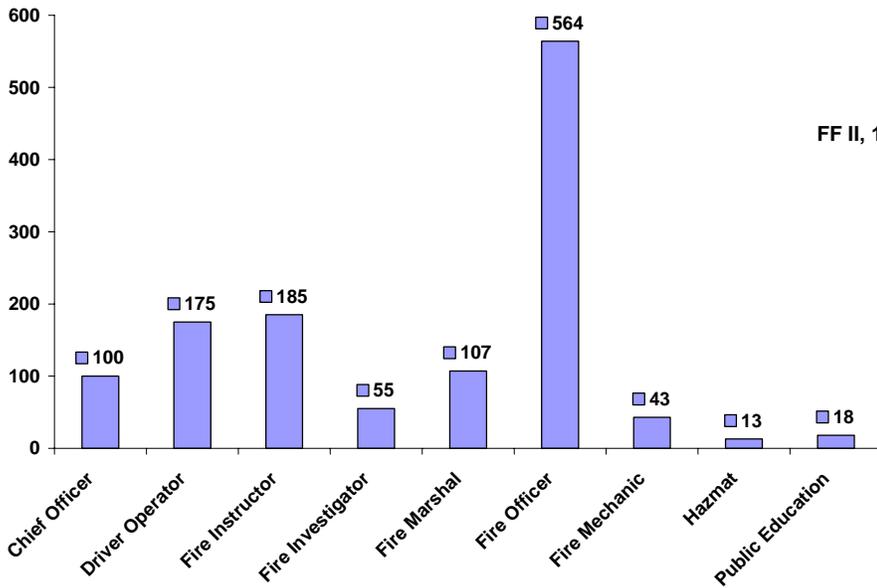
- Implementing State Fire Marshal standards and requirements
- Managing curriculum development
- Accrediting courses leading to certification
- Approving standardized training programs for local and regional delivery
- Administering the certification system
- Publishing certification training standards, instructor guides, student manuals, and related support materials
- Maintaining liaison with individuals, groups, organizations, and agencies involved in training



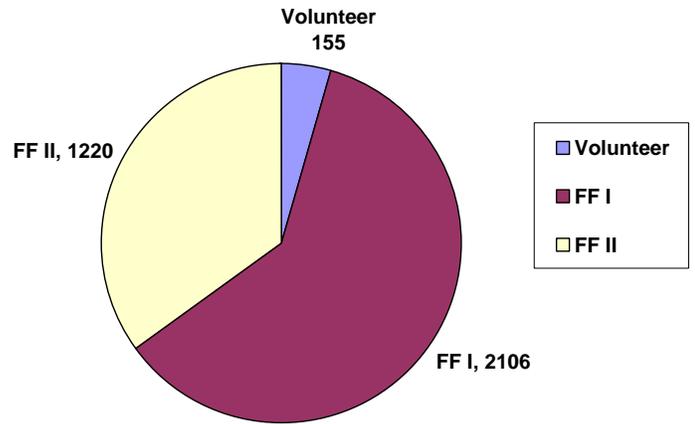
Some of these functions require direct control, as in the case of certification and accreditation. However, for the most part, CFSTES' role is one of facilitating, coordinating, and assisting in the development and delivery of standardized in-service and specialty training for the California fire service.

**In 2007 CFSTES delivered 1,000 certification classes to 19,526 students, issuing 4,741 certifications.**

### CFSTES Certifications Issued



### Firefighter Certifications Issued



### Fire Service Training and Education Program

The State Fire Marshal administers the California Fire Service Training and Education Program (FSTEP) and makes available fire service training and education programs on a voluntary basis to fire departments that rely extensively on volunteer firefighters.



FSTEP is designed to provide both volunteer and career firefighters with hands-on training in fighting fire, vehicle extrication, rescue, emergency vehicle operations, pump operations, and the Incident Command System. Registered instructors may tailor a class to meet a department's specific needs. Graduates receive a California State Fire Marshal's certificate of completion.

FSTEP is also the term used for the training programs available from State Fire Training that do not lead toward certification. In addition to the traditional FSTEP courses, the Incident Command System (ICS), Confined Space Rescue, and Emergency Care of the Sick and Injured are included under the FSTEP umbrella. **In 2007, 1,248 FSTEP classes were delivered to 27,021 students.**

## Statewide Training and Education Advisory Committee (STEAC)

STEAC's mission is to serve as a policy review committee for the State Fire Marshal and provide final review of all State Fire Training course curricula. In 2007, the committee made recommendations to the OSFM on the following:

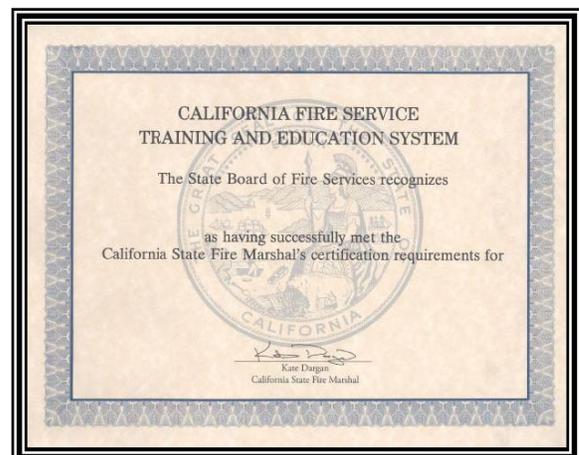


- Approval of beta test delivery of on-line hybrid fire officer level courses through Alan Hancock College, including the allowance for instructors to deliver their own post-course exams and the use of International Fire Service Training Association (IFSTA) 4<sup>th</sup> Edition to supplement State Fire Training curriculum for Management 1. STEAC will continue to evaluate this delivery method.
- Approval of fee increase for certification and course registration of CFSTES and FSTEP
- Change to Instructor certification track to have 3 levels of certification – Training Instructor, Training Specialist, and Training Officer
- Approval of revised Fire Instructor Certification Training Standards
- Approval of draft Blueprint 2020 – SFT Strategic Plan
- Change in terminology from Accredited Regional Academy to Accredited Regional Training Program (ARTP)
- Approval to beta test new curricula for Level 2 Management
- Approval of updated Fire Officer and Chief Officer Certification Training Standards
- Approval of two new locations for ARTP and the reaccreditation of one Local Accredited Academy and one ARTP

## Curriculum Development

**Chief Officer Certification Training Standards (CTS)** were developed using the NFPA 1021 Standard for Fire Officer Professional Qualifications 2003 Edition as the base document. This CTS covers the training requirements for both Fire Officer and Chief Officer Certification.

**Training Officer Certification Training Standards** were developed using the NFPA 1041 Standard for Fire Service Instructor Professional Qualifications 2007 Edition as the base document.



**Fire Marshal Certification Training Standards** began development using the NFPA 1031 Standard for Professional Qualifications for Fire Inspector and Plan Examiner 2003 Edition and the NFPA 1037 Standard for Professional Qualifications for Fire Marshal 2007 Edition.

**Fire Command 1A** curriculum is being updated to reflect the information in the amended NWCG and FIRESCOPE manuals that are used in the course.

**Fire Apparatus Driver/Operator 1A and 1B** curricula are being updated to reflect the information in IFSTA's amended Pumping Apparatus Driver/Operator Handbook Second Edition and the California Commercial Drivers Handbook.

**Fire Instructor 1A, 1B, and 1C** courses are being developed and revised to reflect the new requirements in the Training Officer CTS.

**Fire Investigation 1A and 1B** curricula are being updated to reflect the information in the newly adopted student text from NFPA.

### **Low Angle Rope Rescue (LARR) Operational**

In 2007, more than 200 Low Angle Rope Rescue Operational instructors attended a LARR Rollout class. The new Low Angle Rope Rescue Operational course premiered in September 2006 in Santa Rosa. This 24-hour course replaces the 16-hour Low Angle Rescue course and becomes a prerequisite to attending the updated RS-1 class due to be released in the Spring of 2008.

### **Confined Space Rescue Operational**

The Confined Space Rescue curriculum premiered at the 2007 Training Officers Symposium in Fresno with two more roll-out classes to follow. **One hundred fifty currently registered instructors** were invited to attend one of the three roll-out classes. The new curriculum will replace the old April 1, 2008. The new class includes an updated instructor guide along with a revised text book published by CMC Rescue, Inc. **State Fire Training issued 10 new Confined Space Site approvals and 3 temporary site approvals.**

### **Rescue Systems 1 & 2**

Rescue System 1 and Rescue Systems 2 curriculum are both scheduled to be released in the spring of 2008. **In 2007, 19 new Rescue Systems 1 sites were approved.**

### **Accredited Regional/Local Academies**

Accredited Regional Academies had a name change in 2007 to Accredited Regional Training Program (ARTP). **Two new academies** were added to the roster; City College of San Francisco and Antelope Valley College. Members of STEAC, the Fire Technology Directors Association and SFT staff conducted site visits and reaccredited Fremont Fire Department as a Local Academy, El Camino College, Los Medanos College, Crafton Hills College, and Sierra College as ARTPs.

## EMT-I Program

Our EMT-I training and certification program is an Emergency Medical Services Authority (EMSA) approved statewide program specifically for fire personnel. Emergency Care 10<sup>th</sup> Edition is the adopted curriculum that meets the current U.S. Department of Transportation's Basic National Standard Curriculum. Currently **275 instructors** are registered to deliver both basic and refresher courses throughout the state. In 2007, **39 basic courses** were conducted with **941 students** in attendance; **68 refresher classes** were held for **1,935 students**. **In 2007, we issued 51 initial certifications and re-certified 1,926 fire service personnel.**

### EMT Instructor Orientation

SFT presented the Emergency Medical Technician Instructor Orientation course at Monterey Peninsula College the week of October 1-5, 2007. This week-long course was attended by **13** students from throughout the state.

### Ethical Leadership in the Classroom

This 8-hour course was designed and developed to help instructors understand how ethical decisions are made and the potential impacts of their decisions. This course is **required** for all current and future State Fire Training registered instructors. **In 2007, 55 classes were delivered, 20 of which were grant funded, to 1,564 students.**



### Regional Instructor Orientations

**Twelve Regional Instructor Orientations were delivered to 358 participants** in 2007. Presented by State Fire Training staff, the classes were hosted by various fire departments and community colleges. This one-day workshop is required for fire service personnel interested in teaching State Fire Training classes.

### Rescue Site Approvals

State Fire Training has the responsibility to verify that minimum curriculum requirements are being met for facilities, and faculty standards for training fire service personnel. A cooperative rescue training site approval process was initiated between State Fire Training and the Governor's Office of Emergency Services (OES). **Together, the agencies added two more Confined Space Rescue training sites** (Costa Mesa and Santa Rosa) and five Rescue Systems 1 training sites (Costa Mesa, Jamestown, Monterey, Santa Rosa, and Willits) to the approved training sites list.

## **Peer Assessment for Credential Evaluation (PACE) II**

PACE II's mission is to enhance the professional credibility of State Fire Training's instructors of certified and non-certified courses.

Two workgroups consisting of 11 members each were established this year. The members made a two-year commitment during which they will meet twice a year in their geographic area (Northern California or Southern California) and review applications for instructor registration.

In 2007, the workgroup **reviewed 361 applications, approved 117 new instructors, and authorized 126 registered instructors to add courses to their résumés.**

## **Peer Assessment for Course Equivalencies (PACE) III**

PACE III's mission is to evaluate applicants who believe they meet the instructional requirements for certification through life experience and career education, but have been prevented from progressing within a certification track. This year, the committee met with two petitioners and granted equivalency credit for 7 CFSTES courses.

## **Peer Assessment for Chief Executive (PACE) IV**

PACE IV's mission is to enhance the professional credibility of position certifications earned through a personal performance assessment of candidates from the California fire service for the rank of Fire Chief.

## **California Incident Command Certification System (CICCS)**

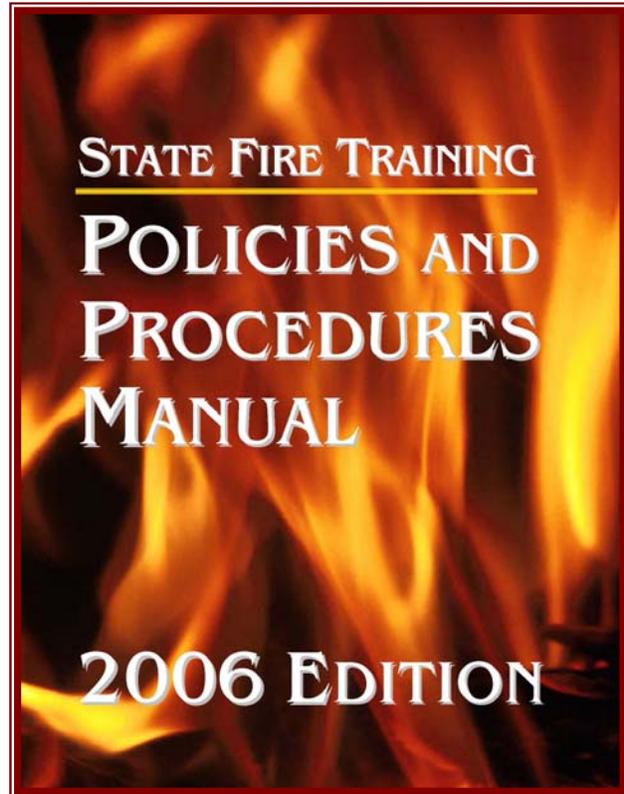
CICCS was created in collaboration with the State Board of Fire Services. It was designed as a decentralized certification program administered at local, regional, and state levels. The CICCS Task Force is working on standardized qualification guidelines and specific qualifications cards.

## **Blueprint 2020 – State Fire Training Strategic Plan**

In the summer of 2006, the California Fire Chiefs Association sponsored a summit with training stakeholders regarding the future of State Fire Training and improvements needed to the current system. The result of the summit was the draft 2020 Strategic Plan, which includes recommendations on the quality assurance, certification, training delivery, and the professional development of the fire service as a whole. The draft document was approved by STEAC and forwarded to the State Board of Fire Services for ratification. The document is available on the SFT website.

## Policies and Procedures Manual

Fire service professionals understand the need for standardized yet contemporary rules, procedures, and guidelines. At State Fire Training we recognize the concern of the California fire service for standardization of the programs managed by State Fire Training. This document is intended to provide that standardization. The SFT Policies and Procedures Manual is available online.



### Course Information and Required Materials Manual

This valuable manual presents the following information for all of State Fire Training's CFSTES and FSTEP classes: the complete course title, minimum number of hours, who the course is designed for, a course description, any prerequisites, applicable certification track, maximum class size, student/instructor ratios, and any restrictions that the course may have.

In addition, the manual identifies the required student and instructor documents, and the vendors that sell the materials. When available, the SFT approved course outline is also included. The Course Information and Required Materials Manual is available to download online.



**The mission of the State Fire Marshal is to protect life and property through the development and application of fire prevention engineering, education and enforcement.**

**Office of the State Fire Marshal**  
<http://osfm.fire.ca.gov>