

STATE FIRE MARSHAL 2012 YEAR IN REVIEW

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OSFM Headquarters
1131 S Street
Sacramento, CA 95811
<http://osfm.fire.gov>

MESSAGE FROM THE STATE FIRE MARSHAL

For the past eight years, CAL FIRE – Office of the State Fire Marshal (OSFM) has published a “Year in Review.” Traditionally, in February, the OSFM newsletter has included an overview of the past year and provided an opportunity for the OSFM to step back and share the efforts that staff and stakeholders have engaged in throughout the year. The 2012 “Year in Review” is no exception.

Throughout 2012, the OSFM has experienced triumphs and faced challenges. 2012 brought about the need to address chaptered legislation with regulatory changes and implementations. A new law concerning pipeline safety increased civil penalties on pipeline operators who violate California safety law, while new legislation brought about the need for new regulations for the Fire Engineering Division in the area of smoke alarms. Fire Engineering also saw an increased interest in fireworks disposal and worked with many of the OSFM partner groups to find a long term solution to California’s fireworks disposal issue. For the Fire and Life Safety Division a new adventure took them to space... specifically, the Space Shuttle Endeavor. The Division was instrumental in assisting with the necessary planning and code review needed to secure the Space Shuttle Endeavor at its new home on display at the California Science Center. Among the many projects the Division was involved in, they found themselves going underground to assist Caltrans with several tunnel projects throughout the state. The Code Development and Analysis Division successfully presented the 2012 rulemaking package to create the 2013 California Building Standards; they were also a key contributor to the Governor’s Office of Planning and Research document called “California Solar Permitting Guidebook,” and with the Division Chief of Fire Life Safety launched the new “California State Fire Marshal, Statue and Regulations Training.” Both Planning Risk Analysis (PRA) and State Fire Training continued to push forward with critical projects that will benefit the State. PRA increased outreach in the areas of California Fire Plan, CAIRS, and coordination between the Public Resources Code and Building Standards, while State Fire Training successfully launched *Mission Alignment* and engaged in the process necessary to achieve national recognition.

The past year was full of activity. No one division or individual was exempted from the impact of continued involvement. This newsletter is our opportunity to showcase the activities and involvement of CAL FIRE – Office of the State Fire Marshal and to emphasize the continued support of our stakeholders. As in years past, I want to thank our partners, volunteers, and the CAL FIRE organization for the continued support that helps us move our mission forward to provide a fire safe California.

Be Safe,

TONYA L. Hoover
State Fire Marshal



State Fire Marshal
Tonya L. Hoover

**STATE FIRE MARSHAL
2012 YEAR IN REVIEW**

Fire and Life Safety Division

Ernie Paez, Division Chief

The Fire and Life Safety Division (FLS) is the main entity within the department for the application of laws and regulations related to fire prevention and life safety. This is achieved through code compliance inspections of new and existing buildings and plan review and construction inspections of State-owned and State-occupied projects as mandated by California Health and Safety Code (HSC) Sections 13108, 13143, 13145 and 13146. The OSFM is responsible for Fire and Life safety in 25,000 State-owned and State-occupied facilities which include:

- 32 State Prisons
- 40 Conservation Camps
- 12 Community Correctional Facilities
- 5 Return to Custody Facilities
- 8 State Mental Hospitals
- 7 Developmental Centers
- 23 California State University Campuses,
- 10 University of California Campuses,
- 42 California Agricultural District Fairs
- Multiple State-Owned Buildings (DGS),

State-Leased Buildings (Other state agencies – Department of Motor Vehicle (DMV), California Highway Patrol (CHP), Department of Parks and Recreation, State Beaches, Cal-Trans, etc.)

In addition, CAL FIRE—Office of the State Fire Marshal (OSFM) is also responsible for fire and life safety in areas where there is no local jurisdiction. This workload includes: local jail facilities, schools, places of assembly, homes for the aged, day care centers, residential care facilities, hospitals, and nursing homes.

2012 was very busy and challenging for the CAL FIRE – OSFM, Fire and Life Safety Division. Over the course of the year, unique fire prevention challenges faced members of the FLS Division with three major highway tunnel projects under construction within the San Francisco Bay area.

For the various tunnel projects (Devils Slide Tunnels, Hwy 1, Pacifica, Caldecott Tunnel, Hwy 24, Oakland/Orinda, and Doyle Drive San Francisco) Caltrans required that National Fire Protection Association (NFPA) 502, the “*Standard of Road Tunnels, Bridges, and Other Limited Access Highways*” be enforced. The expertise of the OSFM FLS Division was requested to ensure the fire and life safety systems required in NFPA 502 are appropriately installed and acceptance testing meets minimum code requirements. Fire and life safety systems for these projects included: linear heat detection fire alarm systems, pressurized cross-passageways for pedestrian emergency exiting, deluge and standpipe systems, and an operation command center.



Devils Slide Tunnels

The Fire and Life Safety Division also oversaw the construction of more than 70 buildings on 250 acres known as the California Health Care Facility (CHCF) in Stockton. This new facility focuses primarily on the provision of health care within the context of a correctional setting that is appropriate for the inmate-patient population. CHCF Stockton includes both new construction and the upgrading and remodeling of existing buildings. The FLS Division provided regulatory oversight for both plan review and construction inspection. The facility is on schedule with an occupancy date of July 2013.

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Fire and Life Safety Division (continued)

Fire and Life Safety staff are also working on several new Superior Court and local jail facilities in Long Beach, San Bernardino, Porterville, San Diego, San Benito, and Santa Barbara. Staff actively participated in ongoing discussions and planning meetings with the California High Speed Rail Authority.



Finally, after a year of planning and help from CAL FIRE – Office of the State Fire Marshal’s Fire and Life Safety Division, the Space Shuttle Endeavor is securely in place and on display for the public to view at the California Science Center at Exposition park in Los Angeles. The \$3 million, 17,400 square foot facility, called the Samuel Oschin Space Shuttle Display Pavilion, will be the Endeavor’s temporary home while the permanent home, a new addition to the Science Center called the Samuel Oschin Air and Space Center, is built. The California Science Center at Exposition Park in Los Angeles is a public-private partnership between the State of California and the not-for-profit- California Science Center Foundation. The

Fire and Life Safety, and the Code Development and Analysis Divisions oversee projects such as these to ensure that the facility is built and complies with current state building regulations. The goal of the FLS Division is to ensure public safety and that all visitors that come to the facility enter and exit into a safe and comfortable environment. The Endeavor display opened on time for public viewing on October 30, 2012.

Code Development and Analysis Division

Kevin Reinertson, Division Chief

California is a leader in the fire and life safety profession. Our fire and building officials are the Nation’s best. The Office of the State Fire Marshal (OSFM) continues this reputation through its regulations, building standards process, proposals, and adoptions. The inclusive process allows for change and continued improvement of our building community while providing balance between regulations and business.

The OSFM fosters, promotes, and develops ways and means of protecting life and property against fire and panic in many ways, including the adoption and implementation of regulations. The Code Development and Analysis Division prepares the OSFM fire and life safety regulations and building standards for review and adoption into the California Code of Regulations (CCR) Title 19 (Public Safety regulations) and Title 24 (California Building Standards Code). The Division reviews all of California’s regulations relating to fire and life safety for relevancy, necessity, conflict, duplication, and/or overlap. It also works to create compromise/ consensus among various individuals, groups, and stakeholders involved in development and promulgation of the State’s codes related to fire and life safety.

Throughout the years, the OSFM has been given the responsibility of developing building standards affecting several industries. Because of the multi-faceted nature of fire protection, the OSFM has worked 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, hazardous materials, and organized camps. The 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.

Division Activities

The Division moved forward significant code change proposals to the International Code Council (ICC) International Building Code (IBC) for the 2015 edition. Proposals included provisions originally developed for the

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2012 YEAR IN REVIEW****Code Development and Analysis Division (Continued)**

These proposals were formally adopted into the IBC at the ICC final action hearings in October 2012. Additionally, Division staff worked with the ICC Code Technology Committee, Roof Vent Study Group (RVSG), to propose additional provisions for the International Fire Code (IFC) relating the issue of smoke and heat removal with specific emphasis on: building area; sprinkler versus non-sprinkler operation impact on firefighting operations. Proposals for the IFC are to be initially heard at the April 2013 ICC code hearings and final action to take place October 2013.

Division staff assisted in the development of the California Solar Permitting Guidebook¹ produced by the Governor's Office of Planning and Research (OPR). This guidebook was developed to help local governments improve permitting for small solar photovoltaic (PV) systems. The guidebook explains State requirements for solar PV, outlines local permitting steps, and recommends several ways that local agencies can improve permitting of solar PV systems. Fire safety provisions contained in the guidebook include: fire/roof classification of photovoltaic panels; fire service approval; area, height, and story limitations; location from property line and adjacent buildings. Additionally, portions of the 2008 Office of the State Fire Marshal PV guidelines were formally adopted as regulation and will be included in the California Fire Code (CFC) effective in January 2014.

Rulemaking Activities

- **Public Safety, Title 19** – In 2012, several sections of the CCR, Title 19 were developed and published; affecting statewide programs, local fire and building officials, the public, and industry. Working with the California Fire Chiefs Association Fire Prevention Officers Section, the OSFM revised regulations to further incorporate enforcement provisions into the 2013 CFC to assist local enforcement agencies. This effort created a more “inspector friendly” fire code. The OSFM also developed and adopted final regulations for portable fire extinguisher service vehicle markings and the listing of carbon monoxide devices.
- **State Fire and Building Codes, Title 24** – The OSFM proposed building standards for the 2013 California Building Standards Codes that were adopted by the California Building Standards Commission on December 12, 2012. The general purpose of this rulemaking was to update and codify a new edition of the California Building Standards Code adopting by reference more current editions of the national model codes and updating references to national and SFM standards. The OSFM's intent for the final adoption package was to include amendments necessary to reasonably maintain a substantially equivalent level of fire and life safety in California.

Stakeholder input and participation was an important element to assist the OSFM in developing these building standards and amendments. The State Fire Marshal promulgated this rulemaking package in the continuing effort to foster, promote, and develop additional ways and means of protecting life and property against fire and panic while minimizing the economic impact to our affected community.

The 2012 rulemaking package creating the 2013 California Building Standards Code included recent editions of the following national model codes:

- 2012 International Building Code (IBC)
 - 2012 International Fire Code (IFC)
 - 2012 International Residential Code (IRC)
 - 2011 National Electrical Code (NEC)
 - 2012 Uniform Mechanical Code (UMC)
 - 2012 Uniform Plumbing Code (UPC)
- The State Fire Marshal modifications were in part limited to correlation of new 2012 model codes with the OSFM regulations and additional revisions for clarity. Several stakeholder meetings were conducted over the past two years for these proposals. Modifications relating to the several Task Force workings

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Code Development and Analysis Division (Continued)

were adopted that included the following:

- I-3 Task Force proposals² revolve around State statue and prison operations (security and fire interaction), prison health care needs (I-3/I-2 facilities).
 - High-Rise Task Force modifications³ examined firefighter operations/tactics, existing regulations (model code and SFM amendments), and statutory requirements (global view of all related).
 - Smoke Alarm Task Force recommendations⁴ that may affect the CBC, CFC and CRC as well as possible CCR, Title 19 revisions regarding smoke alarm listings.
- In cooperation with the OPR, modifications adopted that implement and correlate the OPR's California Solar Permitting Guidebook and the previously released OSFM Photovoltaic Guidelines into the Building, Residential, and Fire Code.
 - Review of existing CCR, Title 19 provisions were adopted that either revise or repeal provisions in the CFC.
 - Correlation with the Division of State Architect (DSA) relating to the Leroy F. Green Facilities Act addressing certain construction provisions based on state funding and CBC/CFC Chapter 9 fire sprinkler and alarm provisions.
 - Correlation with DSA relating to their adoption and amendments for accessibility and new Federal Access Guidelines (mainly editorial for the OSFM rulemaking).

The expected publication of the 2013 California Building Standards Code⁵ is proposed for July 2013 with an effective date of January 1, 2014.

Division Plan Review Section

The staff of the Plan Review Unit conducted approximately 1,711 plan reviews; these included preliminary design, "over-the-counter", back checks of previous submitted design and construction plans, fire protection systems (automatic sprinklers, special systems, and fire alarm), and associated construction documents with an estimated value of \$2.5 billion in construction costs. Noteworthy projects include: San Diego Superior Court, Stockton Superior Court, Space Shuttle Museum, San Diego Women's Jail, and the Fresno High Speed Rail Station to name a few.

Statutes and Regulations Class

In 2012, the OSFM reconstituted the Statutes and Regulations class. This two-day course was developed for fire prevention personnel, building officials, and related design professionals to obtain an understanding of laws and regulations that effect fire and life safety enforcement in California. This class also provides insight into:

- The scope and authority of local departments relative to fire and life safety statutes and regulations.
- The review of California Health and Safety Codes that relate to inspection responsibilities.
- The continuing need for awareness of state fire safety laws and regulations on local fire jurisdictions.
- The correct understanding and use of modifications to model building and fire codes.
- The applicability and content of Title 19, California Code of Regulations.
- Relevant fire and life safety information not found in other building and fire codes or code classes.

The class is instructed by Ernie Paez, Division Chief, Fire and Life Safety Division; Kevin Reinertson, Division Chief, Code Development and Analysis Division (CDA); and Steve Guarino, Supervising Deputy State Fire Marshal, CDA Plan Review Section of the Office of the State Fire Marshal. Classes hosted by California Fire

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Code Development and Analysis Division (Continued)

Chiefs Association, Northern and Southern Fire Prevention Officers Section, were held in several Northern California locations during the end of 2012 with several more dates and locations scheduled for 2013 in Southern California.

For additional information contact Division Chief Kevin Reinertson. Referenced Information Sources:

1. Governor's Office of Planning Research – California Solar Permitting Guidebook
http://osfm.fire.ca.gov/pdf/firemarshal/California_Solar_Permitting_Guidebook.pdf
2. I-3 Occupancy Codes Task Force Final Report and Proposed Code Changes
http://osfm.fire.ca.gov/codedevelopment/pdf/I-3%20Occupancy/I-3_Final_Report.pdf
3. High Rise Task Force Final Report and Proposed Code Changes
http://osfm.fire.ca.gov/firelifesafety/pdf/High_Rise_Task_Force/HighRiseTaskForceFinalReport.pdf
4. California State Fire Marshal Smoke Alarm Task Force Final Report Analysis and Recommendations
http://osfm.fire.ca.gov/SFM_SATF_Rpt.pdf
5. 2013 California Building Standards Codes
http://osfm.fire.ca.gov/codedevelopment/codedevelopment_2013codeadoptioncycle.php

Additional Sources:

- Governor's Office of Planning and Research <http://www.opr.ca.gov/>
- Fire and building codes and/or concerning fire and panic safety www.osfm.fire.ca.gov
- To review all codes and or other proposed regulations
 - California Building Standards Commission www.bsc.ca.gov

Pipeline Safety Division

Bob Gorham, Division Chief

The Office of the State Fire Marshal (OSFM) is directly responsible for regulating the safety of approximately 4,500 miles of intrastate hazardous liquid transportation pipelines within California. This is accomplished by the Pipeline Safety Division consisting of pipeline safety engineers, analytical staff, and administrative support located in Division offices in Sacramento, Bakersfield and Lakewood, California.

Interstate Pipeline Inspection Program Ended December 31, 2012

Due to persistent staffing shortages and increased workload on the intrastate pipeline program, the OSFM made the difficult decision to end its inspection role of the State's 1,400 miles of interstate hazardous liquid pipelines. These inspections will be performed, beginning in 2013, by the USDOT – Pipeline and Hazardous Materials Safety Administration (PHMSA) inspectors located in Ontario, CA.

Civil Penalty Legislation

Governor Brown signed legislation that increased the civil penalties for pipeline safety violations. This legislation matches the federal penalties on interstate pipeline operators and increased the penalties on the operators of hazardous liquid pipelines from \$10,000 for each day of violation with a maximum of \$500,000 for any related series of violations to not more than \$200,000 per day with a maximum of \$2,000,000 for any related series of pipeline violations. These penalties became effective January 1, 2013. All monies received from these violations are to be used exclusively to provide training of local fire departments in responding to pipeline emergencies.



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Pipeline Safety Division (Continued)

Western Region Meeting of the National Association of Pipeline Safety Representatives

In May 2012, the OSFM hosted a meeting of pipeline safety program managers from eleven Western States, as well as federal pipeline safety personnel. This important meeting provided the opportunity to discuss regulating the safety of the nation's hazardous liquid and natural gas pipeline infrastructure.

Pipeline Emergency Responder Training

The OSFM has contracted with California State University, Sacramento to provide instruction and trainers to conduct a series of classes focusing on training emergency responder personnel to respond safely and effectively to pipeline emergencies. The pilot "train-the-trainer" class was held in September and more classes are planned for 2013 at locations throughout the State.

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 U.S. Department of Transportation's Pipeline and Hazardous Materials Safety Administration (PHMSA). The OSFM program has been certified since 1984. This certification assures that the program complies with minimum federal standards for inspector qualifications, program procedures, documentation, recordkeeping, inspector training, and code enforcement. A detailed program audit is conducted by PHMSA each year and the State Fire Marshal receives a rating based upon set program standards. In 2012, the OSFM Pipeline Safety program received a rating of 99.5 percent.

Pipeline Statistics for Calendar Year 2012	
Intrastate Operators	44
Interstate Operators	9
Pipeline Facilities	349
Breakout Tanks	712
Mileage of Intrastate Pipelines	4467
Mileage of Interstate Pipelines	1188
Staff Inspection Days;	351
Violations Issued	57
Civil Penalties Assessed	\$20,000
Civil Penalties Collected (includes prior year)	\$43,000
Number of Significant Pipeline Spills	5
Total Amount Spilled (Barrels)	777
Total Dollar amount of Damages	\$1,490,471

5-Year Significant Incidents Leak Trend

Incident Cause Type	2008	2009	2010	2011	2012	Total (By Type)
CORROSION	4	1	4	5	4	18
EXCAVATION DAMAGE	2		1	1		4
INCORRECT OPERATION	2					2
MATERIAL/WELD/EQUIP FAILURE	3			3	1	7
NATURAL FORCE DAMAGE		1				1
OTHER OUTSIDE FORCE DAMAGE			1			1
Annual Totals	11	2	6	9	5	

Significant Incidents are those including any of the following conditions:

- Fatality or injury requiring in-patient hospitalization
- \$50,000 or more in total costs, measured in 1984 dollars
- Highly volatile liquid (HVL) releases of 5 barrels or more
- Non-HVL liquid releases of 50 barrels or more.
- Liquid releases resulting in an unintentional fire or explosion

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Planning and Risk Analysis Program

Dean Cromwell, CEA

CALIFORNIA ALL INCIDENT RREPORTING SYSTEM (CAIRS)

The CAIRS program reached an exciting milestone in 2012 for CAL FIRE incident reporting. Under a new contract with the vendor, it has become possible to include additional reporting fields for wildland fire cause in the incident reporting system. Steps have also been taken to improve data quality while improving the ease of data entry by the reporting field. Statistics reflecting the new cause categories will be reflected in the 2012 Wildfire Activity Statistics (Redbook). The Redbooks are available on the CAL FIRE website at http://www.fire.ca.gov/fire_protection/fire_protection_info_redbooks.php.

To assist in reaching these goals, staff presented a webinar to CAL FIRE field staff on incident reporting software updates. The webinar gave staff a chance to review the new fields and features, receive instruction on incident reporting, and have their specific reporting questions answered. CAIRS staff plans to develop additional webinars for both CAL FIRE and local government fire departments. The training will focus on tools that are available on the OSFM CAIRS website at <http://osfm.fire.ca.gov/cairs/cairs.php> and will train firefighting staff on how to best complete emergency incident reports.

CAIRS is a very important data program for the California fire service. The program is the depository for incident data that provides a picture of California fire service responses. The data submitted to the program is reviewed, errors within the reported data corrected and then uploaded to the national fire incident database at the United States Fire Administration (USFA). This data is used to establish and review trends and needs of the United States fire service. Reporting to the OSFM CAIRS database is also a requirement under statute and the federal government requires fire departments to report into their states data collection system in order to obtain federal funding and grants. The following table is a snapshot of 2011 incidents **reported** (as of December 30, 2011) to CAIRS:

Incident Counts	Percent of Fires	Percent of EMS	Percent of Other
2,084,934	7	64	29

FIRE PLAN

The 2012 year has been an active one for implementation of the 2010 Strategic Fire Plan. Accomplishments for the year included:

- Unit Fire Plan template was utilized by the field and modified as a result of feedback in 2011
- Fire Planning Framework tools were delivered to the field
- Significant improvements have been made in collection and display of statewide data submitted from Units and Contract Counties to Sacramento
- Continued Plan rollout and training
- All CAL FIRE Units and Contract County Fire Plans have been updated using the new template and can be viewed at http://cdfdata.fire.ca.gov/fire_er/fpp_planning_plans

These accomplishments were reported to the State Board of Forestry and Fire Protection (Board) in September. Then, in October, the San Mateo-Santa Cruz and San Luis Obispo Units presented their Unit Fire Plans to the Board. The Board was very interested in all of these presentations and looks forward to continued progress in Fire Plan implementation.

The Fire Plan Program also received recognition by the Sustainable Cities Center (Center) in London, England. A board of international scientific advisors identified the Plan as a showcase example in internationally renowned best practices for sustainable cities. The Sustainable Cities Center is housed in a structure referred to as “the

STATE FIRE MARSHAL 2012 YEAR IN REVIEW

Planning and Risk Analysis Program (Continued)

Crystal” constructed by Siemens Corporation. The California Strategic Fire Plan is to be presented in the “Safe and Sound zone” in the “Prevent Fires” exhibit, which is an interactive display that shows ways that fire dangers can be detected and prevented. The exhibit’s primary goal is to keep people safe in their cities, workplaces, and homes. The interactive display is not available for viewing yet, but information about the Sustainable Cities Center is available at www.thecrystal.org.

Fire Plan staff also attended the Wildland Urban Interface (WUI) workshop sponsored by the National Institute on Standard and Technology (NIST). The workshop provided an opportunity for experts in WUI fire behavior, engineered fire protection technologies, fire resistant design, standard test methods for building materials, and WUI building and fire codes to collectively determine the areas of research which will have the most impact in mitigating the hazards associated with WUI fires. The top research priority identified at the workshop was hardening of building structures (exteriors, including decks, etc.)

Fire plan staff also followed and offered comments on versions of the National Cohesive Wildland Fire Management Strategy (see <http://www.forestsandrangelands.gov/strategy/index.shtml>) and the Action Plan for the Western Region.

This effort was required by adoption of the national Federal Land Assistance, Management and Enhancement Act (FLAME) Act in 2008. Among other things, the FLAME Act also required a development of a national cohesive wildland fire management strategy. On June 7, 2012, the Secretaries of the Department of the Interior and Department of Agriculture released the *A National Cohesive Wildland Fire Management Strategy-Phase II National Report*. The report lays out three national goals: **Restore and Maintain Landscapes, Fire Adapted Communities, and Fire Response**.

To reach these goals, the U.S. was divided into three zones: west, southeast, and northeast. Representatives from agencies, governments, and other stakeholders in the West have worked to meet the overall strategy that will enable them to plan for and respond to wildland fires efficiently and strategically by restoring and maintaining resilient landscapes, creating fire adapted communities, and encouraging jurisdictional collaboration.

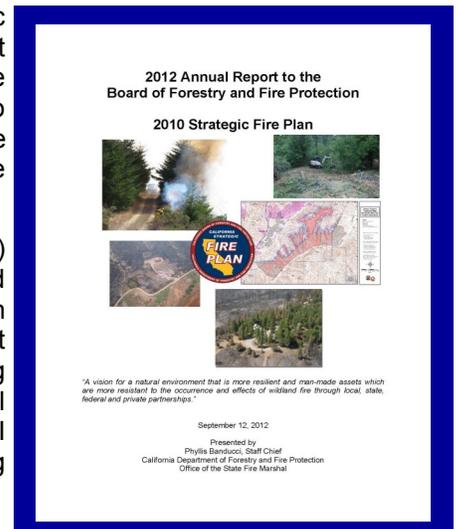
Comments offered by Fire Plan staff in 2012 dealt with technical and policy issues, as well as emphasizing the need to pay much more attention to actions that can be taken to improve the ignition resistance of structures.

FIRE AND RESOURCE ASSESSMENT PROGRAM (FRAP)

CALFIRE's Fire and Resource Assessment Program (FRAP) is required by the California legislature to produce periodic assessments of the forests and rangelands of California. These reports have been published since the 1970's.

In 2008, the U.S. Farm Bill directed the U.S. Forest Service (USFS) under the U.S. Department of Agriculture to coordinate with states on forest and rangelands assessments. The first coordinated report for California was completed in 2010 (see <http://frap.fire.ca.gov/assessment2010.html>). FRAP and staff from Region 5 of the U.S. Forest Service started in 2012 to prepare for the 2015 assessment, to be called the *Forest Action Plan*.

A critical component of this preparation is soliciting input from stakeholders. To facilitate this input, the Forest and Rangelands Assessment Advisory Committee (FRASC) was appointed. This committee met several times in 2012 to serve as a forum for participants to provide input on a broad array of issues affecting forests and rangelands across California. The efforts will continue and gather steam during 2013. Background on FRASC as well as topics covered to date can be found at <http://frap.fire.ca.gov/frasc.html>.



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In addition to the assessment, FRAP undertakes special projects that have a bearing on future assessments or on implementation of the Forest Policy Statement adopted by the Board. Highlights of some of these projects during 2012 were as follows:

- **Cal MAPPER Version 1** – FRAP staff assisted with the development of Cal MAPPER, a geospatial database that is updated quarterly to track fire hazard reduction projects and to serve as a placeholder for future data used by CAL FIRE and others. The first version was successfully tested and will be updated as soon as possible by Version 2.
- **Biomass and SB1122** – FRAP has been conducting research to clarify and discuss forest biofuel feedstock (raw material) supply chains and production technologies. In addition, FRAP staff have been evaluating the environmental impacts and risks of using forest-based biomass for energy identifying trends and what the implications are for policy.
- **Climate Change** – FRAP assisted in developing and refining strategies to address climate adaptation needs. In addition, during 2012 FRAP staff participated in a number of inter-agency committees that are addressing climate change research needs and other policy issues.
- **Urban Forestry** – FRAP worked with USFS staff on the San Jose Urban Forest Inventory and Assessment Pilot Project to generate accurate GIS data layers for tree canopy and other land cover classes. In future years, potential tree planting sites and annual ecosystem service values for existing urban forest will be calculated. In addition, tree canopy targets and the increased value of the ecosystem services associated with reaching the target will be analyzed.
- **Water Plan** – FRAP staff represented CAL FIRE and worked with USFS staff to develop a forest management chapter for the California Water Plan. The chapter discusses management issues and provides recommendations for forest activities that can enhance water resources.
- **Incident Support** – FRAP provided GIS support for wildfire suppression for the Vallacitos Lightening complex and the Ponderosa Fire. Staff assisted in North Ops Intel. This kind of experience increases understanding of the legal and administrative frameworks which involve CAL FIRE and partner agencies.
- **State Responsibility Area (SRA) Mapping** – In support of CAL FIRE implementation of the State Board of Forestry and Fire Protection's (Board) State Responsibility Area (SRA) regulations, FRAP maintains information related to SRA boundary lines, Fire Hazard Severity Zone designations, population, structures, and other relevant data. A new SRA boundary layer was produced in 2012.
- **Mokelumne Avoided Cost Analysis** – During 2012, FRAP continued to participate in an inter-agency project to evaluate the potential benefits of upper watershed forest management actions to reduce fuel loadings on the maintenance of water resources for downstream users.
- **Western States West-Wide Risk Assessment** – FRAP has played a key role in assisting with the direction and model development of the 17 Western statewide West-Wide Risk Assessment. The goal of this study has been to conduct an analysis of wildfire risk across the 17 states using common methodology and dataset. Research work for the final report was finished in 2012 and a final report in 2013 will become available in 2013. This study is significant because this is the first of its kind in the West and has developed both new information and model refinements that relate to characterizing wildfire risk.
- **VTP EIR** – During 2012, FRAP continued to provide substantial assistance the development of the Vegetation Treatment Plan (VTP) Environmental Impact Report (EIR). This plan will support a range of non-commercial forest management activities to address forest heath, stand improvement, and fuel reduction projects. The VTP EIR has been released for public review and it is anticipated to be finalized in 2013.

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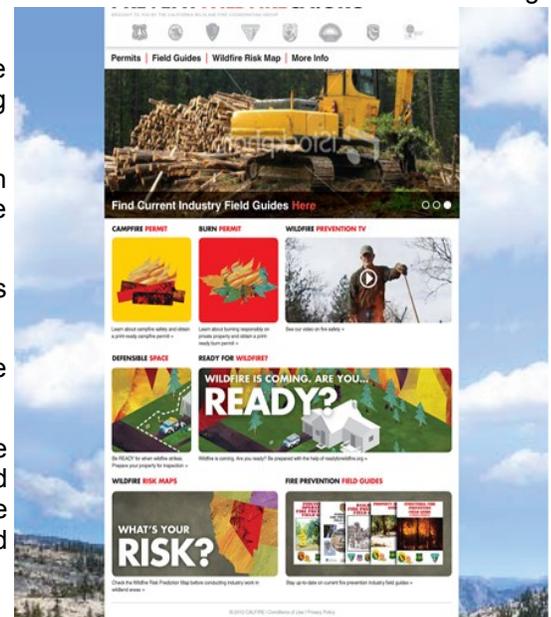
Planning and Risk Analysis Program (Continued)

WILDLAND FIRE PREVENTION ENGINEERING

Fire prevention engineering processes reduce or eliminate fire hazards and risks. They also change the fire environment by removing or reducing the heat source, modifying or reducing the fuels, and modifying behaviors that would allow a heat source to contact ignitable fuels. The Wildland Fire Prevention Engineering Program focused on two major projects in 2012 with the goals of assisting partners and the public in collective fire prevention efforts.

Staff worked on the creation of an interagency fire prevention website. Using grant funding, CAL FIRE and the California Wildland Fire Coordinating Group [CWCG] Interagency Fire Prevention Committee have been working to build "PreventWildfireCA.org" as a site to host the following:

- A map application that will allow private industry a tool to use in making decisions whether or not to cease operations during times of high fire danger
- An *Online Burn Permit* application that will provide local burn permit forms and require the user to view and agree to the related educational information and requirements
- An *Online Camp Fire Permit* with the same requirements as the Debris Burn permit process
- A Defensible Space self-assessment tool that will provide the public with education as well as the specific inspection form
- CAL FIRE's newly revised Fire Prevention Field Guides will be available in a user friendly format for information and downloading (guides cover Industrial Operations Powerline Fire Prevention, Railroad Fire Prevention, Property Inspection, and Structural Fire Prevention)



Wildland Fire Prevention Engineering staff was also involved with a work group formed under the guidance of the Board of Forestry and Fire Protection (Board) to reassess the Public Resources Code Section (PRC) 4290 and related statutes, regulations, codes, and guidelines. Elements of this review include defensible space, water supply, and emergency road access. Work continues and should be complete in 2013. Staff will make recommendations to the Board so the Board can ensure consistency in intent and language.

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State Fire Training Division

Mike Richwine, Assistant State Fire Marshal

State Fire Training (SFT) administers the California Fire Service Training and Education System (CFSTES) in cooperation with accredited academies and registered instructors. As the statutory lead agency for regional and local fire service training, SFT collaborates with fire service organizations and stakeholders to provide quality fire service training and education.

Statewide Training and Education Committee

A wide range of fire service stakeholders are represented on the Statewide Training and Education Advisory Committee (STEAC). The primary mission of STEAC is to serve as a policy review committee for the State Board of Fire Services (SBFS) and the State Fire Marshal (SFM). The committee serves as a clearinghouse for fire training issues and provides final review of all SFM training standards and curricula. Significant STEAC recommendations in 2012 were:

- Rescue Systems III – Structural Collapse Technician, Maritime Fire & Rescue and Driver/Operator – Aerial Tiller Truck Operations were approved as FSTEP Courses.
- College of the Desert was approved for accreditation and American River College was reaccredited as a Regional Training Program.

Mission Alignment Update

Many of the short range and mid-range goals of Blueprint 2020 have already been accomplished. To complete the long-range goals of Blueprint 2020, State Fire Training (SFT) held a series of Tactical Planning - Focus Group meetings to identify obstacles and develop a shared set of strategic directions. The report produced from these meetings provided an overview of the underlying contradictions and problems associated with instituting systemic change in the State Fire Training System. To bring closure to these long range goals and to overcome the barriers to change, the “Mission Alignment” initiative was instituted.

In 2012, Mission Alignment established the following focus groups to investigate, develop, and recommend action plans to address long term goals:

- The **Curriculum Development Focus Group** is exploring mechanisms to complete certification training standards and curriculum development projects in a timely and professional manner. The focus group created “Course Plans” for instructors and in collaboration with California State University, Sacramento developed a Curriculum Development Handbook and Style Guide for cadres to standardize curriculum projects.
- The **National Recognition Focus Group** made the recommendation to the State Fire Marshal to pursue national recognition. In order for the State Fire Training System to retain its leadership position, SFT needs to keep pace with the broader fire service trends and interests. By participating in national recognition our stakeholders would reap the benefits of the expanded nationally based fire service professional qualification systems.

Applications for accreditation were accepted by the two organizations administering national recognition for fire service training; the International Fire Service Accreditation Congress (IFSAC), and the Pro Board Fire Service Professional Qualifications System (Pro Board). Both organizations have well defined processes to evaluate the professionalism and capabilities of applicant agencies. A Self-Assessment Report is under development as required for this process.

- The **Reconfiguration Focus Group** made the recommendation for SFT to streamline all certification tracks. This will require an overhaul of the current certification system and will follow the National Professional Development Model (NPDM) for the Fire and Emergency Services for Higher Education (FESHE) in California.

STATE FIRE MARSHAL 2012 YEAR IN REVIEW

State Fire Training Division (Continued)

The Reconfiguration Focus Group, in coordination with the Curriculum Development Focus group is collaborating on specific proposals for the number and types of classes required in every certification track.

- **Cross Generational Marketing Focus Group** – All of the Mission Alignment focus groups have identified the need for significant improvements to the current SFT system in order for the system to be self sustaining and meet the needs of the system's clients. The Cross Generational Marketing Focus Group has created a communication and marketing plan to address and communicate the upcoming changes to our target audience of firefighters, instructors, fire departments, colleges, and trade organizations.

Each of the four Mission Alignment task force groups, Curriculum Development, National Recognition, State Fire Training Reconfiguration, and Cross Generational Marketing, are all moving toward established goals. Importantly, all changes to the SFT business processes are being communicated through the instructor update classes held around the state along with targeted presentations to the SBFS, the STEAC, the California Fire Chiefs Association and the California Fire Technology Directors Association. Updates can be reviewed on the State Fire Training website: <http://sft.fire.ca.gov>.

California Fire Service Training and Education System (CFSTES)

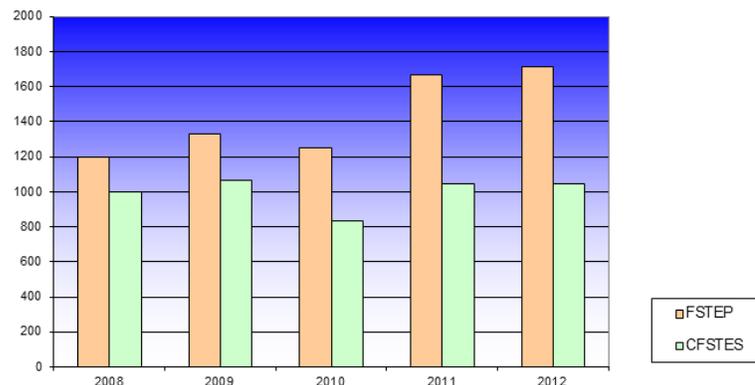
The CFSTES coordinates development, delivery and administration of training for the California fire service. CFSTES has become synonymous with certification. **In 2012 there were 1,045 CFSTES certification classes delivered statewide to 14,829 students, with a total of 1,140 professional certifications issued among various certification tracks. In addition, 2,608 Fire Fighter I, II, and Volunteer Fire Fighter certifications were issued.**

This past year, Sam Mazza successfully completed the requirements and received his Fire Chief certification while Robert Van Nortrick was approved for Fire Chief designation.

Fire Service Training and Education Program (FSTEP)

The OSFM administers the FSTEP and makes available the fire service training and education programs on a voluntary basis to fire departments. 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. **This past year approximately 1,716 FSTEP classes were delivered to 28,896 students.**

Training trends for the State Fire Training approved CFSTES and FSTEP classes for the last five years are represented in the table below:



**STATE FIRE MARSHAL
2012 YEAR IN REVIEW**

State Fire Training Division (Continued)

Instructor Registration

Course work, experience, rank, and validation by the Fire Chief are the general requirements to qualify as a Registered Instructor for State Fire Training. Applicants' qualifications are reviewed internally according to the requirements listed in the SFT Regulations. **In 2012, 94 new instructor applications were approved. Ten Regional Instructor Orientation (RIO) courses were held with 193 students attending. State Fire Training also conducted 17 Ethical Leadership in the Classroom courses with 353 students attending.** Both of these courses are required by SFT in order to be approved as a Registered Instructor.

Beginning in 2012, in order to maintain status as a Registered Instructor, the Instructor Update course was required to be completed. Sixteen courses were administered to a total of 859 students. In addition, existing Registered Instructors who wish to teach the new Prevention 1 curriculum available January 1, 2013 must complete the Fire Prevention 1 Instructor Rollout course. **In 2012, five Fire Prevention 1 Instructor Rollout courses were administered with approximately 83 students completing the course.**

Accredited Technical Rescue Sites

In cooperation with California Emergency Management Agency (CalEMA) - Fire and Rescue Branch and Registered Senior Instructors, SFT staff conducted site review and approval for Confined Space Rescue Technician and Rescue Systems 1 and 2 training sites. These sites are listed on the State Fire Training website.

New sites approved for Confined Space Rescue Training, Rescue Systems 1, and Rescue Systems 2:

New Confined Space Rescue Training Facilities

- Riverside County Fire Department/CAL FIRE – Mecca Training Site
- Riverside County Fire Department/CAL FIRE – Ben Clark Training Facility
- Victor Valley College
- Richmond Fire Department

Rescue Systems 1

- Victor Valley College
- Santa Barbara City Fire Department
- Mammoth Lakes Fire Department
- Richmond Fire Department

Rescue Systems 2

- Eureka Fire Department

State Fire Training is committed to assisting the California fire service through strengthening fire service training and education. This effort can only be accomplished through our continued strong partnerships, adapting to the needs of the fire service, and working towards currencies needed in today's fire service.



STATE FIRE MARSHAL 2012 YEAR IN REVIEW

Fire Engineering / Arson Bomb Division

Ben Ho, Division Chief

The Fire Engineering Division (Division) has the overall responsibilities to administer licensing programs and approve, certify, and list fire safety products.

2012 was an exciting and busy year for the Division with the reestablishment of the Arson and Bomb Unit, along with its statewide fireworks disposal functions. The Division issued several hundred licenses, listings, and certificates, conducted hundreds of inspections and evaluations, and proctored approximately 2,000 exams throughout California while maintaining excellent communication and continuing strong working relationships with the fire service, industry representatives, building officials, and other state and local government agencies.

TYPE	FIREWORKS	FLAME RETARDANT CHEMICALS AND FABRICS	PORTABLE FIRE EXTINGUISHER	AUTOMATIC EXTINGUISHING SYSTEMS	BUILDING MATERIALS LISTING
RENEWAL	1473 operators 116 companies	114 chemical 498 fabric 319 limited 124 general	497 concerns 2038 Certificate of Registration (CofR)	66 concerns 234 limited 1460 WFP	2851 listings
APPROVAL	42 safe & sane devices	18 fabric	18 concerns 252 CofR	9 concerns 115 limited	521 listings
PERMIT	77 public displays 40 special effect, open flame 100 CA Film Commission (filming on state property)				
LICENSE	45 new 9 upgrade	20 general 18 limited		796 fire pump 125 limited 12 concerns	

Division enforcement activities were increased due to the reestablishment of the Arson and Bomb Investigation Unit. Following is the summary for the year:

Complaints Received	93
Cease & Desists	8
Investigations	14
Disciplinary Actions	11
Inspections	178

Senate Bill (SB) 1394 (Lowenthal)

SB 1394 was signed on September 21, 2012 by Governor Brown and chaptered into law. This new law would require that, commencing January 1, 2014, in order to be approved and listed by the CAL FIRE-Office of the State Fire Marshal (OSFM), a smoke alarm shall display the date of manufacture on the device, provide a place on the device where the date of installation can be written, incorporate a hush feature, incorporate an end-of-life feature that provides notice that the device needs to be replaced, and, if battery operated, contain a non-replaceable, non-removable battery with a minimum 10-year life. This law would also give the OSFM the authority to create exceptions to the above listed provisions and suspend enforcement of the new smoke alarm

**STATE FIRE MARSHAL
2012 YEAR IN REVIEW****Fire Engineering / Arson Bomb Division (Continued)**

requirements for six months via the regulatory process. The OSFM is working with the Fire Alarm Advisory Committee, the fire alarm industry, the fire service, and Underwriters Laboratories Inc. (UL) to prepare regulations to implement the Building Material Listing Program requirement for SB 1394. OSFM staff met with the smoke alarm manufacturers, UL and Intertek representatives in December 2012 and brought to their attention that a new law could impact a company's ability to do business in California. The OSFM is currently working with UL to establish the test protocol and work toward revised approved standards.

Assembly Bill (AB) 1566 (Wieckowski)

On September 25, 2012, AB 1566 authorized the CAL FIRE - Office of the State Fire Marshal oversight responsibility of the Aboveground Petroleum Storage Act (APSA) effective January 1, 2013. APSA regulates facilities with aggregate aboveground petroleum storage capacities of 1,320 gallons or more, which include aboveground storage containers or tanks with petroleum storage capacities of 55 gallons or greater. These facilities typically include large petroleum tank facilities and aboveground fuel tank stations, and vehicle repair shops with aboveground petroleum storage tanks. The Act does not regulate non-petroleum products. Facilities with total petroleum storage quantities at or above 10,000 gallons are inspected at least once every three years by a Unified Program Agency and have reporting and fee requirements, while facilities with petroleum storage quantities equal to or greater than 1,320 gallons, but less than 10,000 gallons, have reporting and fee requirements only. All regulated facilities must meet the federal SPCC rule requirements.

Staff has been working on the implementation of the recently signed and chaptered AB 1566. This bill mandates the OSFM to oversee the Aboveground Storage Tank Program. The implementation plan included the establishment of an advisory committee and the hiring of two scientists. We anticipate to have the first meeting in March 2013 to discuss: (1) establishing a surcharge formula to be assessed on regulated businesses to fund the program (collected by CUPAs and remitted to Cal/EPA); and (2) develop regulations (California Code of Regulations, Title 19) for regulated businesses and CUPA's. The OSFM Certified Unified Program Agency (CUPA) program participated in 11 evaluations, revised the HMMP/HMIS laws and regulations document that is posted on the SFM website, updated the Unified Program Strategic Plan (worked in conjunction with California Environmental Protection Agency Cal/EPA), State Water Resource Control Board (SWRCB), Department of Toxic Substances Control (DTSC), California Emergency Management Agency (Cal/EMA) and the CUPA Forum Board, and assisted Cal/EPA with the CCR Title 27 Rulemaking package (Unified Program administration).

Fireworks

Health and Safety Code delegates the OSFM the responsibility for the destruction of dangerous and illegal fireworks once they are seized by local fire departments and law enforcement agencies. Due to environmental issues raised by the Department of Toxic Substance Control (DTSC), state environmental laws and regulations, open burning for the disposal of seized dangerous fireworks is no longer permitted. More extensive steps are now required in order to dispose of confiscated material. These requirements have dramatically increased the costs associated with the disposal process as no substantial funding exists to support the legislatively mandated requirement imposed on the OSFM. The OSFM worked with the Governor's Office, Assembly Member Lowenthal's Office, the Department of Toxic Substances Control (DTSC), the fire service, and the fireworks industry to find a solution, through statutory and regulatory process, to reduce the overall quantity of fireworks requiring disposal as well as for a more efficient overall disposal.

In 2012, the Arson and Bomb Investigators (ABI) have conducted statewide fireworks disposal operations. Arson and Bomb Investigators leveraged the required resources through coordinated disposal operations with local fire and law enforcement agencies to reduce the accumulation of seized fireworks. The OSFM disposed of a total of 103,000 lbs. of seized fireworks. There currently are approximately 90,000 lbs. of seized fireworks still in inventories throughout the State. The program's goal is to reduce storage and provide a manageable quantity for disposal.

**STATE FIRE MARSHAL
2012 YEAR IN REVIEW**

Fire Engineering / Arson Bomb Division (Continued)

The Motion Picture & Entertainment Safety

This program plays a primary role between the California fire service and the motion picture and television industry. The Program liaison works with local film commissions, the State Film Commission, and the film and entertainment industry. The program also provides training, special investigations, inspections, on-location technical assistance, and technical interpretation of OSFM laws and regulations relating to the use of pyrotechnic special effects. Understanding the magnitude of the impact for the industry, the division has successfully made a smooth transition during a staff turnover due to retirement. To promote safety on the set, enforcement consistency and a high level of cooperation between the film maker and Fire Safety Officer (FSO), we conducted two FSO and one Close Proximate Audience classed last year.

Building Materials Listing Program

The division has successfully incorporated the OSFM - Wildland Urban Interface (WUI) Products Handbook into the Building Materials Listing Program. The handbook was developed in an effort to provide the home owners, industries, designers, and local fire and building officials a list of "compliance WUI products." The purpose of the WUI handbook was to assist with the implementation of Chapter 7A. They are listed under the following Categories:

- 8110 – Decking Materials
- 8120 – Exterior Windows
- 8140 – Exterior Siding and Sheathings
- 8150 – Exterior Doors
- 8160 – Under Eave

These products can be searched by using the following link:

http://osfm.fire.ca.gov/licensinglistings/licenselisting_bml_searchcotest.php

Carbon Monoxide (CO)

To assist the public with the implementation of the CO law, the division updated the Carbon Monoxide (CO) Frequently Asked Questions (FAQs) and posted them to the OSFM website. The following is the link to that page: <http://osfm.fire.ca.gov/strucfireengineer/pdf/bml/Frequently%20asked%20questions%20on%20Carbon%20Monoxide.pdf>

A quick program overview:

The division promulgated the following proposed regulations packages:

- NFPA 25, 2011 edition adoption
- Vehicle marking, Title 19, California Code of Regulations (CCR)
- NFPA 10 and Title 19, CCR consolidation
- Fire extinguisher enforcement, Title 19, CCR
- Flame retardant update, Chapter 8, Title 19, CCR

The division conducted the following training courses:

- Fire Extinguisher Inspections Class for Fire Inspectors
- Fire Protection System and Portable Fire Extinguisher Fraud Protection
- Outdoor Public Display Class
- Fire Safety Officer Class
- Fireworks Close Proximate Audience Class

**STATE FIRE MARSHAL
2012 YEAR IN REVIEW**

2012 Awards and Recognitions

Tonya L. Hoover, State Fire Marshal

*Fire Sprinkler Advocate of the Year
By the American Fire Sprinkler Association (AFSA)*

Kevin Reinertson, Division Chief

*The Charles H. Gray Award
By CalChiefs, Northern California Fire Prevention Officers (NorCal FPO)*

John K. Guhl, Deputy State Fire Marshal III

*The Art G. Kane Memorial Award
By the California Automatic Fire Alarm Association (CAFAA)*

Director's Awards

Innovation

Dean Cromwell

Individual Superior Accomplishment

*Linda Menchaca Rodney Slaughter
Mark Romer Jim Spero*

Team Superior Accomplishment

Statewide Analytical Framework

*Rebecca Ferkovich Robin Morose
Chris Keithley Carl Palmer
Kelly Larvie Tiffany Meyer
Mark Rosenberg Dave Sapsis*

Fireworks Disposal

*Al Adams Ben Ho
Bart Chambers Jack Markle
Jason DeWitt Ramiro Rodriguez
Gary Eidsmoe Jeff Schwartz
Tony Guevara Stephen Volmer*

