February Message from the Chief:

This month’s report is to serve as a “2009 – Year In Review” and recognizes our obligation to the environment as it replaces the OSFM annual report and is available at: http://osfm.fire.ca.gov/fromthechief/pdf/sfmreport-february10.pdf. I believe it is important to look at past accomplishments and contributions so that we can use them to move our visions forward and continue to serve the California fire service. The opportunity to do an “annual report” is an important component in our efforts to reach out, connect and share the important works that are accomplished by the dedicated staff at the Office of the State Fire Marshal (OSFM) and our stakeholders. The OSFM continues to integrate all aspects of the fire service together in the effort to provide a safer working environment for emergency responders and a fire safe environment for all Californians.

The 2008/2009 OSFM two-year plan focused on building a fire safe California with the adoption of new codes and regulations, fire service training and education, fire safety measures that protect our citizens occupying state owned and leased buildings, providing solid statistical information to address the California fire problem, diligence with issues associated with fire protection equipment, and continuing to keep our water-ways and communities safe from hazardous materials and pipeline incidents. Because the Office of the State Fire Marshal has broad, far reaching responsibilities directly connected to the California fire service through statute; our successes directly relate to each individual and program area that provides the fire fighting force in their community.

We must not forget our past; and use our experiences as a tool to move us forward. The OSFM programs strengthen the fire service to better meet the needs of our communities and our environment within the long-term vision and mission. These programs include code adoptions and fire protection systems installed in buildings, the materials used in the construction of buildings, the techniques used to construct buildings, and the training and education of how to respond to emergencies in our communities play a key part in keeping our fire service safe and our citizens out of harms way. To our partners and volunteers that help us move our mission forward, THANK YOU for your time and dedication to the public safety vision.

Be safe!

Tonya L. Hoover
Acting State Fire Marshal
Code Development and Analysis

The Office of the State Fire Marshal 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 California State Fire Marshal's fire and life safety regulations and building standards for review and adoption into the California Code of Regulations (CCR) Titles 19 and/or Title 24. The Division also reviews all of California’s regulations relating to fire and life safety for relevancy, necessity, conflict, duplication and/or overlap. The Division works to create compromise and consensus among various individuals and groups involved in development and the promulgation of the state’s codes related to fire and life safety.

State Fire and Building Codes – Title 24

The California Building Standards Commission approved the State Fire Marshal’s Building, Fire and Residential Code adoption packages at their hearing on January 12, 2010. The 2010 California Building Standards Codes are proposed to be published July 1, 2010, having an effective date of January 1, 2011. California’s first partnership with the International Building and Fire Codes was completed January 30, 2007 with the adoption and July 4, 2008 publication of the 2007 California Building Standards Codes. Over the past year, the OSFM has worked to revise certain elements of Title 24 the California Building Standards Code (Fire, Building, Electrical, Mechanical, and Plumbing code and Referenced Standards) for the next triennial edition the 2010 California Building Standards Code.

This triennial rulemaking cycle adopts by reference of the 2009 International Building and Fire Code, the 2008 National Electrical Code and the 2009 Uniform Mechanical and Plumbing Codes with modifications and amendments that; correct omissions, complete tasks originally sought and further augment the adoption of the California Codes and to continue bring you the best set of building and fire code proposals possible. Additionally, California’s first partnership with the International Residential Code was included in this rulemaking.

Several key things are important to remember:

- The State Fire Marshal is committed to this adoption and believes strongly in the value of the model code process and the overall quality of the model codes as many of the OSFM amendments are proposed to the model codes themselves.
- The State Fire Marshal has taken extraordinary measures to ensure that
this package represents the best in fire and life safety considerations, stakeholder involvement and economic considerations.

- Both fire and building code professionals, industry and many other stakeholders have worked with the State Fire Marshal to develop this rule-making package.

The adoption of an entire new set of California building, fire and other referenced codes is a complex task. The OSFM promulgated this rulemaking package in an effort to continue to foster, promote and develop additional ways and means of protecting life and property against fire and panic while minimizing the economic impact. The OSFM along with the other state agencies, the Building Standards Commission and its Committees, and stakeholders, has worked together this past year to produce a new edition of the California Building Standards Code (California Code of Regulations, Title 24, Parts 2, 3, 4, 5, 9 and 12) based upon a more current edition of a model code.

Automatic Fire Sprinkler Systems for One and Two Family Dwellings
A key component in the 2010 code adoption is the addition of residential fire sprinklers in all new one and two family dwellings and town-home construction. For many years, installation of fire sprinkler systems has only been required in office buildings and multi-family dwellings like apartments. These sprinkler systems are proven to save lives and extinguish fires. More than 100 jurisdictions in California already have a local residential fire sprinkler ordinance.

California is a leader in the fire and life safety professions. Our fire and building officials are some of the nation's best and speak with considerable experience. We strongly believe the OSFM proposals and adoptions continue this reputation and allow for change and overall improvement of our building community while at the same time, taking a more conservative approach than the model code in the high risk occupancies.

In October 2008 and again in April 2009 the OSFM convened representatives from various disciplines to study issues concerning the water supply of residential sprinklers and the installation of residential sprinklers. The purpose of the two task groups was to provide information, recommendations, and suggested strategies for solutions to the State Fire Marshal. This was in preparation for a statewide residential fire sprinkler requirement for new construction scheduled for implementation January 1, 2011.

Stakeholders from across the State of California participated in this monumental task which included; California Fire Service, Building Industry, Building Officials,

The Task Groups identified the following primary issues that would essentially be broken into sub-groups for intense review and recommendations:

- Fees
- Connection Configuration
- Laws and Regulations
- Process Efficiencies and Cost Impacts
- Installation
- Cost Offsets/Incentives
- Local Enforcing Agency Issues

In July 2009 the final phase of the residential sprinkler Task Force was formed to address and implement a strategy to educate stakeholders of “Best Practice” recommendations from the water supply and installation task groups. The Education and Training Task Group has been charged with developing a coordinated training program for the implementation of residential fire sprinklers in new construction statewide and make recommendations to the State Fire Marshal.

- Reasons supporting this recommendation are numerous.
- Vulnerable and special needs populations are growing and require higher levels of protection.
- Sprinkler fire protection systems are the best, first defense against life and property loss but are not infallible. Layered fire protection is the appropriate risk mitigation approach.
- The life loss history in California continues to need improvement as does firefighter safety. Too many people still perish in preventable fires.
- The State Fire Marshal is charged with setting the fire and panic standards for California and has done so with an open, participative, research based and professional process for this adoption.
- The impact of our amendments is not far-reaching or overly restrictive. They are reasonable, focused, limited to those buildings with the greatest risk of life loss, and economically neutral.

The State Fire Marshal has placed the final reports and recommendations of the Phase I Residential Fire Sprinkler/Water Purveyor Task Force and the Phase II Residential Fire Sprinkler Installation Task Force on the OSFM web page located at [www.osfm.fire.ca.gov](http://www.osfm.fire.ca.gov).
Wildfire Protection Building Construction

The OSFM amendments to the California Building Code, 2010 edition have been revised to simplify user application of wildfire protection building construction requirements, to clarify the intent of the regulations, and incorporate advancements in understanding wildfire exposure protection while maintaining the overall hazard mitigation goals established in 2005. These amendments are based on recommendations of an ad hoc advisory group established by the State Fire Marshal.

The Wildfire Protection Building Construction “2010 CBC Ch7A” Task Force met periodically from March through June 2009. The Task Force had representation from five building construction associations and three fire service organizations (including Cal Chiefs Fire Prevention Officers and California Building Officials), four national fire testing laboratories including Western Fire Center, and subject matter experts in fire research and code compliance. The Task Force held two stakeholder meetings to receive input from interested parties and received participation from NFPA, ASTM, ICC Fire Code Committee, the Missoula Forest Fire Science Laboratory (USFS), and NIST. The State Fire Marshal is proposing amendments, correlated with wildfire protection provisions in the 2010 California Fire Code, California Residential Code and the California Reference Standards Code, that will achieve the first comprehensive revision of the standards since they were originally adopted.

The amendments adopted for the 2010 California Codes simplify subject matter organization and renumber sections to consolidate provisions on application, vents, exterior coverings, and standards of quality which were dispersed throughout the chapter. New examples, exceptions, and additional methods to achieve prescriptive compliance with the stated performance goals are proposed to simplify user application of the regulations. The original intent of the 2005 standards, to reduce the potential for disastrous building losses during wildfire conflagrations, is clarified and reflected in proposed uniform statewide exceptions for small and/or remote accessory buildings. Two new OSFM test standards are included in the 2010 California Reference Standards to simplify the building code with no change in regulatory effect by moving performance test requirements for decks and ignition resistant materials from the code to the new test standards.

The Task Force identified several issues that had not been fully addressed due to limited resources and the complexity of the issues. It is expected that future rulemaking cycles will address these issues which include the following:

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http://osfm.fire.ca.gov/
• The establishment of effective and cost-efficient weathering of paints, coatings and non-wood materials prior to fire testing similar to the 10-year natural weathering established for wood roof covering.
• The relative cost-benefit importance of wildfire exposure (e.g. wind-blown embers vs. direct flame contact) and hazard mitigation measures (e.g. decks, vent design, and vent location).
• Well supported wildfire exposure scenarios that are realistic and represent the actual hazard (e.g. 3 minute vs. 10 minute direct flame contact exposure and ember exposure) and appropriateness of the existing performance test requirements for ignition resistant materials.

The amendments do include increased prescriptive compliance options for vents, eave protection, and exterior surfaces which maintain or increase the degree of protection provided. Existing inconsistent provisions for weathering, the use of stains and coatings, testing, and tested material labeling are either clarified, repealed, or expanded to achieve consistent cost-effective minimum standards.

These provisions provide a reasonable degree of protection from diverse and unpredictable building ignition mechanisms resulting from exterior wildfire exposure, especially wind-blown burning embers. The extent and degree of these building construction regulations is based on a corresponding level of hazardous vegetation management immediately surrounding the building to mitigate the hazards from large-scale direct flame contact exposure. Effective cost and efficient ignition resistant building construction requires that the property be in compliance with the vegetation management requirements referenced in this chapter and in the California Fire Code.

Information
For more information about fire and building codes or information concerning fire and panic safety can also be obtained by visiting the OSFM web site www.osfm.fire.ca.gov.

To review all of the new codes to take effect in January 2011, visit the California Building Standards Commissions web site www.bsc.ca.gov.

Public Safety – Title 19
In 2009, several areas in the California Code of Regulations Title 19 were developed and published which affected OSFM statewide programs and local officials. Over the past year the Division achieved several major endeavors:
• Division staff worked with the Fire Prevention Officers Association to create an “inspector friendly” fire code book, incorporating enforcement provisions of Title 19 for local enforcement agencies into the 2010 California Fire Code.

• Published regulations for repeal of gasoline fuel containers, automatic fire suppression systems Type L (limited) license for in-house personnel, automatic extinguishing systems forms, Fireworks Flame-throwing Devices, and more.

• Proposing modifications to amend various outdated sections of Title 19 correcting outdated occupancy groups, editorial errors and referenced standards. Revisions include standards for waste containers and fire alarm, and requirements for clearances of hazardous vegetation and fuels around buildings and structures.

The Division also provides consulting assistance and review of other state agencies’ regulations for fire and panic safety. In January 2009, staff participated on the Department of Water Resources Committee for FloodSAFE buildings and their first public workshops on flood threats and code revisions.

Planning and Risk Analysis

Fire and Resource Assessment Program (FRAP)

In 2009 the Fire and Resource Assessment Program (FRAP) at the OSFM began a statewide assessment of California’s forest resources which is required by the 2008 Federal Farm Bill. By June 18, 2010, FRAP will have completed two documents: a statewide assessment of forest resources and a statewide forest resource strategy document.

A draft assessment will be available for public review in mid-February and a draft strategies document will be available in March. Information may be found at http://frap.cdf.ca.gov/assessment2010.html.

The FRAP Assessment document covers private and public ownerships and addresses three main themes: Conserving Working Forests, Protecting Forests from Harm and Enhancing Public Benefits from Trees and Forests. A number of sub-themes are covered such as Population and Development, Sustainable Working Forests, Wildfire Threat to Ecosystem Health and Community Safety, and Reducing Wildfire Risks. Possible impacts of Climate Change are also covered.

Under each theme, status and trends of the resource are summarized. For example, in the case of wildfire, several measures are used to show trends. Using data on fire
records and perimeters from 1950-2008, an average 320,000 acres burned annually. However there is very large variability in annual acres burned from year to year, largely due to weather conditions and large lightning events that result in many dispersed ignitions in remote locations. Annual totals range from a low of 31,000 acres in 1963, to a high of 1.37 million acres in 2008.

Looking at the fire acreage organized by decade and by life form, fire is most common in shrub-lands. Conifer, Hardwoods and Grasslands all burned relatively similar amounts through the 70’s, 80’s and 90’s, after which Conifer lands show a very large increase in annual acres burned (during the most recent decade). Between 2000 and 2010 Conifer acres burned has been averaging 193,000 acres per year, compared to an average of 48,000 acres over the previous four decades. Non-wildland areas all burn at relatively low rates, and appear to show no significant trends, although some of the landscape that burned historically is now in a different cover type due to various factors.

In addition to these trends in wildfire amounts, there is also recent research indicating trends of increased fire severity, particularly in coniferous forest types of the Sierra Nevada. The increase in both amount and severity of fire implicates significant increases in fire risk to both ecosystems and public safety. Rural development growth in the Sierra increases assets exposed to damage from fire. The implication of climate change may well make for increasing hazards and risks associated with vegetation fires. In a similar pattern, a number of studies have shown trends of increasing cost of fire suppression and losses. Collectively, research suggests that the patterns exhibited in recent history will only get worse due to changes in both threats and in assets exposed to damages, magnifying the need for comprehensive planning and strategies designed to effectively mitigate these risks.

As a follow up to trend analysis, each theme and its related subthemes are analyzed spatially using a variety of statewide geographic datasets. Results are discussed, summarized and displayed in the form of statewide or regional maps covering all land ownerships. Lands that are of concern as having both high value and threat to those values are suggested as priorities for strategies to deal with issues in those areas.
One example is an analysis that identifies unique ecosystems that have high levels of risk of damage from future wildfires. As such, the intent is to focus on suggested areas that might have priority for actions for resource protection in the future. The analysis is complex and delineates threats from wildfires both at the stand- and landscape- level threat. Estimated results are that statewide, there are 18.4 million acres that might be considered High Priority for possible action. There are large concentrations in the South-Coast, Sierra Nevada, Great Basin, Modoc Plateau, and the Northwest interior regions of the state as shown in the map below on Priority Landscapes for Preventing Damage to Ecosystem Health. Note that roughly half of this total (9.3 million acres) is on Public lands.

Regarding strategies or approaches that can be taken at the ecosystem level to reduce future damages from wildfire, these vary by the type of ecosystem under concern. Typically, approaches directly try to mimic the effects of the native fire regime on that system, or indirectly by either avoiding damaging wildfires, or by modifying the fuel and ecosystem components so that they are more resilient to damage. To a large degree, these approaches are already in practice in California by agencies, communities, landowners, and other stakeholders. There is an existing and growing number of Fire Safe Councils, Firewise communities and similar activities. However, a number of factors, including funding, perceived adverse impacts of treatments, and resistance to change limit the extent of such efforts. The challenge is to find ways to improve existing efforts and overcome the limitations.

Fire Hazard Severity Zone Progress
Since 2008, CAL FIRE has been updating its recommendations for Very High Fire Hazard Severity Zones (FHSZ) in Local Responsibility Areas. Based on these recommendations, local agencies can update their local zoning to reflect Very FHSZ.

In 2009, FRAP completed Fire Hazard Severity Zone recommendations for the counties of: Calaveras, Contra Costa, Lake, Plumas, San Diego, San Luis Obispo, and
Siskiyou. Recommendations for cities and some unincorporated areas in Riverside County were released in January 2010. The three major remaining counties are Los Angeles, Orange, and Ventura; these are slated for completion in the first part of 2010.

**California All Incident Reporting System (CAIRS)**

The California Health and Safety Code 13110.5 states that the Office of the State Fire Marshal (OSFM) shall gather statistical information from California fire departments on all fires, medical aid incidents and hazardous materials incidents. Participating fire departments report their data to the OSFM through the National Fire Incident Reporting System (NFIRS). NFIRS was 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. Fire statistical reports showing various relationships between fire causes, effects, contributing factors, etc. are available at [http://www.osfm.fire.ca.gov/cairs/cairs_nfirsreports.php](http://www.osfm.fire.ca.gov/cairs/cairs_nfirsreports.php).

Fire personnel reporting the circumstances of the incidents while using a reliable and consistent coding methodology are key elements in developing profiles that affect a department’s decisions. Incident data can be used by fire departments to document their experience, support management decisions, and justify budget requests.

Local agencies and CAL FIRE units forward their incident data to the OSFM, where the information is imported into a statewide database and forwarded to the USFA. A state or national fire profile can be developed and trends in fire problems can be detected that are often too infrequent to be seen at the local level. Trend information can be used to target fire safety and prevention programs and to assist in identifying the safety level of various products and standard practices. The benefits of incident reporting can only be discovered through use of the system over time.

**Benefits of Incident 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 districts 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.

The growth of participation has been driven by the U.S. Department of Homeland Security – Assistance to Firefighters Grants (AFG) program. The grant recipients must report their incidents to the USFA through NFIRS for the period covered by the assistance or for a twelve month period commencing as soon as they develop the capacity to report. For more information regarding the AFG program, please visit [http://www.usfa.dhs.gov/fireservice/grants](http://www.usfa.dhs.gov/fireservice/grants).

For assistance with incident reporting to the OSFM, please contact Kirsti Fong at (916) 445-8435 or kirsti.fong@fire.ca.gov or www.osfm.fire.ca.gov/cairs/cairs.php.

For assistance with NFIRS Online (CAIRS) for CAL FIRE, please contact William Gordon at (916) 324-3292 or william.gordon@fire.ca.gov.

Data and Correlated Trends in the California Fire Service
As of January 19, 2010, NFIRS data reported to the OSFM for 2009 included information on more than 1.3 million incidents.

### 2009 Summary of Responses by Incident Type

<table>
<thead>
<tr>
<th>Incident Type</th>
<th>Incident Count</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fire (Incident Types 100-173)</td>
<td>51,487</td>
<td>3.9%</td>
</tr>
<tr>
<td>Overpressure Rupture, Explosion, Overheat, No Fire (200-251)</td>
<td>1,731</td>
<td>0.1%</td>
</tr>
<tr>
<td>Rescue and Emergency Medical Service Incident (300-381)</td>
<td>932,743</td>
<td>70.8%</td>
</tr>
<tr>
<td>Hazardous Condition, No Fire (400-482)</td>
<td>25,694</td>
<td>2.0%</td>
</tr>
<tr>
<td>Service Call (500-571)</td>
<td>76,744</td>
<td>5.8%</td>
</tr>
<tr>
<td>Good Intent Call (600-672)</td>
<td>130,675</td>
<td>9.9%</td>
</tr>
<tr>
<td>False Alarm and False Call (700-751)</td>
<td>92,652</td>
<td>7.0%</td>
</tr>
<tr>
<td>Severe Weather and Natural Disaster (800-815)</td>
<td>391</td>
<td>0.0%</td>
</tr>
<tr>
<td>Special Incident Type (900-911)</td>
<td>4,942</td>
<td>0.4%</td>
</tr>
<tr>
<td><strong>2009 Total (as of 01/19/10)</strong></td>
<td><strong>1,317,059</strong></td>
<td></td>
</tr>
</tbody>
</table>
All Fires Reported to the OSFM for 2009

<table>
<thead>
<tr>
<th>Incident Type</th>
<th>Number of Incidents</th>
<th>Property Losses</th>
<th>Contents Losses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Structure Fire</td>
<td>15,513</td>
<td>345,414,737</td>
<td>147,147,535</td>
</tr>
<tr>
<td>Fixed Structure Fire in Mobile Property used as</td>
<td>392</td>
<td>4,926,521</td>
<td>1,965,227</td>
</tr>
<tr>
<td>Vehicle Fire</td>
<td>10,380</td>
<td>70,314,813</td>
<td>8,253,737</td>
</tr>
<tr>
<td>Natural Vegetation Fire (excludes crops/plants)</td>
<td>11,312</td>
<td>339,097,956</td>
<td>30,110,586</td>
</tr>
<tr>
<td>Outside Rubbish Fire</td>
<td>9,547</td>
<td>1,512,301</td>
<td>454,328</td>
</tr>
<tr>
<td>Special Outside Fire (includes outside fires with definable value)</td>
<td>1,743</td>
<td>7,718,229</td>
<td>5,335,066</td>
</tr>
<tr>
<td>Cultivated Vegetation Crop Fire</td>
<td>405</td>
<td>1,677,377</td>
<td>740,941</td>
</tr>
<tr>
<td>Fire, Other</td>
<td>2,195</td>
<td>107,848,691</td>
<td>4,049,080</td>
</tr>
<tr>
<td>2009 Total (as of 1/19/10)</td>
<td>51,487</td>
<td>$878,510,625</td>
<td>$198,056,500</td>
</tr>
</tbody>
</table>

Arson Fires in California Reported to the Office of the State Fire Marshal
(as of 1/19/10)

| All Reported Fires (Authorized and Prescribed Burning not included) | 54,699 | $881,469,852 | $199,023,163 |
| All Arson Fires | 5,997 | $46,576,380 | $20,592,155 |
| Arson Fires - Vehicle | 1,574 | $15,289,725 | $736,255 |
| Arson Fires - Structure | 1,158 | $30,321,404 | $19,586,082 |
| Arson Fires - Residential | 555 | $25,355,291 | $17,758,796 |
| Arson Fires - Wildland (Authorized and Prescribed Burning not included) | 1,153 | $254,943 | $63,475 |
| Percentage of Fires Related to Arson | 11% | 5% | 10% |

* 459 Fire Departments Reporting in 2009 (a fire department may include additional reporting stations)

The data contained in these reports comes from the CAL FIRE CAIRS database. Property and contents loss figures, if included herein, are estimates only. These emergency incident statistics, including injury and death counts, are based 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. While incoming data is validated according to logical data rules, individual data elements can not always be verified for accuracy.
Engineering and Enforcement

Fire Engineering
The Office of the State Fire Marshal’s Fire Engineering Division is responsible for 12 statewide programs, which includes Building Materials Listing, Wildfire Protection Building Construction, Title 19 Regulations Development, Portable Fire Extinguishers, Flame Retardant Chemicals and Fabrics, Vapor Recovery, Automatic Fire Extinguishing Systems, Certified Unified Program Agency (CUPA), Licensing Enforcement and Inspections, Laboratory Accreditation, Fireworks/Explosives, and Motion Picture and Entertainment.

Automatic Fire Extinguishing System Program
- License Companies: The Automatic Fire Extinguishing System Program has processed 65 licenses for companies statewide.
- Regulations Update: The Program has established a new Limited License category (Type L) for inspection testing and maintenance of automatic extinguishing systems which allows the building owner or tenant who have trained and experienced employees to conduct inspections, annual testing, and maintenance of wet pipe sprinkler systems, standpipe systems or private fire service mains in structures or properties they own or lease.
- Certificate of Registration: The program has established a “Weekly Fire Pump Certificate of Registration” for employees of the new Type L licensed companies who perform weekly tests of fire pumps.

Building Materials Listing Program
- Building Materials Listing: The Listing service processed 2,424 annual renewals, 139 new listings, 128 technical revisions, 28 cross-listings, 59 non-technical revisions. The program also reviewed and approved seven Wildland Urban Interface (WUI) building material products. Staff completed revisions of Title 19 regarding the listing requirement childproof, portable gasoline containers.

Certified Unified Program Agency (CUPA)
- CUPA Evaluations: Of the 83 Certified Unified Program Agencies in the state (of which at least 26 agencies include fire authorities), 23 CUPA evaluations were conducted. The OSFM completed all 10 CUPA evaluations that required the presence of the OSFM in coordination with the California Environmental Protection Agency, State Water Resources Control Board, Department of Toxic Substance Control, and the California Emergency Management Agency. Twenty-six CUPAs have been selected for Unified Program evaluation in 2010.
CUPA Web site and Electronic Reporting (Assembly Bill 2286): The CUPA homepage has been revised with a new list of menu items on the left-hand side of the page, which may be viewed at: http://osfm.fire.ca.gov/cupa/cupa.php.

Assembly Bill 2286 (“Electronic Reporting” or California Electronic Reporting System [CERS]) which came into effect January 1, 2009, requires all regulated businesses and all regulated local government agencies to use the internet to file required Unified Program information by January 1, 2013. As the objectives of the Work Group near completion, the following items have been achieved, which may be viewed on Cal/EPa’s Electronic Reporting Website at http://www1.calepa.ca.gov/CUPA/EReporting/.

Licensing Enforcement/Inspection Program
The Fire Engineering Division has established the Enforcement and Inspection Program to support all Fire Engineering's programs. The program staff has completed 76 cases in 2009. The program staff are actively strengthening our enforcement activities and working closely with the local authority having jurisdictions throughout California. In addition, the Investigators may provide both internal and external training on laws and regulations as related to Fire Engineering Division activities and may be assigned to special law enforcement operations when the need arises.

Fireworks Program
- Pyrotechnic Operator Licensing: The OSFM Fireworks Program currently has 12 individual license classifications for pyrotechnic operator as follows: Unrestricted, Basic Commercial, Restricted Commercial, Rocket 1st Class, Rocket 2nd Class, Rocket 3rd Class, Special Effects 1st Class, Special Effects 2nd Class, Special Effects 3rd Class, Theatrical Trainee, Theatrical, and Performer. The total amount of renewal licenses issued this year was 1,482. The program processed 51 new/upgraded licenses.
- Products Approval: One of the responsibilities of the OSFM Fireworks program is the testing and evaluation of new firework/pyrotechnic devices for consumer use. Program staff reviewed and approved 50 new consumer rocket motors (model and high power) for consumer use. In addition to rockets, the program staff has tested and approved 14 new Safe and Sane devices.
- Company Licensing: The program has issued 3,314 retail licenses this past year for the sale of Safe and Sane fireworks throughout the state. In addition to retail licenses, the office also issues licenses for the Manufacturer of Firework Items, the Importation and Exportation of firework items and
wholesaling of firework items. There are currently 53 of these types of licenses collectively. The program is also responsible for the issuance of public display licenses to companies that conduct public firework activities within the state. There are currently three types of public display licenses as follows: 23 General Public Display, 16 Special Public Display, and 3 Limited Public Display.

- Disposal of Seized Fireworks: The fireworks program is also responsible for the collecting of seizure forms/data compiling the amounts and the destruction of seized dangerous fireworks. Currently there are 40,567 pounds seized dangerous fireworks for the year 2009.

Fire Safe Cigarette Program
Since 2006, state law requires cigarette manufacturers to file a written certification to the OSFM that each cigarette listed has been tested in accordance with Health and Safety Code Section 14952. In an effort to provide information to the enforcing authorities, the program has reviewed, verified, and approved 81 cigarette products in 2009.

Flame Retardant Chemical and Fabric Program
- Certification and Registration: The Flame Retardant Program has processed 343 Limited Applicator, 139 General Applicator, 520 Fabric, and 106 Chemical Registrations for the year. The examinations for General and Limited Applicators have been restructured to refine and improve the methods of service and standardize procedures.
- Regulations Update (Title 19, CCR, Chapter 8): The office has started the process to update Title 19, Chapter 8 - Regulations Relating to Flame-Retardant Chemicals, Fabrics, and Application Concerns. Draft proposed regulations have been developed with the assistance of the Flame Retardant Advisory Committee. Changes pertain to test standards and procedures, fees, qualifications, and examination procedures.

Motion Picture and Entertainment Safety Program
In the effort to retain the motion picture industry in the Los Angeles area and in California, on December 11, 2009, the Motion Picture & Entertainment Safety Program, in partnership with FilmLA, hosted a pyrotechnic demonstration to educate public officials regarding the importance of motion picture filming and the use of pyrotechnic special effects.

- Permitting: The Motion Picture and Entertainment Safety Program has reviewed and approved over 800 filming permits issued by the California
Film Commission. The program also processed 46 Pyrotechnic Special Effects, 52 Open Flame Special Effects, and 12 Motion Picture tent use permits for the year. The program managed many complex, major freeway closure permits for motion picture filming throughout California.

- Training and Partnership: The program staff conducted two Motion Picture Fire Safety Officer training classes at Sony Pictures and the Burbank Fire Department; certifying approximately 135 Fire Safety Officers. The program, in partnership with the Fire Engineering Fireworks Program and State Fire Training, developed the State’s first “Proximate Audience Pyrotechnic” training class. This class is tentatively scheduled for delivery in the first quarter of 2010.

Portable Fire Extinguisher Program
- Licensing and Certification: The Fire Extinguisher Program has processed 1,950 Certificate of Registrations and 476 company licenses. This year the program also initiated a random testing program and has retested 425 Certificate of Registration holders statewide.

Wildfire Protection Building Construction Program
The Wildfire Protection Building Construction Program provides statewide direction, coordination and facilitation on the implementation of Chapter 7A “Materials and Construction Methods for Exterior Wildfire Exposure” of the California Building Code (CBC). Program staff is working with fire research, testing laboratories, industry, and other stakeholders.

- Building Code Compliance Facilitation: To improve compliance with wildfire protection building code requirements a new procedure was established to create formal California Building Code (CBC) “Chapter 7A Compliance Policies”. These OSFM policies (available at http://osfm.fire.ca.gov/codedevelopment/wildfireprotectionbuildingconstruction-cbc2010ch7ataaskforce.php) provide options for code compliance and supplement the five new OSFM code interpretations drafted this year on wildfire protection provisions of the building code.

- Training and Education: Program staff conducted thirteen presentations, seminars, and workshops to the OSFM staff, local enforcing agencies, industry, and construction representatives during the year on the Wildland-Urban Interface (WUI) fire problems and wildfire protection building code requirements. Support was provided to the California Fire Chiefs Association, Fire Prevention Officers Section (http://www.firepreventionofficers.org) where staff served as Co-Chair to the Northern Division WUI Com-
A presentation on ignition resistant building construction and the use of buildings for firefighter refuge was made to the “10th Wildland Fire Safety Summit” conference sponsored by the International Association of Wildland Fire.

- Support for Codes and Standards: Participated with the ASTM (American Society for Testing and Materials) “Subcommittee on External Fire Exposures” (http://www.astm.org/COMMIT/COMMITTEE/E05.htm) and the NFPA “Forest and Rural Fire Protection Technical Committee”.

Enforcement

This year, in addition to the day-to-day workload of the Law Enforcement section of CAL FIRE’s Fire Prevention Program, personnel also worked to develop and implement a new POST (Peace Officers Standards and Training) required Field Training Program. The Field Training Program is required for all Peace Officers who fall under certain sections of the penal code – in this case 830.2. It is a 10 week program and is in addition to the 20 week Regular Basic Training required for all POST certified peace officers. A lot of hard work by very dedicated employees went into developing CAL FIRE’s new program and the officers who graduate from the current Regular Basic Course in Ione will be the first to go directly into the Field Training Program.

The Field Training Program is designed for Peace Officers much like the JAC (Joint Apprenticeship Committee) program is for Firefighters. It is intended to facilitate a peace officer’s transition from the academic setting to the performance of their duties in the field. Although an officer graduating from the Regular Basic Course has received thorough instruction on basic law enforcement subjects, that officer cannot be expected to immediately assume the full responsibilities of an experienced officer. Newly assigned officers must receive additional training in the field where they can learn from officers who have already gained a great deal of practical experience. The Field Training Program introduces a newly assigned officer to the personnel, procedures, policies, and purposes of CAL FIRE’s law enforcement program and provides the initial formal and informal training specific to the day-to-day duties of its officers. POST requires agencies to provide a minimum 10-week Field Training Program which is expected to achieve the following goals:

- To produce a competent peace officer capable of working a solo assignment in a safe, skillful, productive, and professional manner.
- To provide standardized training to all newly assigned peace officers in the practical application of learned information.
To provide clear standards for rating and evaluation which give all trainees every reasonable opportunity to succeed.

To enhance the professionalism, job skills, and ethical standards of the law enforcement community.

CAL FIRE’s Field Training Program is designed much like those of our partner agencies (i.e. the Department of Fish and Game and State Parks and Recreation). Our training manual, the “Field Training Guidebook” uses the standard template required by POST and is set up similar to an ICS (Incident Command System) task book. It is divided into subject areas with defined training tasks. These tasks can be accomplished in several different ways: field performance (actual live contact during normal call for service), role playing (scenarios) and written or verbal test. CAL FIRE’s “calls for service” are limited in scope as compared to a Police Department or Sheriff’s Office, much like our Resource Agency counterparts. However, our officers are peace officers whose authority extends statewide. We have the authority to enforce all state laws but our primary duty is the enforcement of the law as is set forth in Section 4156 of the Public Resources Code, the enforcement of forest laws and regulations, state and county fire laws and regulations, and the laws relating to explosives. The goal of the Field Training Program is to provide every possible tool to our peace officers so that they can safely, effectively and efficiently perform the duties of a CAL FIRE Peace Office

**Pipeline Safety**

The Office of the State Fire Marshal is directly responsible for regulating the safety of approximately 5,800 miles of hazardous liquid transportation pipelines within California. The Pipeline Safety Division (PSD) consists of 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 act as an agent of the federal Office of Pipeline Safety in the inspection of more than 1,100 miles of interstate pipelines.

The pipeline industry continues to show remarkable improvements in the reduction of pipeline leaks reflected in a decade long decline. This remarkable

<table>
<thead>
<tr>
<th>Pipeline Infrastructure Under SFM Regulation CY 2009</th>
<th></th>
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</thead>
<tbody>
<tr>
<td>Intrastate Operators</td>
<td>47</td>
</tr>
<tr>
<td>Interstate Operators</td>
<td>9</td>
</tr>
<tr>
<td>Pipeline Facilities</td>
<td>349</td>
</tr>
<tr>
<td>Breakout Tanks</td>
<td>712</td>
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<tr>
<td>Mileage of Intrastate PLs</td>
<td>4651</td>
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<tr>
<td>Mileage of Interstate PLs</td>
<td>1161</td>
</tr>
<tr>
<td>Probable Violations Issued</td>
<td>64</td>
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</table>
improvement in pipeline releases can be attributed to an OSFM inspection program that emphasizes cooperation, training, and enforcement; and with the advent of new inspection technology and a statewide emphasis on third party damage prevention. The PSD investigated 2 pipeline incidents in 2009.

In accordance with federal law, no State may regulate hazardous liquid pipelines unless their program is certified by US Department of Transportation’s Office of Pipeline Safety. The California State Fire Marshal’s program has been certified since 1981. This certification assures 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 2009, the California State Fire Marshal’s program received a rating of 95%.

Pipeline Leak Decline, 2000 - 2009

<table>
<thead>
<tr>
<th>Year</th>
<th>Operator</th>
<th>Location (County)</th>
<th>Commodity</th>
<th>Barrels Spilled</th>
<th>Cause</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000</td>
<td>Vintage</td>
<td>Orange</td>
<td>Crude Oil</td>
<td>15</td>
<td>Atmospheric Corrosion</td>
</tr>
<tr>
<td>2001</td>
<td>Venoco</td>
<td>Santa Barbara</td>
<td>Crude Oil</td>
<td>11</td>
<td>Internal Corrosion</td>
</tr>
<tr>
<td>2002</td>
<td>Vintage</td>
<td>Orange</td>
<td>Crude Oil</td>
<td>14</td>
<td>Atmospheric Corrosion</td>
</tr>
<tr>
<td>2003</td>
<td>Vintage</td>
<td>Orange</td>
<td>Crude Oil</td>
<td>12</td>
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<tr>
<td>2004</td>
<td>Vintage</td>
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<td>11</td>
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<td>Vintage</td>
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<td>Crude Oil</td>
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<tr>
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<td>Crude Oil</td>
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<tr>
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<td>Vintage</td>
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<td>Crude Oil</td>
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<td>2008</td>
<td>Vintage</td>
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<td>Crude Oil</td>
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State Fire Training

State Fire Training operates in conjunction with the Statewide Training and Education Advisory Committee (STEAC) and the State Board of Fire Services (SBFS).
They review and make recommendations to the State Fire Marshal for approval of new curriculum projects, programs, as well as changes to current business processes and programs. The significant recommendations to the SFM in 2009 are as follows:

**State Board of Fire Services**
- Fire-Arson Investigator Certification Training Standards.
- Community Risk Officer Certification Training Standards.
- Company Fire Officer Certification Training Standards.
- Accreditation for Mount San Antonio College, San Jose Fire Department, Lake Tahoe Community College and Monterey Peninsula College.

**Statewide Training and Education Advisory Committee**
- New accreditations for Monterey Peninsula College, Lake Tahoe Community College.
- Re-accreditation of Mount San Antonio College and San Jose Fire Department.
- Fire-Arson Investigator Certification Training Standards (CTS) final draft.
- Rapid Intervention Crew (RIC) Tactics Curriculum revision and update.

**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 2009 there were 1,068 CFSTES certification classes delivered statewide to 15,592 students; with a total of 3,615 professional certifications issued among twelve certification types.

**Fire Service Training and Education Program (FSTEP)**
The Office of the State Fire Marshal administers the FSTEP and makes available 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. In 2009, 1,328 FSTEP classes were delivered to 26,560 students.

**Training Trends**
The total number of State Fire Training approved CFSTES and FSTEP classes and students for 2009 are represented on the table below.
Classes    Students
CFSTES     1,068     15,592
FSTEP      1,328     26,560
Total      2,396     42,152

An analysis of the past five years, of approved classes, indicates that State Fire Training classes are increasing - CFSTES class deliveries by 50% and FSTEP class deliveries by 70% in the past five years. This trend suggests the need for certification training and hands on or specialty courses still exists and continues to grow exponentially.

Curriculum Projects 2009
Curriculum projects do not always fall neatly within an annual year. A re-cap of programs that have completed their transition, the status of on-going projects, or projects that are just getting started are described below:

Programs Completed in 2009
- Changes to Training Instructor Courses: Training Instructor 1A through 1C now include updated instructor guides, student supplements, and Powerpoint slide presentations for all three courses. All the changes to the Training Instructor series will culminate with instructor candidates completing their Training Instructor Task books and successfully passing the Capstone Test. Registered Instructors were provided with an update class as a function of institutionalizing the changes to the Training Instructor Series in 2009.
- Fire Officer Certification Training Standards: The Certification Training Standards for the Fire Officer Certification track was divided into three sections, Company Officer, Chief Fire Officer, and Executive Chief Officer; and completed in 2009. The Curriculum cadre is now charged with identifying specific classes and course requirements.
- Management Level 2: New course outlines were developed which contain updated editions of approved textbooks that were added to the Course Information and Required Materials Manual. A letter to all Registered Management level 2 instructors, Fire Technology Directors, and Accredited Academies were distributed in 2009.
- Fire Control 3 (FC-3A 3B): The Live Fire Training curriculum was updated to
meet the NFPA 1403 standard and split into two courses: FC-3A, Structural Fire Fighting in Acquired Structures and FC-3B and Structural Fire Fighting in Live-fire Simulators. The Course Guides were completed for each course along with the Position Task Books for both the Primary and Senior Coordinators. The curriculum was approved in the spring and nine update classes were provided for over 250 SFT registered FC-3 instructors in 2009.

- Rescue Systems 1 & 2 (2010): Updated versions were completed in 2009 and will be completely transitioned in 2010. The program was funded and supported by the California Emergency Management Agency. The updated versions include site and instructor requirements, and new content based on Federal and State guidelines and regulations. These classes were provided for all Registered Rescue Systems instructors in 2009. A total of 203 out of 297 Rescue Systems 1 (2010) Instructors and 59 out of 80 Rescue Systems 2 Instructors attended the update class.

- Emergency Response to Alternative Fuel Vehicles: Funded by the California Air Resources Board (CARB), this new FSTEP training program provides registered auto-extrication instructors a new tool and perspective in their training. The Alt-Fuel training program provides a background on each of the alternative fuel/energy sources powering vehicles on the road today. The “Emergency Response” section of this class transitions smoothly into a discussion for emergencies involving fires and extrication. A train-the-trainer class was hosted by Training Officers Section of the California Fire Chiefs Association at the 2009 Training Officers Symposium in Fresno.

Peer Assessments for Credential Evaluation (PACE) II
To be an Instructor for State Fire Training a review of the application is now processed by SFT staff. Once the application is approved the instructor is registered to begin teaching SFT courses. In 2009 over 700 applications were reviewed and a total of 263 new instructors were registered.

Approved Rescue Training Sites
State Fire Training Staff in cooperation with the California Emergency Management Agency’s Fire and Rescue Branch and Senior Instructors 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. In 2009 there were 12 approved rescue training sites which include:

New Confined Space Rescue Training Facilities
- Camp Pendleton
- Riverside
- Orange County Fire Authority
Rescue Systems 1
- Glendale Fire Department
- San Luis Obispo Fire Department
- NASA AMES Training Center
- Ione CAL FIRE Academy
- Yuba City Fire Department

Rescue Systems 2
- Los Angeles County Fire Department
- Riverside Fire Department

National Fire Academy (NFA) Grant
The NFA provides grants for course deliveries throughout the state. State Fire Training conducted a needs analysis and found that Rapid Intervention Crew Tactics (RIC) was still needed in many rural areas of the state for both volunteer and combinations fire departments. With funding provided by the NFA, State Fire Training was able to deliver 7 RIC classes in areas of California where training is difficult to access.

Fire and Life Safety

The Fire and Life Safety Division is the largest unit within the OSFM and is the authority having jurisdiction in state owned/occupied facilities which involves plan review, construction inspections, fire and life safety inspections; all to assure compliance with pertinent laws and regulations.

In 2009 the Fire and Life Safety Division hired seven Deputy State Fire Marshals and one Deputy State Fire Marshal Supervisor. This brings our personnel count to 3 support staff, 24 Deputy State Fire Marshals, 5 Deputy State Fire Marshal Supervisors and two Division Chief's.

Staff approved and finalized a new $270 million dollars, approximately 190,000 square foot, 19 story high-rise (CA State Teacher Retirement System) building in West Sacramento. We conducted approximately 9,980 field inspections which include new construction, tenant improvements, remodels and routine fire and life safety inspections of existing state owned and state leased facilities, prisons, state hospitals, Caltrans air space, California State Universities and Department of Water Resource facilities. Fire and Life Safety staff conducted 2,337 state
occupied building plan reviews, 367 of which were for the California State University Campuses statewide. We completed and implemented the Deputy State Fire Marshal Training Manual, New Employee Orientation Guide, Caltrans Airspace Inspection Program, Department of Water Resources (California Aqueduct) annual inspection program and the creation of the electronic State owned data base. In addition, our division responded to approximately 24 reported incidents at state facilities; one which is estimated at approximately $6 million dollars in damage to State property.