

OFFICE of the STATE FIRE MARSHAL

July 2010 Report

OSFM Monthly Report

- Message from Tonya L. Hoover
- Code Development and Analysis Division
- Pipeline Safety Division
- Fire and Life Safety Division

The Fireline

- Regional Instructor Orientation Revisited
- PV Training on Time and on Track



**Acting State Fire Marshal
Tonya L. Hoover**

July Message from the Chief:

As we begin a new fiscal year; the mid-mark of the calendar year; and fire season, I know we are all mindful of the enormity of our responsibilities. We and our staff find it necessary to do more with less in our personal and professional lives; all the while maintaining our dedication and commitment to the fire service. If we liken the fire service to a book or story, we find there is *dialogue* that includes sharing information internally and externally on a department-wide basis and with the public. Our story has *characters* who are the people with whom we interact and communicate every day. We have a *plot*; better known as the storyline or all the events in the story which affects our communities. The last piece is the *pace* which is the tempo that makes a story more enjoyable and impels us to take the time and effort to read. It provides the cadence for the details we need to share in order to illustrate the challenges, successes, and services that lead our readers to a better understanding and a secure knowledge that we are meeting the needs and expectations of their communities.

One of the many ways the fire services' story is told is by its incident reporting. Every year the fire service is asked to define their budgets, justify their staffing, and validate the total force efforts in fire protection, prevention and risk reduction. From 2007 – 2009, of the approximately 1,020 California fire departments, approximately 416 (40%) reported to the California All Incident Reporting System (CAIRS), which feeds into the National Fire Incident Reporting System (NFIRS). Thus, when the California fire service reports to CAIRS, it is also reporting to the United States Fire Administration. In support of your reporting efforts and to provide timely data, this year we moved from an annual to a quarterly uploading of the CAIRS data to the national database utilizing the same reporting format as NFIRS, so the information can be collected, imported, and mined more efficiently.

This means your department may tell its story more effectively and succinctly, by reporting incidents to the OSFM – CAIRS Unit. The goal to capture 100% reportable data is essential! In many cases, detailed incident reporting is directly tied to funding opportunities. Without the ability to articulate local and state-wide needs, we may find that support, justifications, personnel and grant dollars slip away. Every incident reported and each carefully completed report is the necessary piece of a great story. By using data, we are able to articulate our efforts of providing key services and reducing our communities' risks. If your department would like more information about the State's reporting system, please go to: <http://www.osfm.fire.ca.gov/cairs/cairs.php>.

Make sure your story is being told.....report your incidents to CAIRS.

Be safe!

A handwritten signature in black ink that reads "Tonya L. Hoover".

Tonya L. Hoover
Acting State Fire Marshal



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Code Development and Analysis Division

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

CCR, Title 24, 2010 California Building Standards Code

The 2010 California Building Standards Codes are proposed to be published July 2010, having an effective date of January 1, 2011. 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 of the 2010 California Building Standards Code.

This triennial edition, the 2010 California Building Standards Codes adopts by reference the 2009 International Building (IBC) and Fire Code (IFC), the 2008 National Electrical Code (NEC) and the 2009 Uniform Mechanical (UMC) and Plumbing Code (UPC) with modifications and amendments that; correct omissions, complete prior tasks and further augment the adoption of the California Codes while continuing to bring California the best set of building and fire codes possible. Additionally, California's first partnership with the International Residential Code was included in this rulemaking for the California Residential Code. The following parts of Title 24 make up the OSFM's Building Standards:



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- Part 2 – 2010 California Building Code (2009 IBC)
- Part 2.5 – 2010 California Residential Code (2009 IRC)
- Part 3 – 2010 California Electrical Code (2009 NEC)
- Part 4 – 2010 California Mechanical Code (2009 UMC)
- Part 5 – 2010 California Plumbing Code (2009 UPC)
- Part 9 – 2010 California Building Code (2009 IFC)
- Part 12 – 2010 California Referenced Standards Code

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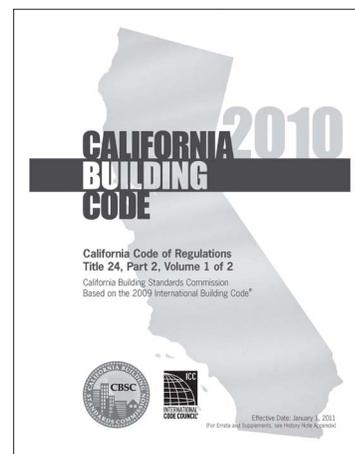


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Code Adoption/Amendment Highlights

Part 2, 2010 California Building Code

- Reclassify I-1 to R2.1 (Residential Care Facilities greater than 6)
- Protective Social Care modifications and clarifications
- Clean up and reorganization of many SFM amendments for the format of the model codes
- Correlate number of occupants in R-3, R3.1, R-4, R-2.1 and I-4 occupancies with statute
- Coordination of several operational constraints for I-3 occupancies with the California Department of Corrections
- Modifications to addressing H and L occupancies above the 10th story and a 20 story limit
- Hazardous materials transportation limitations within H and L occupancies
- Codified OPS92 IB for nurses stations and corridors in I-2 occupancy
- Coordination of E-occupancy public and private schools for K-12 means of egress, separation and fire sprinkler protection and fire alarms provisions
- Modifications for Elevator lobbies that clarify their application in high-rises
- Modifications for corridor penetrations that reinstate 2001 CBC and other provisions for I-2 occupancies that maintain fire safety while lessening the economic impact
- Wildfire protection building construction (Chapter 7A and test standards) revised to simplify user application, clarify the intent of the regulations, and incorporate advancements in the standards through the understanding wildfire exposure protection
- Clean up of fire alarm provisions for motion pictures/studios/TV broadcast station/studios
- Amendments to maintain two means of egress from large multi-story dwellings and from the third floor of dwelling units
- Correlated provisions between CBC, CFC and T-19 for tents and membrane structures, SFM now able to most IBC/IFC provisions with modification in lieu a stand alone chapter
- Updated reference standards throughout



Part 2.5, 2010 California Residential Code (New Code for California)

- Automatic fire sprinkler systems required for new one- and two-family dwellings and townhouses

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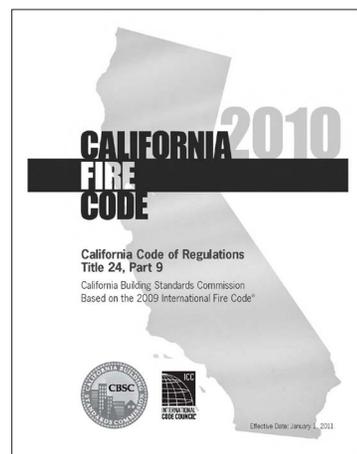
- Automatic fire sprinkler modifications for reduction of wall rating in garages
- Set back reductions for dwellings with automatic fire sprinklers
- Maintain door closures for doors between garages and dwellings (no change from 2007 CBC)
- Protection of underside of carports with habitable space above (no change from 2007 CBC)
- 42 inch guardrail (no change from 2007 CBC)
- Correlate IRC with CBC for interior finish flame spread (no change from 2007 CBC)
- Clean up/correlate smoke alarm provisions with CBC and statute
- Residential Care Facility provisions for less than 6 (R-3.1 occupancy) located in Section R325
- Wildfire exposure (CBC 7A) provisions located in Section R327
- Rewrite/revise roofing provisions for minimum Class C statewide and correlate with CBC the Class A and B provisions
- Second means of egress maintained from third floor of dwellings

Part 9, 2010 California Fire Code

- Coordinate provisions for unvented heating appliances with the Department of Housing and Community Development and statute (HSC 19881)
- Adopt more of the base model code provisions that were once considered as non-building standards or maintained in CCR, Title 19
- Complete review and overhaul of existing amendments for clarity and application of fire protection systems in chapter 9
- Hazardous materials transportation limitations within H and L occupancies
- Address alternative reference standard for dry cleaners to utilize NFPA 32
- Correlated provisions between CBC, CFC and T-19 for tents and membrane structures, SFM now able to most IBC/IFC provisions with modification in lieu a stand alone chapter
- Adoption of Chapter 25 for tire storage and further amend in coordinating with CalRecycle (California Intergraded Waste Management Board) CCR, Title 16 provisions
- Reprint various enforcement provisions of CCR, Title 19 into the CFC for better uniformity
- Modifications for certain occupancies located along highways, on beaches and state parks
- Updated reference standards throughout



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The State Fire Marshal is committed to the adoption and publication of the 2010 California Building Standards Code and believes strongly in the value of the model code process and the overall quality of the model codes as many of the State Fire Marshal's amendments and standards are proposed to the national model codes. The State Fire Marshal has taken extraordinary measures to ensure that the 2010 California Building Standards Code 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 the 2010 California Building Standards Code.

Information

For more information about fire and building codes or information concerning fire and panic safety, visit the State Fire Marshal's website www.osfm.fire.ca.gov.

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

Pipeline Safety Division

For those of you reading this monthly report, how many of you work for a fire department? And of those, how many of you have SFM jurisdictional "hazardous liquid" petroleum pipelines running through your response area?

If you do have these kinds of pipelines in your jurisdiction (gasoline, diesel, jet fuel, crude oil, etc.), you may want to read the code section below taken from the California Government Code, Chapter 5.5.



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1. Section 51014.3

(a) Each pipeline operator shall notify the State Fire Marshal and the local fire department having fire suppression responsibilities at least three working days prior to conducting a hydrostatic test which is required by this chapter. The notification shall include all of the following information:

- (1) The name, address, and telephone number of the pipeline operator
- (2) The specific location of the pipeline section to be tested and the location of the test equipment.
- (3) The date and time the test is to be conducted.
- (4) An invitation and a telephone number for local fire departments to call for further information on what they should do in the event of a leak during testing.

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(5) *The test medium*

(6) *The name and telephone number of the independent testing firm or person responsible for certification of the test results.*

(b) *The State Fire Marshal may observe tests conducted pursuant to this chapter.*

In general, a hazardous liquid pipeline must be hydrostatically pressure tested every 5 years. Test pressures can be anywhere from 100 psi to over 1000 psi! Most tests are conducted using water as the test medium, but in some cases, pipeline operators can get a waiver from the State Fire Marshal allowing them to test with diesel or jet fuel (as long as its flash point is 140 degrees F or more).

Pipeline operators can also obtain waivers to test the pipeline using "In-Line Inspection" (commonly referred to as "smart pig" technology) in lieu of a pressure test - but that is an entirely different topic!

For more information on hazardous liquid pipelines, pipeline regulations or location of pipelines, contact the Pipeline Safety Division of the SFM at 562-497-9100 or visit our website at <http://osfm.fire.ca.gov>.

Fire and Life Safety Division Tech Tips

Fire Alarm Audibility Testing

Prior to acceptance testing by the authority having jurisdiction (AHJ), NFPA 72 National Fire Alarm Code (2007 Edition), Table 10.4.2.2 (15) (a) requires that the sound pressure level of the fire alarm signal be measured and recorded throughout the protected area utilizing a sound level meter complying with ANSI S1.4, Type 2 requirements.

The National Fire Alarm Code Handbook states that the measurements are to be taken 5 feet above floor using the "A" weighted scale and the "Fast" response time settings on the sound level meter.

The California Fire Code (2007), Section 907.10.2 requires the fire alarm signal to be a minimum of 15 decibels (dBA) above the average sound level or 5 dBA above



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the maximum sound level having duration of at least 60 seconds, whichever is greater in every occupied space within the building.

Both the California Fire Code and NFPA 72 require the sound pressure level of the fire alarm signal to be a maximum of 110 dBA at the minimum hearing distance from any audible appliance.

What type of documentation?

OSFM recommends that the fire alarm contractor record the dBA measurements on a set of approved fire alarm plans at the locations where the measurements are taken.

The AHJ should then verify a percentage of the dBA measurements and any questionable measurements such as: areas distant from audible appliances, rooms without audible appliances and excessively high or low measurements.

Important: It is recommended that adequate hearing protection be worn by all persons during audibility testing to prevent hearing loss such as: earplugs, noise reduction ear muffs, or better yet, "electronic ear muffs," which can instantly decrease ambient sound level by 20 dB. Be aware that even 105 dBA may cause pain to ones ears!



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State Fire Training Division

Regional Instructor Orientation (RIO) Revisited

State Fire Training (SFT) is responsible for the Certification and Instructor Registration processes. Our RIO course is designed to educate instructors in the regulations and processes that affect instructor registration. During the delivery of this course we often receive inquiries as to our processing timelines and expectations of instructors.

Our staff has compiled a list of frequently asked questions addressing issues posed to SFT which may assist registered instructors with a better understanding of their roles and responsibilities when scheduling and delivering courses.

Question: "What steps can I as an instructor take to ensure a test is not compromised?"

To prevent a breach of test material the following steps should be taken by the instructor:

1. Upon receipt of exam booklets, verify that the quantity is correct before the start date of the class and keep them in a secure location.
2. When exam booklets are distributed to students, require them to write the booklet serial number on the designated line on the front of the scantron form.
3. Collect all exam booklets as soon as the exam is finished to avoid having students take them with their personal belongings as they leave.
4. Prior to the end of the class place the booklets in numerical order, allowing an immediate red flag if there is a missing exam booklet.

Question: "What is the responsibility of instructors when handling student's personal information?"

Whenever personal information is required for course processing and certification the instructor can prevent the breach of students' personal information by ensuring



Mary Wilshire, SFT Manager of Certification and Registration and Mike Garcia, Deputy State Fire Marshal III for Southern California, conducts a RIO class in San Bernardino.



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that all score sheets/scantrons are handled as confidential documents before, during, and after the class has been conducted. This can be done by accounting for the location of these documents during the class and in the packaging of the class materials for return to SFT. Use a delivery carrier that provides tracking of the packages you send back to SFT as the instructor is responsible until all materials are received by SFT.

Question: "Why is the processing time so long from the time the course material arrives at SFT and the time the tests are scored and the letters and certificates mailed out to students?"

The processing time of six to eight weeks is due in part the volume of classes being handled at any one time. The other driving factor is SFT frequently receives incomplete score sheets and must take the time to correct errors and/or send them back to the instructor to correct. To assure instructors are not contributing to the delay, they should verify that student information on scantron forms are legible and accurate to be entered into the SFT database readily by:

5. Using a #2 pencil only.
6. Making sure all required information is written in the boxes and bubbled in completely.
7. Social security number is complete.

Question: "What happens if I have a change after the course has been approved for delivery by SFT"?

When making changes to a currently registered class (i.e. a change to the primary and/or senior instructor, the start and/or end dates and the estimated number of students and/or manuals) the following should be done immediately:

- Handwrite the changes on the course approval letter and fax to (916) 552-9464 or email the course scheduler: Brandon.erickson@fire.ca.gov
- Send in the change request well in advance of the class start date.

Question: "Why is there a timeframe in returning all course material to SFT and the requirement for the instructor to maintain their records?"

The time limit helps to avoid delays in processing the results to the students as they have the right to expect this information in a timely manner. This is especially important if the results necessitate a retake exam. Retakes must occur within one year of completing the course. For historical and auditing purposes it is required that instructors keep all training records for 4 years.



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We wish to thank registered instructors for their cooperation and for respecting their roles and responsibilities as an extension of State Fire Training. Our goals are to deliver courses and assistance to all students and instructors. If you have any questions or would like additional information please feel free to contact Mary Wilshire, Manager of Certification and Registration at Mary.Wilshire@fire.ca.gov.

PV Training on Time and on Track

The collaboration of the photovoltaic (PV) industry and fire service is rapidly moving forward in the development of a Photovoltaic Training Program for fire department operations. This new training program will be debuting soon around the state and will include background information on photovoltaics systems, how they work, and how to identify their components.



PV Workgroup Sacramento, CA 2010

The PV workgroup has collected a number of case studies where the PV systems have been involved in emergency situations. These case studies will be used to spotlight specific firefighter safety and operational considerations. PV workgroup leader Captain Wes Kitchel, Santa Rosa Fire Department (Retired), advises that firefighters will need to determine if they have a structural fire and whether or not the structure has been compromised, and/or if they have a roof emergency that involves a PV system. The considerations of these types of emergencies may affect strategy and tactics.



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PV systems are appearing on various occupancy types around the state. Photo Courtesy: Matt Piass, San Jose Fire Department

First responder interest in this subject is growing as evidenced with the recently published report from the NFPA Research Foundation entitled "Fire Fighter Safety and Emergency Response for Solar Powered Systems." This report can be downloaded from the NFPA Research Foundation web-site at www.nfpa.org/foundation. Both the California State Fire Marshal Program and the NFPA Research Report address changes to the working environment and offer specific strategies for keeping emergency responders safe.