



California State Fire Marshal Information Bulletin

Residential Automatic Fire Sprinklers in One- and Two-Family Dwellings and Townhouses

Issued: 2/18/10

This Information Bulletin is to clarify which provisions have been adopted and/or amended by the SFM regarding residential automatic fire sprinkler systems in one- and two-family dwellings and townhouses for statewide application. The adoption of residential automatic fire sprinkler systems was approved by the Building Standards Commission (BSC) on January 12, 2010 (with an effective date of January 1, 2011); and since that time, the SFM has received inquiries primarily in regards to the following issues:

- a.) The use of a domestic shutoff valves; and
- b.) The need for an acceptable water supply source

The SFM has adopted through the BSC the 2009 International Residential Code (IRC) by reference for inclusion into 2010 California Residential Code (CRC) as part of the California Building Standards Code (Title 24, CCR, Part 2.5). This adoption includes provisions for the installation of automatic fire sprinkler systems for new one- and two-family dwellings and townhouses by one of several methods, that include but are not limited to provisions contained in 2010 CRC, Section R313.3 (derived from Section P2904 of the 2009 IRC) or the National Fire Protection Associations (NFPA-13D, 2010 edition) Standard for the Installation of Sprinkler Systems in One- and Two-family Dwellings and Manufactured Homes.

The adoption of these provisions and/or standards allows for the installation of a domestic shutoff valve with a single water supply source/metering. The SFM has not adopted a standard or code that would "require" a second (dual) water supply source/metering (domestic demand and fire protection demand). Furthermore, the "preferred method" in accordance with NFPA-13D (2010 edition) is a single meter with domestic shut off as described in the NFPA 13D Annex A Explanatory Material for section 6.2. However, it must be emphasized that the size of and/or the requirement for a second water supply source/metering is subject to the acceptance of the local water purvey, city or county or city and county or the local fire authority having jurisdiction.



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Note: *The design of the Domestic Shutoff Valve is such that if there is a fire sprinkler operation/activation during domestic usage, the Valve will automatically shut off flow to the domestic system and divert the available water supply to the fire sprinkler system, thereby eliminating the lower flow into the sprinkler system that might otherwise be caused by possible significant domestic water usage. The use of a domestic valve can eliminate the need to combine the domestic and sprinkler demand (gallons per minute) when performing the hydraulic design calculation, thus enhancing the water meter/pipe sizing in many cases.*

The SFM convened a group of Subject Matter Experts to address the residential fire sprinkler/water supply issues. Between October 9, 2008 and March 30, 2009 this group developed the SFM Residential Fire Sprinkler/Water Purveyor Task Force (Phase I) Final Report with recommendations for “best practices” which was issued in June 2009. This report is available for review and downloading (PDF) at:

<http://osfm.fire.ca.gov/pdf/firemarshal/taskforcefinalreport.pdf>

Additionally, a copy of the SFM Residential Fire Sprinkler Installation Task Force (Phase II) Final Report with recommendations for “best practices” was issued in June 2009 and is available for review and downloading (PDF) at:

<http://osfm.fire.ca.gov/pdf/firemarshal/taskforcephast2finalreport.pdf>

A third report, the SFM Residential Fire Sprinkler Training and Education Task Force (Phase III) Final Report with recommendations is being finalized and will be available soon for review and downloading (PDF)

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