

Keeping a holiday tree watered is important to not becoming a fire statistic

By J.B. Smith, Safety and Buildings Division Commercial Buildings Program Manager

As cold weather is upon us and the holiday season fast approaches, I thought it good to share with you some important fire safety information associated with Christmas trees.

The National Fire Protection Association (NFPA) estimates that each year an average 210 home structure fires begin with Christmas trees. Data from 2002 through 2005, show these types of fires caused each year an average of 24 civilian deaths, 27 civilian injuries, and \$13.3 million in direct property damage.

The NFPA analysis shows that although the number of Christmas tree fires is low, the hazard associated with these types of fires is quite high. The percentage of trees involved in structure fires represent an extremely small portion of the total number of natural Christmas trees sold (approx. 30 million trees in the US each year). Even so, on average, one of every nine Christmas tree fires resulted in a fatality compared to an average of one death per 75 structure fires when a fire is not confined to the room of origin. About 49 percent of those tree fires spread beyond the room of origin and those caused approximately 94 percent of the associated fatalities.

The good news is that properly maintaining a cut Christmas tree significantly reduces the ability to not become a part of the statistics that NFPA references. The moisture content of each tree plays perhaps the single most significant role in reducing the fire hazard your tree represents. By keeping the tree well watered, the moisture content in the needles of the tree will remain high, helping to limit accidental ignition and prevent rapid flame spread. A tree which has dry needles can more easily ignite when exposed to a flame source and will generate heat release rates that are capable of causing flashover in residential-size rooms.

Researchers at the National Institute of Standards and Technology have a video on their Web site illustrating the benefit of keeping a holiday tree well watered:
http://www.fire.nist.gov/tree_fire.htm.

For those of you having sprinkler systems within your homes, you will also find video at that site showing the results of living room (mock-ups built inside their lab) fires where their scientists exposed two dry Christmas trees to an open flame. Although damage is significantly reduced, please don't think of a fire sprinkler systems as a substitute for watering the tree.

I hope you have a safe holiday season and remember . . . **keep your tree watered.**

Should you have any questions about the article, feel free to contact me:
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