



U.S. Experience with Sprinklers

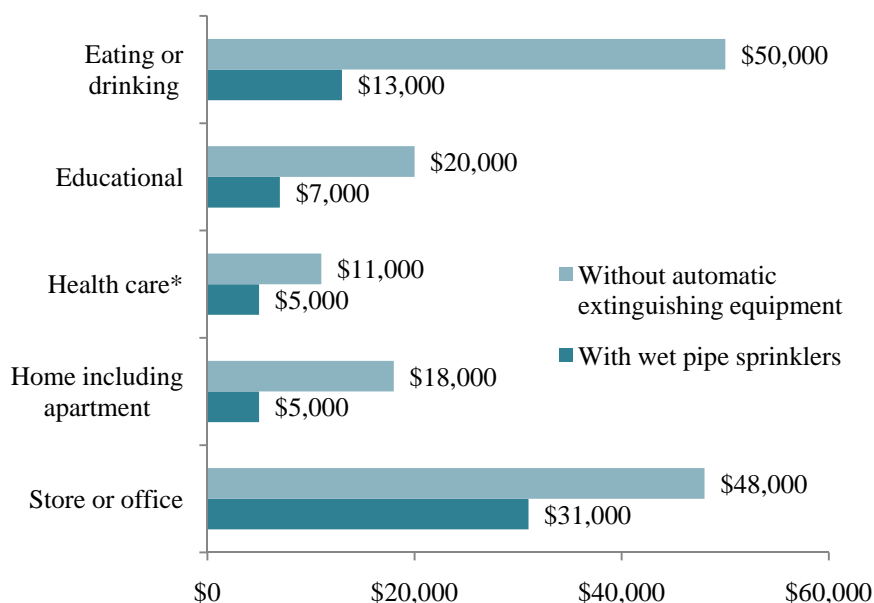
Sprinklers save lives and protect property from fires.

Compared to properties without automatic extinguishing equipment

- The death rate per fire in sprinklered homes is lower by 83%.
- For most property uses, damage per fire is lower by 34-77% in sprinklered properties.

Flame damage was confined to the room of origin in 95% of fires in sprinklered properties vs. 73% in fires with no automatic extinguishing equipment.

Damage per Fire With Wet Pipe Sprinklers versus Without Automatic Extinguishing Equipment, 2004-2008



*Health care refers to hospitals, nursing homes, clinics, doctor's offices, and mental retardation facilities.

Sprinklers are reliable and effective.

- In reported structure fires large enough to activate them, sprinklers operated in 91% of fires in sprinklered properties.
- Wet pipe sprinklers operated in 92% of these fires vs. 80% for dry pipe sprinklers.
- In reported structure fires large enough to activate them, sprinklers operated and were effective in 87% of fires in sprinklered properties.
- Wet pipe sprinklers operated and were effective in 88% of non-confined fires vs. 74% for dry pipe sprinklers.

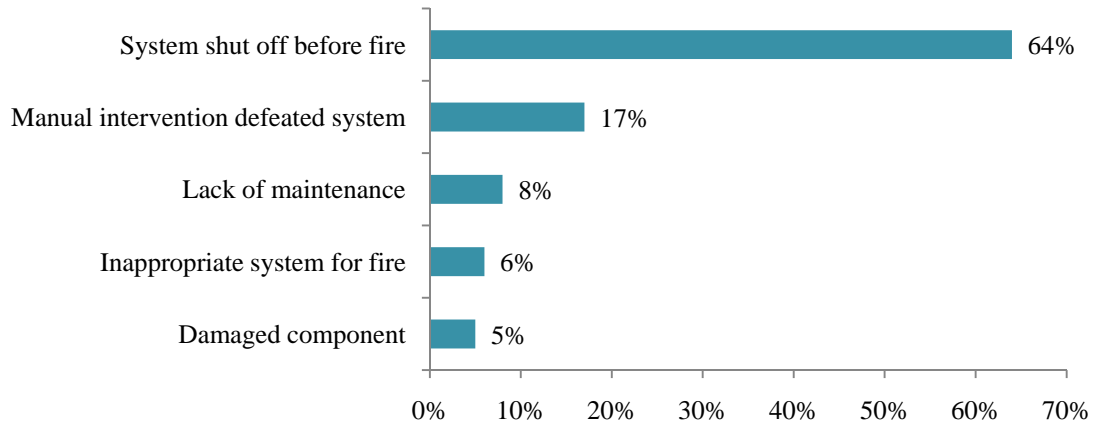
NFPA's Fire Sprinkler Initiative: Bringing Safety Home seeks to encourage the use of home fire sprinklers and the adoption of fire sprinkler requirements for new construction. See www.firesprinklerinitiative.org.

Statistics are based on 2004-2008 U.S. reported fires excluding buildings under construction and properties with no sprinklers in fire area. Almost no reported confined fires are large enough to activate operating sprinklers, and so confined fires are excluded from analysis of reliability and effectiveness.

Source: *U.S. Experience With Sprinklers*, John R. Hall, Jr., NFPA Fire Analysis And Research, Quincy, MA, September 2010

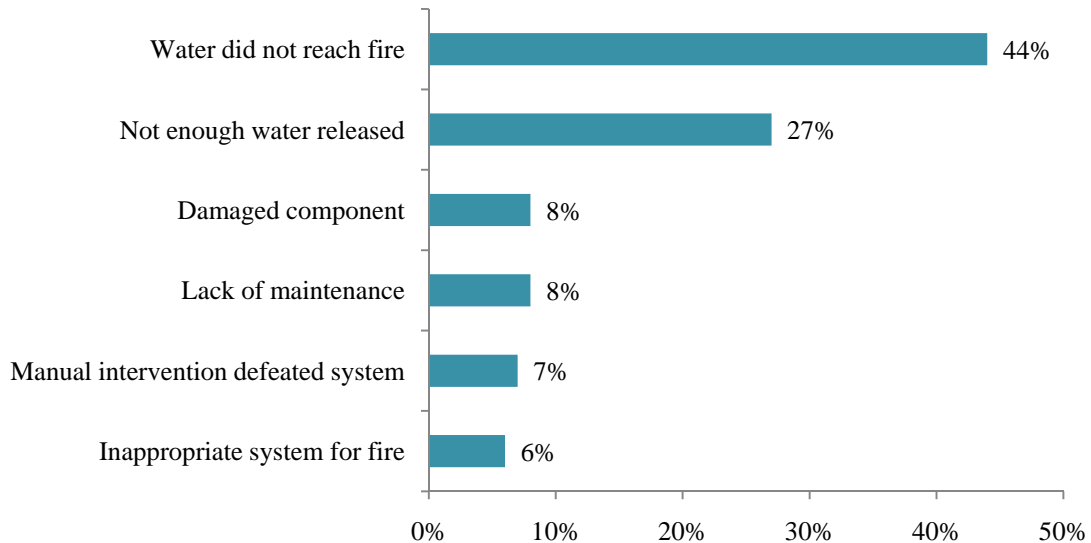
In 2004-2008 fires large enough to activate them, sprinklers operated in 91% of fires in sprinklered properties. The graph below is based on the other 9% in which sprinklers should have operated but did not.

Reasons When Sprinklers Fail to Operate, 2004-2008



In 2004-2008 fires where sprinklers operated, they were effective in 96% of the cases. The graph below is based on the other 4% in which the sprinkler was ineffective.

Reasons When Sprinklers Are Ineffective, 2004-2008



Usually only 1 or 2 sprinklers are required to control the fire.

- When wet pipe sprinklers operated, 89% of reported fires involved only 1 or 2 sprinklers.
- For dry pipe sprinklers, 76% involved only 1 or 2 sprinklers.

Statistics are based on 2004-2008 U.S. reported fires excluding buildings under construction and properties with no sprinklers in fire area. Almost no reported confined fires are large enough to activate operating sprinklers, and so confined fires are excluded from analysis of reliability and effectiveness.

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