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## Objectives Describe the impact of residential fire sprinklers on residential fires Review what the NFPA is and the development process for applicable codes Name and navigate applicable codes (NFPA 13, 13R, 13D, IRC) Distinguish characteristics between "Residential" sprinklers and Standard "Spray" (Commercial) sprinklers Explain how residential sprinklers are listed, approved and developed. Identify residential sprinklers, system types, and sprinkler system components









## Preventing Flashover Saves Property Too

A secondary benefit to residential sprinklers is property protection









	In 2017	Trend since 20
Fires	1,319,500	-6.2%
Deaths	3,400	+9.6%























## Poll #2

Please answer the poll that pops up on the screen Participation is required to earn CEUs

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## "Quick Response" Sprinklers vs. "Residential" Sprinklers

- Definitions from NFPA 13-2019:
  - 3.3.205.4.16\* Quick-Response (QR) Sprinkler. A type of spray sprinkler that has a thermal element with an RTI of 50 (meter-seconds)<sup>1/2</sup> or less and is listed as a quick-response sprinkler for its intended use.
  - 3.3.205.4.17 Residential Sprinkler. A type of <u>fast-response</u> sprinkler having a thermal element with an RTI of 50 (meter-seconds)<sup>1/2</sup> or less that has been specifically investigated for its ability to enhance survivability in the room of fire origin and that is listed for use in the protection of dwelling units.
- What is "Fast Response"?
  - 3.3.205.2\* General Sprinkler Characteristics. The following are characteristics of a sprinkler that define its ability to control or extinguish a fire. (1) Thermal sensitivity. A measure of the rapidity with which the thermal element operates as installed in a specific sprinkler or sprinkler assembly. One measure of thermal sensitivity is the response time index (RTI) as measured under standardized test conditions. (a) Sprinklers defined as <u>fast response</u> have a thermal element with an RTI of 50 (ms)<sup>1/2</sup> or less...

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## Poll #3

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## Questions

- Is a Listed Residential Sprinkler a "fast response" sprinkler?
  - Yes
- Are all sprinklers with "fast response" operating elements listed as "quick response?
  - No
- Give an example of a sprinkler with a "fast response" operating element but not listed as "quick response"
  - Extended Coverage Ordinary Hazard Sprinklers
  - ESFR
  - Residential Sprinklers

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