

**NFPA®**

# 13E

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Recommended Practice for  
Fire Department Operations in  
Properties Protected by  
Sprinkler and Standpipe Systems

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**2020**



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## NFPA® 13E

### Recommended Practice for

## Fire Department Operations in Properties Protected by Sprinkler and Standpipe Systems

### 2020 Edition

This edition of NFPA 13E, *Recommended Practice for Fire Department Operations in Properties Protected by Sprinkler and Standpipe Systems*, was prepared by the Technical Committee on Fire Service Training. It was issued by the Standards Council on November 4, 2019, with an effective date of November 24, 2019, and supersedes all previous editions.

This edition of NFPA 13E was approved as an American National Standard on November 24, 2019.

### Origin and Development of NFPA 13E

In 1933, NFPA adopted an informative brochure that was prepared by the Committee on Field Practice titled “Use of Automatic Sprinklers by Fire Departments.” It was published as a separate pamphlet and reprinted in 1936. The work formerly carried on by the Committee on Field Practice was distributed to a number of new committees in 1953, and at that time the Committee on Standpipes and Outside Protection was given responsibility for the brochure. A subcommittee of the committees on Standpipes and Outside Protection, Automatic Sprinklers, Fire Department Equipment, and Fire Service Training prepared a revision, “Fire Department Operations in Protected Properties,” which, on recommendation of the four committees, was adopted as an informative report at the NFPA Annual Meeting in 1961. The informative report was published and circulated as a separate pamphlet, No. SPI-1961, but was not included in the annual volumes of the *National Fire Codes*.

*Recommended Practice for Fire Department Operations in Properties Protected by Sprinkler and Standpipe Systems*, NFPA 13E, was adopted with minor revisions by NFPA at its 1966 Annual Meeting at the recommendation of the Committee on Standpipes and Outside Protection. It was amended and updated in 1973, 1978, 1983, 1989, 1995, and 2000. The changes made by the Technical Committee on Fire Service Training in the 2000 edition of this document aligned its text with changes made to NFPA 13, *Standard for the Installation of Sprinkler Systems*. In addition, several chapters were added that included new pre-incident planning and fireground operational considerations for fire personnel.

In the revision process for the 2005 edition, the numbering of chapters and paragraphs changed to reflect requirements in the 2004 edition of the *Manual of Style for NFPA Technical Committee Documents*.

The 2010 edition included some clarifying language regarding the use of alternative water supplies for fire department support of sprinkler and standpipe systems. This edition also included additional illustrations of primary sprinkler/standpipe system valves and an improved illustration of a typical sprinkler system layout, using symbols from NFPA 170, *Standard for Fire Safety and Emergency Symbols*, 2009 edition.

In the 2014 edition, the committee updated the standpipe system sections to bring them up to current practices.

For the 2020 edition, the committee reviewed and updated all extracted and referenced materials in the document. The committee also made many changes to ensure that the provisions are consistent within the guide and with other NFPA documents. Many chapters have been reorganized to make the guide easier to use and to better assist users with understanding what the provisions address. The committee added text to explain how sprinkler heads should be maintained for fire investigation purposes following their use in an emergency, as well as clarification for the inspection process of sprinkler heads, and placing them back in service by qualified persons. The committee also added material to clarify how museums and libraries might respond or preplan in the event of a sprinkler activation, and that users should be aware of those special situations if they are in their jurisdiction. Another area the committee clarified is the fact that pressure adjustments need to be made when hose connections are below grade.

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**Committee Scope:** This Committee shall have primary responsibility for all fire service training techniques, operations, and procedures to develop maximum efficiency and proper utilization of available personnel. Such activities can include training guides for fire prevention, fire suppression, and other missions for which the fire service has responsibility.

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## NFPA 13E

## Recommended Practice for

Fire Department Operations in Properties  
Protected by Sprinkler and Standpipe Systems

2020 Edition

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**NOTICE:** An asterisk (\*) following the number or letter designating a paragraph indicates that explanatory material on the paragraph can be found in Annex A.

A reference in brackets [ ] following a section or paragraph indicates material that has been extracted from another NFPA document. Extracted text may be edited for consistency and style and may include the revision of internal paragraph references and other references as appropriate. Requests for interpretations or revisions of extracted text should be sent to the technical committee responsible for the source document.

Information on referenced and extracted publications can be found in Chapter 2 and Annex C.

## Chapter 1 Administration

**1.1 Scope.** This recommended practice provides basic procedures and information for use in fire department operations concerning properties equipped with certain fixed fire protection systems. The fixed systems covered in this recommended practice are interior automatic sprinkler systems, exterior sprinkler systems, and standpipe systems.

**1.2 Purpose.**

**1.2.1** The purpose of this recommended practice is to assist fire departments in developing training programs and planning effective operations for supporting certain fixed fire protection systems in buildings in which fire can occur. Recommended practices are given for the adequate support and use of sprinkler and standpipe systems.

**1.2.2** Nothing herein is intended to restrict any jurisdiction from exceeding these minimum suggestions.

## Chapter 2 Referenced Publications

**2.1 General.** The documents or portions thereof listed in this chapter are referenced within this recommended practice and should be considered part of the recommendations of this document.

**2.2 NFPA Publications.** National Fire Protection Association, 1 Batterymarch Park, Quincy, MA 02169-7471.

NFPA 25, *Standard for the Inspection, Testing, and Maintenance of Water-Based Fire Protection Systems*, 2020 edition.

NFPA 241, *Standard for Safeguarding Construction, Alteration, and Demolition Operations*, 2019 edition.

**2.3 Other Publications.**

Merriam-Webster's Collegiate Dictionary, 11th edition, Merriam-Webster, Inc., Springfield, MA, 2003.

**2.4 References for Extracts in Recommendations Sections.**

NFPA 13, *Standard for the Installation of Sprinkler Systems*, 2019 edition.

NFPA 14, *Standard for the Installation of Standpipe and Hose Systems*, 2019 edition.

NFPA 24, *Standard for the Installation of Private Fire Service Mains and Their Appurtenances*, 2019 edition.

## Chapter 3 Definitions

**3.1 General.** The definitions contained in this chapter apply to the terms used in this recommended practice. Where terms are not defined in this chapter or within another chapter, they should be defined using their ordinarily accepted meanings within the context in which they are used. Merriam-Webster's Collegiate Dictionary, 11th edition, is the source for the ordinarily accepted meaning.

**3.2 NFPA Official Definitions.**

**3.2.1\* Approved.** Acceptable to the authority having jurisdiction.

**3.2.2\* Authority Having Jurisdiction (AHJ).** An organization, office, or individual responsible for enforcing the requirements of a code or standard, or for approving equipment, materials, an installation, or a procedure.

**3.2.3 Labeled.** Equipment or materials to which has been attached a label, symbol, or other identifying mark of an organization that is acceptable to the authority having jurisdiction and concerned with product evaluation, that maintains periodic inspection of production of labeled equipment or materials, and by whose labeling the manufacturer indicates compliance with appropriate standards or performance in a specified manner.

**3.2.4\* Listed.** Equipment, materials, or services included in a list published by an organization that is acceptable to the authority having jurisdiction and concerned with evaluation of products or services, that maintains periodic inspection of production of listed equipment or materials or periodic evaluation of services, and whose listing states that either the equipment, material, or service meets appropriate designated standards or has been tested and found suitable for a specified purpose.

**3.2.5 Recommended Practice.** A document that is similar in content and structure to a code or standard but that contains only nonmandatory provisions using the word “should” to indicate recommendations in the body of the text.

**3.2.6 Should.** Indicates a recommendation or that which is advised but not required.

### 3.3 General Definitions.

**3.3.1 Fire Department Connection.** A connection through which the fire department can pump supplemental water into the sprinkler system, standpipe, or other water-based fire protection systems, thereby supplementing existing water supplies. [24, 2019]

**3.3.2 Hydrant.** An exterior valved connection to a water supply system that provides hose connections.

**3.3.2.1\* Private Fire Hydrant.** A valved connection on a water supply system having one or more outlets that is used to supply hose and fire department pumpers with water on private property.

**3.3.2.2 Public Hydrant.** A valved connection on a water supply system having one or more outlets that is used to supply hose and fire department pumpers with water.

**3.3.2.3 Yard Hydrant.** A hydrant that is not designed to supply a fire department pumper.

**3.3.3 Pressure-Regulating Device.** A device designed for the purpose of reducing, regulating, controlling, or restricting water pressure. [24, 2019]

**3.3.4\* Sprinkler System.** A system, commonly activated by heat from a fire and discharges water over the fire area, that consists of an integrated network of piping designed in accordance with fire protection engineering standards that includes a water supply source, a water control valve, a waterflow alarm, and a drain. The portion of the sprinkler system above ground is a network of specifically sized or hydraulically designed piping installed in a building, structure, or area, generally overhead, and to which sprinklers are attached in a systematic pattern. [13, 2019]

**3.3.5 Standpipe System.** An arrangement of piping, valves, hose connections, and associated equipment installed in a building or structure, with the hose connections located in such a manner that water can be discharged in streams or spray patterns through attached hose and nozzles, for the purpose of extinguishing a fire, thereby protecting a building or structure and its contents in addition to protecting the occupants. [14, 2019]

**3.3.5.1 Automatic Dry Standpipe System.** A standpipe system permanently attached to a water supply capable of supplying the system demand at all times, containing air or nitrogen under pressure, the release of which (as from opening a hose valve) opens a dry pipe valve to allow water to flow into the piping system and out of the opened hose valve. [14, 2019]

**3.3.5.2 Automatic Wet Standpipe System.** A standpipe system containing water at all times that is attached to a water supply capable of supplying the system demand at all times and that requires no action other than opening a hose valve to provide water at hose connections. [14, 2019]

**3.3.5.3 Combined System.** A standpipe system that supplies both hose connections and automatic sprinklers. [14, 2019]

**3.3.5.4 Manual Dry Standpipe System.** A standpipe system with no permanently attached water supply that relies exclusively on the fire department connection to supply the system demand. [14, 2019]

**3.3.5.5 Manual Wet Standpipe System.** A standpipe system containing water at all times that relies exclusively on the fire department connection to supply the system demand. [14, 2019]

**3.3.5.6 Semiautomatic Dry Standpipe System.** A standpipe system permanently attached to a water supply that is capable of supplying the system demand at all times arranged through the use of a device such as a deluge valve and that requires activation of a remote control device to provide water at hose connections. [14, 2019]

**3.3.5.7 Wet Standpipe System.** A standpipe system having piping containing water at all times. [14, 2019]



## Chapter 4 General

**4.1\* General.** Fire departments should be prepared to support fire protection systems provided with fire department connections. Fire department administrations should use the record of effectiveness of automatic sprinkler systems and current data to promote these systems and should focus on actively supporting the operations of these systems.

**4.1.1** Fire department personnel should be knowledgeable of and prepared to deal with the following three principal causes of unsatisfactory sprinkler performance:

- (1) A closed valve in the water supply line
- (2) The delivery of an inadequate water supply to the sprinkler system
- (3) Occupancy changes that render the installed system unsuitable

**4.1.2** The fire department should correct these situations by implementing effective departmental pre-incident planning, inspections, and other appropriate actions. The use of sprinkler systems initially designed for a low-heat-release product or intended only to accommodate low storage when a change has been made to a high-heat commodity, a significantly increased storage height, or new storage configurations can result in unsuccessful sprinkler performance, so the fire department or authority having jurisdiction should take steps to correct such problems.

**4.1.3** Whenever automatic sprinklers are installed within the jurisdiction, the fire department training program should include a course on the fundamentals of automatic sprinkler systems. The fire department should recognize the following:

- (1) When properly designed, installed, maintained, and supported by the fire department, a sprinkler system can apply water directly to the fire in a more effective manner than can the fire department using manual fire suppression methods.
- (2) Not all sprinkler systems are equally effective in their performance. Systems might not have been properly maintained or might not be effective for the current occupancy.