

## **Changes in the 2016 Editions of NFPA 13R and NFPA 13D Residential Criteria**

The 2016 edition of NFPA 13 has just been published by the NFPA. This new edition of the standard contains a number of new requirements that are important to everyone in the fire sprinkler industry. The list is quite long, so it has been broken into a four-part series of special editions for TechNotes. These summaries will explain the changes that are most important in the opinion of the editor. This will not be a list of every change to the standard, but is intended to help everyone understand the big items with respect to installation, hanging and bracing, discharge, and residential.

This issue is Part 4. It will focus on the changes to the residential rules of NFPA 13D and NFPA 13R. It has been prepared by Bob Upson, NFSA's Manager of Engineering Services. The following items are highlighted from the revisions made in preparation of the 2016 edition:

### **NFPA 13R**

#### **Reinstallation of Dry Sprinklers (5.1.1.1.1)**

It has been clarified that dry sprinklers may be reinstalled when removed in accordance with the manufacturer's installation manual.

#### **Sprinkler Replacement (5.1.1.2)**

Prior to 2003, some residential sprinklers were produced and installed for design densities less than 0.05 gpm. Replacing these sprinklers in existing installations can be a challenge. When they are no longer available from the manufacturer, a sprinkler with an equivalent K-factor and comparable coverage area may be substituted.

#### **Fittings Not Included in Table 5.2.9 (5.2.12.2.1.5)**

Expanded language has been provided permitting the use of additional listed fittings types provided that they are used in accordance with their listing limitations and manufacturer's installation instructions.

#### **Compatibility between Nonmetallic Pipe and Corrosion Inhibitors (5.2.3.2)**

The words "with the nonmetallic pipe materials" have been added to the end of this section in order to correlate with the wording of NFPA 13 section 6.3.7.2.

#### **Outside of Dwelling Units (6.2.2)**

This section has had substantial editorial revision removing duplication of material found in Section 7.2. No technical changes have been introduced to the previous requirements of the standard in this revision.

#### **Obstruction within Closets (6.4.6.3.2)**

This section has been expanded to include small compartments and adds flexibility in the permissible locations for installing a single pendent or upright sprinkler within 18 inches of the ceiling.

### **Sprinkler Protected Glazing (6.5.4)**

New language has been introduced with requirements for sprinkler protected assemblies as alternatives to fire-rated wall assemblies. Similar language appears in NFPA 13.

### **Drains (6.9.2)**

The requirement for main drains to serve all portions of the system has been removed.

### **FDCs on Underground Piping (6.11.5 & 6.11.5.1)**

The standard permits underground piping to be any material acceptable to the plumbing code. Additional requirements have been added for underground piping serving the fire department connection (FDC); a minimum pressure rating of 175 psi, rated at no less than 120°F for nonmetallic pipe.

### **Design Criteria – Outside Dwelling Unit (7.2, 7.2.2, & 7.2.4.1)**

There have been substantial editorial revisions in conjunction with the changes made in 6.2.2. No technical changes have been introduced to the previous requirements of the standard in this revision.

## **NFPA 13D**

### **Reinstallation of Dry Sprinklers (5.1.1.1.1)**

It has been clarified that dry sprinklers may be reinstalled when removed in accordance with the manufacturer's installation manual.

### **Gauges Not Required to be Listed (5.1.2.1)**

This edition adds gauges to the list of components not required to be listed.

### **Certain Architectural Features (8.2.5.7)**

The language defining required coverage for small areas created by architectural features has been relocated from Annex A into the body of the standard.

### **Obstructions within Closets (8.2.7)**

This section has been expanded to include small compartments and adds flexibility in the permissible locations for installing a single pendent or upright sprinkler within 18 inches of the ceiling.

### **Acceptable Pipe Sizing Methods (10.4.3 & 10.4.4)**

Substantial editorial revisions have been made to this section to make the requirements more user-friendly. The requirements from the previous edition have not been altered by these revisions.

### **Sprinkler Replacement (12.3.2.1)**

Prior to 2003 residential sprinklers were produced and installed for design densities less than 0.05 gpm. Replacing these sprinklers in existing installations can be a challenge. When they are no longer available from the manufacturer, a sprinkler with an equivalent K-factor and comparable coverage area may be substituted.

## **Editorial correction to Issue #330 – Changes in the 2016 Edition of NFPA 13 Discharge Criteria**

In the second paragraph of the Commodity Classification update, it stated “PVC (polyvinyl fluoride)”, the text should have read “PVF (polyvinyl fluoride)”. A corrected version of TN Issue #330 is available to members on the NFSA website.