



Public Input No. 64-NFPA 25-2026 [New Section after 1.4]

TITLE OF NEW CONTENT

1.5 Equivalency.

Nothing in this standard shall prevent the use of systems, methods, or devices of equivalent or superior quality, strength, fire resistance, effectiveness, durability, and safety over those prescribed by this standard.

1.5.1

Technical documentation shall be submitted to the authority having jurisdiction to demonstrate equivalency.

1.5.2

The system, method, or device shall be approved for the intended purpose by the authority having jurisdiction.

Statement of Problem and Substantiation for Public Input

NFPA 25 currently does not include a formal equivalency clause, which should be added.

This absence limits the ability of users and Authorities Having Jurisdiction (AHJs) to evaluate and approve alternative solutions that may provide equal or better performance. Permitting equivalency is essential for the following reasons:

- Supports innovation and technological development

Fire protection technologies continue to evolve (e.g., condition-based monitoring, remote inspection tools, digital testing methods). Without an equivalency pathway, these innovations cannot be practically implemented or validated in the field.

- Enables evidence-based adoption

Equivalency allows new methods to be applied under controlled approval, generating data and operational experience. This evidence is often necessary for future inclusion within prescriptive requirements.

- Provides AHJ authority while maintaining safety

The requirement for solutions to be “approved” (see NFPA definition 3.2.1) ensures that the AHJ retains full control and must be satisfied that equivalency is demonstrated. This maintains the safety intent of the standard.

- Aligns with broader NFPA practice

Many NFPA standards include equivalency provisions as an enabling mechanism. Their absence in NFPA 25 creates inconsistency and unnecessary rigidity in inspection, testing, and maintenance practices.

- Prevents unintended barriers to R&D and continuous improvement

Without equivalency, the standard may unintentionally stifle research, development, and modernization of inspection and maintenance methodologies.

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Public Input No. 81-NFPA 25-2026 [Section No. 3.3.3]

3.3.3 Automated Inspection and Testing.

The performance of inspections and ~~tests at a distant location from the system or component being inspected or tested~~ tests through the use of electronic devices or equipment installed for the purpose.

Statement of Problem and Substantiation for Public Input

This change correlates with NFPA 13 FR 1006 which changed the definition to clarify the term. The justification for that FR read: "Automated inspection and testing does not necessarily have to be performed from a "distant location". In many instances, an automated test is initiated at the device itself by pressing a button, turning a key switch, etc. By tying distant to automated, we are conflating two important but separate concepts; remote (as in remote or distance monitoring) and automated (meaning little or no human interaction)."

It is important for these terms to be consistent. If the definition were to change at NFPA 13's second draft, a subsequent PC will follow for NFPA 25's second draft.

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Committee: INM-AAA



Public Input No. 74-NFPA 25-2026 [New Section after 3.3.30]

3.x.x.x* Observation (as used in Chapter 4).

A suggested recommendation for correction, improvement or enhancement to a water-based fire protection system on an issue that lies outside the scope of this standard.

A.3.x.x.x Examples of items not covered by this standard include the evaluation of unsprinklered areas and the spacing of sprinklers. However, evaluations based on such observations are the responsibility of the property owner or designated representative as indicated in 4. x.x and 4. x.x. An example of a hazard evaluation form can be found in Annex E.

Statement of Problem and Substantiation for Public Input

This term is widely used in the fire sprinkler industry with respect to documentation of issues found during ITM activities that lie outside the scope of 25. However, this term as it relates to documentation/records is not defined and is only addressed currently in the Annex, thus causing uncertainty as to how observations should be addressed with respect to the ITM report. As has proven to be the case for users of NFPA 72, having this term defined, with specific respect to its use in Chapter 4 (and not to the other instances of "observation" in the standard), should prove very helpful both for the sprinkler contractor and the building owner/designated representative. This definition is being proposed along with an associated PI proposing the permission of observations to be made by a contractor to the building owner, while the building owner retains full discretion on whether to address such observations.

The annex material is based in part on existing annex material currently found under Section A.1.1.3.1.

Related Public Inputs for This Document

<u>Related Input</u>	<u>Relationship</u>
<u>Public Input No. 78-NFPA 25-2026 [New Section after 4.1.7]</u>	
<u>Public Input No. 79-NFPA 25-2026 [Section No. A.1.1.3.1]</u>	
<u>Public Input No. 78-NFPA 25-2026 [New Section after 4.1.7]</u>	
<u>Public Input No. 79-NFPA 25-2026 [Section No. A.1.1.3.1]</u>	

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Public Input No. 200-NFPA 25-2026 [New Section after 3.3.31]

3.3.XX* Plant (Shop) Air.

A continuously operating industrial air compressor with an air receiver used to support manufacturing or other processes integral to the facility it serves.

A.3.3.XX Plant (Shop) Air.

Plant (shop) air systems will have air volume and pressure capabilities exceeding those needed for dry pipe systems, preaction systems, or pilot detector air systems. Small air compressors used for filling tires, beach toys, or homeowner grade tools are not sufficient to meet the needs for supplying air to sprinkler or pilot systems.

Statement of Problem and Substantiation for Public Input

This definition and annex language has been added to correlate with NFPA 13. The definition and annex text are direct extractions from 3.3.174 and A.3.3.174.

Related Public Inputs for This Document

<u>Related Input</u>	<u>Relationship</u>
<u>Public Input No. 205-NFPA 25-2026 [Section No. 13.10]</u>	
<u>Public Input No. 206-NFPA 25-2026 [Section No. 13.10.1.1]</u>	
<u>Public Input No. 208-NFPA 25-2026 [New Section after 13.10.2]</u>	
<u>Public Input No. 210-NFPA 25-2026 [New Section after 13.10.3]</u>	
<u>Public Input No. 212-NFPA 25-2026 [Section No. 13.10.4.1]</u>	

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Sections 3.3.40, 3.3.41

3.3.6.40.5 * 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, 2024]

3.3.6.40.5.1 Automatic Standpipe System.

A standpipe system that is attached to a water supply capable of supplying the system demand and that requires no action other than opening a hose valve to provide water at hose connections.

3.3.6.40.5.2 Dry Standpipe.

A standpipe system designed to have piping contain water only when the system is being utilized.

3.3.6.40.5.3 Horizontal Standpipe.

The system piping that delivers the water supply for two or more hose connections, and for sprinklers on combined systems, on a single level. [14, 2024]

3.3.6.40.4.4 Manual Standpipe.

Standpipe system that relies exclusively on the fire department connection to supply the system demand.

3.3.6.40.5.5 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, 2024]

3.3.6.40.5.6 Wet Standpipe System.

A standpipe system having piping containing water at all times. [14, 2024]

3.3.6.41.6 Standpipe System Classes.

3.3.6.41.6.1 Class I System.

A system that provides 2½ in. (65 mm) hose connections to supply water for use by fire departments. [14, 2024]

3.3.6.41.6.2 Class II System.

A system that provides 1½ in. (40 mm) hose stations to supply water for use primarily by trained personnel or by the fire department during initial response. [14, 2024]

3.3.6.41.6.3 Class III System.

A system that provides 1½ in. (40 mm) hose stations to supply water for use by trained personnel and 2½ in. (65 mm) hose connections to supply a larger volume of water for use by fire departments. [14, 2024]

Renumber subsequent sections

3.6 groups together definitions for water based fire protection systems to make them easy to locate. Standpipes are a water based fire protection system and their definitions should be located in 3.6 along with the others already found there (fire pumps, private fire service mains, sprinkler systems, etc.).

This proposal makes no change to the definitions, but simply relocates them to a more appropriate section.

If the relocation is accepted by the committee, the associated annexes should likewise be renumbered.

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Public Input No. 22-NFPA 25-2026 [Section No. 4.1.2.5.1]

4.1.2.5.1

Valve enclosures equipped with low-temperature alarms shall be ~~allowed~~ permitted to be inspected weekly.

Statement of Problem and Substantiation for Public Input

Manual of Style

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Committee: INM-AAA



Public Input No. 215-NFPA 25-2026 [New Section after 4.1.2.5.2]

4.1.2.6

Pump house conditions shall be inspected daily during cold weather and weekly during other times in accordance with section 8,2,2.

Statement of Problem and Substantiation for Public Input

Adding this requirement in chapter 4 prompts the owner to consider and check on the conditions in the fire pump room or enclosure during freezing or cold conditions. The temperatures required in Chapter 8 must be verified daily during cold weather.

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Public Input No. 197-NFPA 25-2026 [Sections 4.1.5.2, 4.1.5.3]

Sections 4.1.5.2, 4.1.5.3

~~4.1.5.2 –~~

~~Where the corrosion mitigation system is not replaced in accordance with NFPA 13 to maintain the increased C value, the dry pipe or preaction system shall be hydraulically calculated and modified, as necessary, to demonstrate the system can achieve the required hydraulic design criteria using the lower C value.~~

~~4.1.5.3 –~~

~~Where the corrosion mitigation system used in 4.1.5.1 is found to be deficient or impaired and the requirements of 4.1.5.2 are not met, the system shall be repaired or replaced with a corrosion mitigation system permitted by NFPA 13 allowing for the use of a C value of 120.~~

Statement of Problem and Substantiation for Public Input

The requirement for the owner to have the system recalculated and modified if needed to meet the lower C-value is punitive to the owner for something in which they had no input or understanding regarding the consequences. While the remedy can be justified, I am deeply concerned about the negative backlash that these types of requirements have on the acceptance and utilization of NFPA 25. I recognize the challenge this presents but the NFPA 13 TC should have never permitted the increase in C-value.

Related Public Inputs for This Document

<u>Related Input</u>	<u>Relationship</u>
<u>Public Input No. 218-NFPA 25-2026 [Section No. 13.4.3.2.15]</u>	
<u>Public Input No. 218-NFPA 25-2026 [Section No. 13.4.3.2.15]</u>	

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Public Input No. 201-NFPA 25-2026 [New Section after 4.1.6.1.2]

4.1.6.1.3

Where non-listed fire protection system components were permissible based on the installation requirements in effect at the time of installation but are now required to be listed and are to be replaced, the new component shall be listed for fire protection.

Statement of Problem and Substantiation for Public Input

The requirement is specific to the replacement of non-listed air compressors that utilize a general use switch or a cord-and-plug connection. The proposed additional text correlates with NFPA 13 §8.2.7.5 and §8.2.7.6.

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Public Input No. 68-NFPA 25-2026 [New Section after 4.1.6.2]

4.1.6.4*

Any test not performed within the frequency required by this standard shall be recorded and classified as a non-critical deficiency.

Statement of Problem and Substantiation for Public Input

This requirement is needed to ensure that all tests required by this standard are performed within the required frequency. The definition of a non-critical deficiency includes the phrase "... correction is needed to meet the requirements of this standard ...". If a test hasn't been performed, then correction is needed and the owner or their designated representative must be notified through the inspection record to take action to have the test(s) performed. Many inspection forms include questions about the performance of less frequent test and do report it when a test isn't done as a failed test.

Related Public Inputs for This Document

<u>Related Input</u>	<u>Relationship</u>
<u>Public Input No. 69-NFPA 25-2026 [New Section after A.4.1.6.2]</u>	

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Committee: INM-AAA



Public Input No. 75-NFPA 25-2026 [New Section after 4.1.6.2]

4.1.6.4* Corrections and repairs shall use listed components, devices, and materials as required by the appropriate installation standard.

Statement of Problem and Substantiation for Public Input

This requirement is needed to ensure that corrections and repairs that are made do not adversely affect the integrity and/or performance of the system or component. Temporary “fixes” that utilize materials that aren’t listed for fire protection systems often fail causing systems to false trip or otherwise activate causing water damage, false alarms, and other costly consequences.

Related Public Inputs for This Document

<u>Related Input</u>	<u>Relationship</u>
<u>Public Input No. 76-NFPA 25-2026 [New Section after A.4.1.6.2]</u>	

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Committee: INM-AAA



Public Input No. 78-NFPA 25-2026 [New Section after 4.1.7]

4.1.7*. Observations.

4.1.7.1

If observations are noted during inspection, testing and maintenance, they shall be permitted to be communicated to the building owner or designated representative as documentation separate and distinct from the records requirements in Section 4.3

4.1.7.2

The actions recommended to address such observations shall be up to the discretion of the building owner or designated representative unless already enforced by the authority having jurisdiction.

A.4.1.7. While this standard does not require an inspector to evaluate the adequacy or accuracy of a system, it does not prohibit the inspector or inspection organization from making observations to the owner or designated representative of a system that relate to the need for evaluations or modifications in the interest of fire and life safety. Observations should not be a part of the inspection report.

Statement of Problem and Substantiation for Public Input

See substantiation for PI 74.

The intent is for this section to precede the current section 4.1.7, not follow that section, as TerraView indicates.

The proposed annex language has been taken in large part from existing language in Section A.1.1.3.1.

Related Public Inputs for This Document

<u>Related Input</u>	<u>Relationship</u>
<u>Public Input No. 74-NFPA 25-2026 [New Section after 3.3.30]</u>	
<u>Public Input No. 79-NFPA 25-2026 [Section No. A.1.1.3.1]</u>	
<u>Public Input No. 74-NFPA 25-2026 [New Section after 3.3.30]</u>	
<u>Public Input No. 79-NFPA 25-2026 [Section No. A.1.1.3.1]</u>	

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Public Input No. 125-NFPA 25-2026 [Section No. 4.1.10]

4.1.10* Information Sign.

4.1.10.1

A permanently marked metal or rigid plastic information sign shall be placed at each system riser where either of these conditions exist:

(1) The system was designed and installed based on the 2002 or earlier editions of NFPA 13 .

(2) The system was designed and installed based on the 2007 or later editions of NFPA 13, and the General Information Sign is missing.

4.1.10.2

Each sign shall be secured with a corrosion-resistant wire, chain, or other approved means and shall indicate at least the following information:

- (1) Location of the area served by the system
- (2) Location of auxiliary drains and low-point drains for dry pipe and preaction systems
- (3) Presence and location of antifreeze or other auxiliary systems
- (4) Presence and location(s) of heat tape
- (5) Location of control valves as required by 13.3.1.1
- (6)* Flow and pressure of the hydraulically most demanding system.

A.4.1.10.2 (6) This information is needed to perform various tests required by this standard including the standpipe flow test, the full flow test of pressure reducing valves, the forward flow test of backflow preventers, and to evaluate the annual fire pump flow test.

- (7)* Flow test data.

A.4.1.10.2 (7) This information is needed to perform the 5-year flow test required for Private Fire Service Mains.

- (8)* Results of main drain flow test

A.4.1.10.2 (8) This information is needed to perform the quarterly and annual Main Drain Test required in Chapter 13.

- (9)* Results of dry pipe and double interlock preaction valve test

A.4.1.10.2 (9) This information is needed to perform the full flow test every three years required in Chapter 13.

- (10) Name of contractor or designer providing the information and installing the Information Sign.

4.1.10.3* Where information required by 4.1.10.2 items (1) through (6) can't be determined using original installation shop drawings, test certificate(s), or other relevant documents, the system shall be surveyed, redrawn, and hydraulically calculated to recreate this information.

A.4.1.10.3 All of the information required for the Information Sign should be available in the original records required to be retained by the owner for the life of the system. See 4.3.4. Where this information is not available, it must be recreated so that proper inspection, testing, and maintenance activities and pass/fail criteria required by this standard can be provided.

4.1.10.4 Where original flow test data, original results of main drain flow test, or original results of dry pipe and double interlock preaction valve test can't be determined, new tests shall be performed and included as a base line for evaluating tests required by this standard.

Statement of Problem and Substantiation for Public Input

The proposed additional information included on the Information Sign is necessary for the proper ITM of the system as required by NFPA 25.

Related Public Inputs for This Document

<u>Related Input</u>	<u>Relationship</u>
Public Input No. 196-NFPA 25-2026 [Section No. A.4.1.10]	

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Committee: INM-AAA



Public Input No. 214-NFPA 25-2026 [Section No. 4.1.10]

4.1.10*– Sprinkler System Information Sign.

4.1.10.1

A permanently marked metal or rigid plastic information sign shall be placed at each system riser.

4.1.10.2

Each sign shall be secured with a corrosion-resistant wire, chain, or other approved means and shall indicate at least the following information:

- (1) Location of the area served by the system
- (2) Location of auxiliary drains and low-point drains for dry pipe and preaction systems
- (3) Presence and location of antifreeze or other auxiliary systems
- (4) Presence and location(s) of heat tape
- (5) Location of control valves as required by 13.3.1.1

Statement of Problem and Substantiation for Public Input

Chapter 4 is General Requirements. This change to the section heading is to make it clear that only sprinkler systems require information signs.

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Public Input No. 9-NFPA 25-2026 [Sections 4.1.10, 4.1.11]

Sections 4.1.10, 4.1.11

~~4.1.10*~~ Information System Information Signs.

~~4.1.10.1~~ General Information Sign.

~~Unless the requirements of 4.1.10.4~~

~~A permanently marked metal or rigid plastic information sign shall be placed at each system riser~~

~~2 are met, a general information sign shall be provided for each sprinkler system.~~

~~4.1.10.2~~ Information Sign.

~~4.1.10.2.1~~

~~Where the general information sign was not required at the time of system acceptance or for systems other than sprinkler systems, an information sign shall be provided for each system .~~

~~4.1.10.2~~

~~—~~

~~.2~~

~~Each The information sign shall be secured with a corrosion-resistant wire, chain, or other approved means and shall indicate at least the following information, where applicable :~~

- ~~(1) Location of the area served by the system~~
- ~~(2) Location of auxiliary drains and low-point drains for dry pipe and preaction systems~~
- ~~(3) Presence and location of antifreeze or other auxiliary systems~~
- ~~(4) Presence and location(s) of heat tape~~
- ~~(5) Location of control valves as required by 13.3.1.1~~

4.1. 11 10.3 Hydraulic Design Information Signs.

The following systems shall be provided with a hydraulic design information sign for each system.

- (1) Sprinkler systems
- (2) Standpipe systems

4.1.10.3.1

A pipe schedule system shall have a hydraulic design information sign that reads "Pipe Schedule System."

4.1.10.4 * Antifreeze Information Sign.

4.1.

11

10 . 4. 1 _

For existing, nonlisted, premixed antifreeze solutions that are permitted to remain in a system per 5.3.4.4.2 and 5.3.4.4.3 , an antifreeze information sign shall be placed on the antifreeze system control valve indicating the manufacture type and brand of the antifreeze solution, the concentration by volume of the antifreeze solution used, and the volume of the antifreeze solution used in the system.

4.1.

11

10 . 4. 2 _

An antifreeze information sign for listed solutions shall be placed on the antifreeze system main valve indicating the manufacture type and brand of the antifreeze solution, the minimum use temperature of the antifreeze solution used, and the volume of the antifreeze solution used in the system.

4.1.10.5 _

Signs shall be secured with a corrosion-resistant wire, chain, or other approved means at an approved location.

Statement of Problem and Substantiation for Public Input

System information sign requirements should be consolidated in Chapter 4 as general requirements as they are required on multiple types of systems covered by NFPA 25. Additionally, these signs should be maintained by the owner and be continually maintained like other requirements in section 4.1. Moving signage requirements to Chapter 4 ensures that their presence is still enforceable by the AHJ and would not over saturate inspection reports with noncritical deficiencies that have no affect on system performance.

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Public Input No. 66-NFPA 25-2026 [Section No. 4.1.13]

4.1.13 Inactive Water-Based Fire Protection System Components.

4.1.13.1- * _ _

Where all or part of an inactive water-based fire protection system is abandoned in place, ~~components including sprinklers, hose valves and hoses, and alarm devices~~ all components not covered by 4.1.13.2 and 4.1.13.3 shall be removed.- { ~~13: 30.2.2~~ }

4.1.13.2

Control valves abandoned in place shall have the operating mechanisms removed.
{ ~~13: 30.2.3~~ } _

4.1.13.3

~~Sprinkler~~ Water-based fire protection system piping and/or valves abandoned in place shall be uniquely identified to differentiate them from active system piping and valves.- { ~~13: 30.2.4~~ } _

Statement of Problem and Substantiation for Public Input

The current allowance is extracted from NFPA 13 and could be misunderstood to apply only to sprinkler systems. These changes expand the intent of this section to include all water-based fire protection systems covered by NFPA 25.

Related Public Inputs for This Document

<u>Related Input</u>	<u>Relationship</u>
Public Input No. 67-NFPA 25-2026 [New Section after A.4.1.11]	

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Committee: INM-AAA



Public Input No. 42-NFPA 25-2026 [Section No. 4.3.1.2]

4.3.1.2*–

~~Records shall be permitted to be stored and accessed electronically.~~

System records shall be retained on site in a manner approved by the local fire department and the AHJ in accordance with 4.3.1.2.1 through 4.3.1.2.3.

4.3.1.2.1 Documentation stored on site shall be stored in the approved documentation cabinet installed at the time of construction or alterations to the system.

4.3.1.2.2 Where required by the local fire department or AHJ, documentation shall be in both paper and electronic formats.

4.3.1.2.3 Where files are retained electronically, the approved storage medium shall be permanently attached to the documents cabinet required under 4.3.1.2.1 to prevent loss or damage.

(Delete original Annex material and replace with the following.)

A4.3.1.2 NFPA 13 now requires documents cabinets to be installed for all new and modified fire protection systems and this section correlates and reasserts that records for these systems are to be retained and maintained in these required document cabinets from the point of requirement forward. The retention of system design, installation, acceptance testing, and quarterly/annual inspection testing and maintenance is critical to the sustainability and efficacy of a buildings fire protection system. The need to retain records on site in paper copy format is critical to the process of educating owners on the condition of their system by the AHJ conducting regular annual inspections and to provide a snap shot of the systems health during and immediately after events that generate an emergency response. With the introduction of the documents cabinet into NFPA 13, a key component for system records has been addressed, but where electronic formats are used for retention, the educational and immediate transparency of the systems condition and history are lost. This section is not intended to prohibit electronic formats, but to require paper copies to be available for review on site at all times. The purpose of the cabinet and permanently attached electric medium is to prevent both damage and loss/removal of the required documents necessary for proper maintenance, repair, design and expansion of the fire protection system in the building.

Typical records to be stored in the cabinet includes:

- 1) The original design documents, plans, calculations, cut sheets, plan approval letters, and hydrostatic testing certificates, etc.
- 2) Any commissioning documents with the associated system(s), including fire pump curves, high-piled storage configurations and locations noted on original floor plans.
- 3) Spare copies of the hydraulic placards, system design placards and other required signage, etc.
- 4) Annual, quarterly and special inspections and test records, recurring fire pump test curves, etc.
- 5) Copies of the system site map or zone maps with designated locations identified for low point drains, control valves, remote systems, etc.

Statement of Problem and Substantiation for Public Input

NFPA 13 now requires documents cabinets to be installed for all new and modified fire protection systems and this section correlates and reasserts that records for these systems are to be retained and maintained in these required document cabinets from the point of requirement forward. The application of the cabinet here is to clarify the documents needed to be submitted and the ability of the AHJ to require documents in both paper and electronic formats. This section provides consistency with both NFPA 13 and NFPA 72 and other fire protection systems

that require design, inspection and testing documents to be permanently stored by the owners. As noted in the annex submittal: The retention of system design, installation, acceptance testing, and quarterly/annual inspection testing and maintenance is critical to the sustainability and efficacy of a buildings fire protection system. The need to retain records on site in paper copy format is critical to the process of educating owners on the condition of their system by the AHJ conducting regular annual inspections and to provide a snap shot of the systems health during and immediately after events that generate an emergency response. With the introduction of the documents cabinet into NFPA 13, a key component for system records has been addressed, but where electronic formats are used for retention, the educational and immediate transparency of the systems condition and history are lost. This section is not intended to prohibit electronic formats, but to require paper copies to be available for review on site at all times.

Anecdotally, the extreme costs to redesign and/or reverse engineer systems to gather the necessary documents in order to recreate required signage or to re-establish a basis for alterations or expansion of existing systems make the document cabinet a welcome concept to owners who attest to costs for this work in excess of \$10,000 to \$20,000.

Submitter Information Verification

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Submittal Date: Tue May 05 16:46:10 EDT 2026

Committee: INM-AAA



Public Input No. 136-NFPA 25-2026 [Section No. 4.3.4]

4.3.4

As-built system installation drawings, hydraulic calculations, original acceptance test records, ~~and device~~ device manufacturer's data sheets- ~~shall~~ , and manufacturers published installation, operation, and maintenance requirements shall be retained for the life of the system.

Statement of Problem and Substantiation for Public Input

More information is needed for reference by inspectors during ITM activities. Data sheets do not often contain adequate information needed for ongoing maintenance.

Submitter Information Verification

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Submittal Date: Tue Jun 02 09:46:26 EDT 2026

Committee: INM-AAA



Public Input No. 192-NFPA 25-2026 [New Section after 4.3.5]

4.3.5.1 Records for high pressure storage cylinder assemblies used in accordance with Chapter 12, shall be retained by the owner for the life of the system.

Statement of Problem and Substantiation for Public Input

Chapter 12 contains an section on document retention that should be included in chapter 4 and removed from chapter 12.

Related Public Inputs for This Document

<u>Related Input</u>	<u>Relationship</u>
<u>Public Input No. 191-NFPA 25-2026 [New Section after 12.5.2]</u>	

Submitter Information Verification

Submitter Full Name: Mark Fessenden

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Submittal Date: Wed Jun 03 01:33:56 EDT 2026

Committee: INM-AAA



Public Input No. 83-NFPA 25-2026 [New Section after 4.5]

TITLE OF NEW CONTENT

4.5.1 All components and systems with greater than annual inspection frequencies that are not completed within the prescribed interval shall be deemed a deficiency.

Statement of Problem and Substantiation for Public Input

The proposed language is intended to clarify the significance associated with inspection activities that occur at frequencies greater than one year and are not completed within the prescribed interval. Currently, NFPA 25 identifies deficiencies based largely on observed physical conditions or operational impairments; however, the standard does not consistently address overdue inspection activities. This PI improves consistency within NFPA 25 by recognizing overdue inspection activities as deficiencies rather than merely incomplete documentation items. The proposed language aligns with the overall intent of NFPA 25 to maintain fire protection systems in an operational state of readiness and provides clear enforceable criteria for owners, contractors, and authorities having jurisdiction. The proposal does not create new inspection requirements or shorten existing inspection frequencies. Instead, it clarifies that once the prescribed interval has been exceeded, the affected component or system is no longer considered compliant with the inspection requirements of the standard and shall be identified as a deficiency until the required inspection is completed.

Submitter Information Verification

Submitter Full Name: Vincent Powers

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Submittal Date: Fri May 29 10:15:39 EDT 2026

Committee: INM-AAA



Public Input No. 199-NFPA 25-2026 [Section No. 4.6.1 [Excluding any Sub-Sections]]

All components and systems shall be tested at intervals specified in the appropriate chapters to verify that they function as intended.

Statement of Problem and Substantiation for Public Input

The current wording is open ended. This change aligns the text with that for inspections in 4.5.

Submitter Information Verification

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Submittal Date: Wed Jun 03 10:59:25 EDT 2026

Committee: INM-AAA



Public Input No. 84-NFPA 25-2026 [New Section after 4.6.1.1]

TITLE OF NEW CONTENT

4.6.1.1 All components and systems with greater than annual test frequencies that are not completed within the prescribed interval shall be deemed deficiency.

Statement of Problem and Substantiation for Public Input

The proposed language is intended to clarify the significance associated with test and testing activities that occur at frequencies greater than one year and are not completed within the prescribed interval. Currently, NFPA 25 identifies deficiencies based largely on observed physical conditions or operational impairments; however, the standard does not consistently address overdue inspection activities. This PI improves consistency within NFPA 25 by recognizing overdue test requirements as deficiencies rather than merely incomplete documentation items. The proposed language aligns with the overall intent of NFPA 25 to maintain fire protection systems in an operational state of readiness and provides clear enforceable criteria for owners, contractors, and authorities having jurisdiction. The proposal does not create new requirements or shorten existing inspection frequencies. Instead, it clarifies that once the prescribed interval has been exceeded, the affected component or system is no longer considered compliant with the test and testing requirements of the standard and shall be identified as a deficiency until the required inspection is completed

Submitter Information Verification

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Submittal Date: Fri May 29 10:26:55 EDT 2026

Committee: INM-AAA



~~4.~~

~~44~~

~~1.~~

~~7— Accessibility: 4.11.7.1 —~~

~~3.1~~

~~Inspection and testing of
equipment~~

~~components and systems installed in areas that are inaccessible for safety considerations
due to process operations shall be inspected and tested during each scheduled shutdown.~~

~~4.~~

~~44~~

~~4.~~

~~7~~

~~3.2~~

~~—~~

~~Where approved by the authority having jurisdiction, inspection and testing of
equipment~~

~~components and system installed in areas that are inaccessible for safety considerations
due to process operations shall be conducted during each scheduled shutdown.~~

~~4.~~

~~44~~

~~4.~~

~~7~~

~~3.3* —~~

~~Where a risk assessment demonstrates that a temporary condition will result in personnel
safety being compromised, inspection and testing activities shall be delayed when approved
by the authority having jurisdiction.~~

Statement of Problem and Substantiation for Public Input

This change consolidates the two sections titled “Accessibility” into one section. While inaccessibility for safety concerns is related to the overall safety of personnel performing ITM activities, having these requirements and allowances in one section and closer to the beginning of chapter 4 makes them more The terms that have been added or changed in sections 4.1.3.1 and 4.1.3.2 clarify the intent of each section and add consistency in the use of these terms.

Related Public Inputs for This Document

Related Input

Relationship

Public Input No. 71-NFPA 25-2026 [Section No. A.4.11.7.3]

Submitter Information Verification

Submitter Full Name: Terry Victor

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Submittal Date: Thu May 21 14:28:40 EDT 2026

Committee: INM-AAA



Public Input No. 60-NFPA 25-2026 [New Section after 4.11.7.3]

4.12 Contractors Responsibilities

4.12.1 Contractor shall inform the owner in writing when a newer edition of this standard is adopted in the owner's jurisdiction.

Statement of Problem and Substantiation for Public Input

When a new edition of this standard is adopted in a jurisdiction the owner needs to be informed of that adoption. If the jurisdiction does not adopt this standard then the owner needs to be informed of the latest edition of this standard. Contractors are aware of changes to the edition of the standard and generally owners are not. Contractors can improve communication with owners by informing the owner when the standard has changed. It may be argued this is the AHJ's job, reality is the contractor may be the only entity to set foot in a building and they are utilizing the standard for their service. It is reasonable they could inform the owner a newer edition is enforceable because they are aware of that change. It is not reasonable for a contractor to state they don't know what edition is adopted because they are required to perform their service to the currently adopted standard or the most recent published standard.

Submitter Information Verification

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Submittal Date: Mon May 18 21:18:49 EDT 2026

Committee: INM-AAA



Public Input No. 95-NFPA 25-2026 [Section No. 5.1.1.1]

5.1.1.1

This chapter shall provide the minimum requirements for the routine inspection, testing, and maintenance of sprinkler systems installed in accordance with NFPA 13 and NFPA 13R or other approved installation standard.

5.1.1.1.1 Inspection, testing, and maintenance requirements occurring at intervals greater than annual that are not completed within the prescribed frequency shall be deemed a deficiency.

Statement of Problem and Substantiation for Public Input

The proposed language is intended to clarify the significance associated with test and testing activities that occur at frequencies greater than one year and are not completed within the prescribed interval. Currently, NFPA 25 identifies deficiencies based largely on observed physical conditions or operational impairments; however, the standard does not consistently address overdue inspection activities. This PI improves consistency within NFPA 25 by recognizing overdue test requirements as deficiencies rather than merely incomplete documentation items. The proposed language aligns with the overall intent of NFPA 25 to maintain fire protection systems in an operational state of readiness and provides clear enforceable criteria for owners, contractors, and authorities having jurisdiction. The proposal does not create new requirements or shorten existing inspection frequencies. Instead, it clarifies that once the prescribed interval has been exceeded, the affected component or system is no longer considered compliant with the test and testing requirements of the standard and shall be identified as a deficiency until the required inspection is completed.

Submitter Information Verification

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Submission Date: Fri May 29 13:48:10 EDT 2026

Committee: INM-AAA



Public Input No. 105-NFPA 25-2026 [Section No. 5.1.1.2]

5.1.1.2

Table 5.1.1.2 shall be used to determine the minimum required frequencies for inspection, testing, and maintenance.

Table 5.1.1.2 Summary of Sprinkler System Inspection, Testing, and Maintenance

<u>Item</u>	<u>Frequency</u>	<u>Reference</u>
Inspection	-	-
Assessment of the internal piping condition	—	Chapter 14
Automatic air vents	—	Chapter 13
Control valves	—	Chapter 13
Fire department connections	—	Chapter 13
Gauges (wet and deluge systems)	—	Chapter 13
Gauges (dry and preaction systems)	—	Chapter 13
Hangers/braces/supports	Annually	5.2.3
Heat tracing	—	5.2.6
Hydraulic design information sign	Annually	5.2.5
Information signs	Annually	5.2.7, and 5.2.8
Pipe and fittings	Annually	5.2.2
Sprinklers	Annually	5.2.1
Sprinklers (electrically operated)	Annually	5.2.1.5
Sprinklers (spare)	Annually	5.2.1.4
Sprinkler guards	Annually	5.2.1.1.7
Supervisory signal devices (except valve supervisory switches)	—	5.2.4 and Chapter 13
System valves	—	Chapter 13
Valve supervisory signal devices	—	5.2.4 and Chapter 13
Waterflow alarm devices	—	5.2.4 and Chapter 13
Test	-	-
Antifreeze solution	Annually	5.3.4
Control valves	—	Chapter 13
Electrically operated sprinklers	—	5.3.2
Gauges	—	Chapter 13
Main drain	—	Chapter 13
Sprinklers (all)	At 50 years and every 10 years thereafter	5.3.1
Sprinklers (all)	At 75 years and every 5 years thereafter	5.3.1
Sprinklers (dry)	At 20 years and every 10 years thereafter	5.3.1
Sprinklers (extra-high or greater temperature solder type)	Every 5 years	5.3.1
Sprinklers (fast-response, except ESFR and CMSA)	At 25 years and every 10 years thereafter	5.3.1
Sprinklers (ESFR and CMSA with fast-response elements)	At 20 <u>25</u> years and every 10 years thereafter	5.3.1
Sprinklers (harsh environments)	Every 5 years	5.3.1

<u>Item</u>	<u>Frequency</u>	<u>Reference</u>
Supervisory signal devices (except valve supervisory switches)	—	Chapter 13
System valves	—	Chapter 13
Valve supervisory signal devices	—	Chapter 13
Waterflow alarm devices	—	5.3.3 and Chapter 13
Maintenance	-	-
Low-point drains (dry pipe and preaction systems)	—	Chapter 13
Sprinklers and automatic spray nozzles protecting commercial cooking equipment and ventilation systems	Annually	5.4.1.8
Replacement of sprinklers	—	5.4.1.1
Replacement of sprinklers affected by a fire	—	5.4.1.1
Replacement of threaded sprinklers removed from fitting for any reason (except dry type)	—	5.4.1.2
Stock of spare sprinklers	—	5.4.1.6
Valves (all types)	—	Chapter 13
Investigation	-	-
Obstruction	—	Chapter 14

Statement of Problem and Substantiation for Public Input

Editorial change that was missed during the last cycle.

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Submittal Date: Fri May 29 14:03:22 EDT 2026

Committee: INM-AAA



Public Input No. 28-NFPA 25-2026 [Section No. 5.1.3]

5.1.

~~3-Internal~~

3 Internal Piping Condition and Obstruction Investigations.

~~The procedures outlined in Chapter 14 shall be followed where there is a need to conduct an assessment of the internal piping condition or an obstruction investigation.~~

5.1.3.1

An internal assessment of each sprinkler system shall be conducted in accordance with 14.2.

5.1.3.2

Where required by 14.2 an obstruction investigation of the sprinkler system shall be conducted in accordance with 14.3.

Statement of Problem and Substantiation for Public Input

The current requirement to conduct an internal pipe assessment "when needed" is unenforceable. Proposed language clarifies the intent to internally inspect all water-based fire protection systems and provides proper pointers to the specific sections in Chapter 14.

Submitter Information Verification

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Submittal Date: Fri Mar 06 11:16:28 EST 2026

Committee: INM-AAA



Public Input No. 72-NFPA 25-2026 [Section No. 5.2.1.1.3]

5.2.1.1.3*

Sprinklers installed in concealed spaces ~~such as above suspended ceilings~~ shall not require inspection.

Statement of Problem and Substantiation for Public Input

This change removes the one example of what is to be considered a concealed space. A related PI describes some examples of a concealed space.

Related Public Inputs for This Document

<u>Related Input</u>	<u>Relationship</u>
Public Input No. 73-NFPA 25-2026 [Section No. A.5.2.1.1.3]	
Public Input No. 115-NFPA 25-2026 [Section No. 5.2.2.3]	
Public Input No. 116-NFPA 25-2026 [Section No. 5.2.3.3]	

Submitter Information Verification

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Submittal Date: Thu May 21 14:53:40 EDT 2026

Committee: INM-AAA



Public Input No. 163-NFPA 25-2026 [Section No. 5.2.1.1.4]

5.2.1.1.4 –

~~Sprinklers installed in areas that are inaccessible for safety considerations due to process operations shall be inspected during each scheduled shutdown.~~

Statement of Problem and Substantiation for Public Input

This requirement was redundant to the general requirements in 4.11.7 and is not needed.

Submitter Information Verification

Submitter Full Name: Kevin Hall

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Submittal Date: Tue Jun 02 15:45:01 EDT 2026

Committee: INM-AAA



Public Input No. 11-NFPA 25-2026 [Section No. 5.2.1.1.5]

5.2.1.1.5*

Where escutcheons and coverplates for recessed, flush, and concealed sprinklers are found to be missing or show signs of any of the following deficiencies, they shall be replaced with listed escutcheons or coverplates that are part of the listed sprinkler assembly:

- (1) Physical damage
- (2) Corrosion detrimental to sprinkler performance
- (3) Loading detrimental to sprinkler performance
- (4) Paint, other than that applied by the sprinkler manufacturer, detrimental to sprinkler performance

5.2.1.1.5.1*

Where escutcheons and coverplates for recessed, flush, and concealed sprinklers are found to be adhered or attached to the ceiling or wall, they shall be replaced.

5.2.1.1.5.2

Where the listed escutcheon or coverplate from a listed sprinkler assembly is required to be replaced in accordance with 5.2.1.1.5 or 5.2.1.1.5.1 and is no longer commercially available, the sprinkler assembly shall be replaced.

A.5.2.1.1.5 With particular regard to corrosion, loading or paint, the expectation is that qualified personnel conducting these inspections will apply their judgment in determining to what extent, if any, those conditions constitute a detriment to performance.

Statement of Problem and Substantiation for Public Input

An annex note is being proposed here. See substantiation for PI-10

Related Public Inputs for This Document

<u>Related Input</u>	<u>Relationship</u>
<u>Public Input No. 10-NFPA 25-2026 [Section No. A.5.2.1.1.1]</u>	
<u>Public Input No. 10-NFPA 25-2026 [Section No. A.5.2.1.1.1]</u>	

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Submittal Date: Thu Jan 29 15:32:08 EST 2026

Committee: INM-AAA



Public Input No. 88-NFPA 25-2026 [New Section after 5.2.1.1.7]

5.2.1.1.7 Sprinkler Recall Status Inspection

5.2.1.1.7 Sprinkler Recall Status Inspection _

5.2.1.1.7.* The sprinkler list required by 5.4.1.6.6 shall be inspected annually for sprinklers that are under a recall issued by the Consumer Product Safety Commission (CPSC), the sprinkler manufacturer, or nationally recognized safety organization. _

5.2.1.1.7.2 Sprinklers identified as subject to a recall shall be replaced. _

5.2.1.1.7.3 Sprinkler systems, or portions thereof, found to contain recalled sprinklers shall be considered impaired. _

5.2.1.1.7.4 Sprinkler systems, or portions thereof, found to contain recalled sprinklers shall be permitted to remain in service where approved. _

4.5.1.1.7 See Annex I for examples of sprinklers applicable to this section. _

..

Statement of Problem and Substantiation for Public Input

Certain wet and dry sprinklers utilizing dynamic O-ring water seal designs were previously subject to major recalls involving Central Sprinkler, Omega, Star, and Gemini sprinkler models. Industry testing and subsequent standards revisions identified that degradation of the O-ring sealing components could result in sticking, material transfer, or failure of the sprinkler to properly operate during a fire event. Based on these findings, Underwriters Laboratories (UL) revised the sprinkler listing standards to prohibit O-ring water seal constructions, with manufacturing of listed sprinklers utilizing this design effectively ending on January 2003.

Although these recalled sprinklers are decades old, significant quantities remain installed in existing fire sprinkler systems throughout the United States. The continued presence of recalled dynamic O-ring sprinklers represents a life safety concern.

In July 2025, a fatal fire occurred at the Gabriel House assisted living facility in Fall River, Massachusetts, resulting in the deaths of ten residents. The incident was reported as the deadliest fire in Massachusetts in more than forty years and brought renewed attention to the hazard associated with recalled sprinklers remaining in service. Post-incident inspections identified recalled Central GB-series dynamic O-ring sprinklers installed within the facility. Subsequent targeted inspections by the Fall River Fire Department and neighboring jurisdictions identified additional recalled sprinklers in existing occupancies, further demonstrating that these products remain widespread in the field.

This proposal is intended to improve identification of recalled sprinklers during inspection activities and increase awareness that recalled dynamic O-ring sprinklers continue to exist in existing fire sprinkler systems decades after the original recalls were issued.

Submitter Information Verification

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Submittal Date: Fri May 29 12:03:18 EDT 2026

Committee: INM-AAA



Public Input No. 152-NFPA 25-2026 [New Section after 5.2.1.5]

Sprinkler Recall Status Inspection

5.2.1.6 (NEW) Sprinkler Recall Status Inspection

5.2.1.6.1.* The sprinkler list required by 5.4.1.6.6 shall be inspected annually for sprinklers that are under a recall issued by the Consumer Product Safety Commission (CPSC), the sprinkler manufacturer, or nationally recognized safety organization.

5.2.1.6.2 Sprinklers identified as subject to a recall shall be replaced.

5.2.1.6.3 Sprinkler systems, or portions thereof, found to contain recalled sprinklers shall be considered impaired.

5.2.1.6.4 Sprinkler systems, or portions thereof, found to contain recalled sprinklers shall be permitted to remain in service where approved.

Statement of Problem and Substantiation for Public Input

This Public Input (PI) addresses a continuing and imminent life-safety hazard associated with the widespread presence of recalled fire sprinklers that remain installed in existing buildings decades after multiple manufacturer and Consumer Product Safety Commission (CPSC) recall actions.

Certain wet and dry sprinklers utilizing dynamic O-ring water seal constructions were subject to major recalls affecting Central Sprinkler Company, Omega, Star, and Gemini brands. Based on industry testing and subsequent standards action, Underwriters Laboratories (UL) identified that degradation, sticking, and material transfer of O-ring seals could inhibit sprinkler operation under fire conditions. As a result of these findings, UL sprinkler standards were revised to prohibit the use of O-ring water seal constructions, with an effective manufacturing cutoff date of January 9, 2003.

Despite the age of these recalled sprinklers, large quantities remain installed in existing buildings. CPSC data indicate that major O-ring recalls affected tens of millions of sprinklers nationally (e.g., approximately 35 million under Central's 2001 program alone, plus earlier Omega and limited Gem/Star models), with only partial replacements documented. Consequently, recalled sprinklers are expected to remain in service across thousands of buildings, including occupancies serving vulnerable populations.

Field sprinkler testing data from UL Solutions, along with recent field-service testing results from Dyne Fire Protection Labs, demonstrate a pronounced disparity in operating performance between sprinklers incorporating O-ring water seals and those without such seals. UL's long-running field-testing program shows normal operation in approximately 63–71 percent of tested wet sprinklers with O-ring seals and approximately 44–49 percent of tested dry sprinklers with O-ring seals, compared to normal operation rates consistently exceeding 95 percent for sprinklers without O-ring water seals across multiple sprinkler types and service ages. Complementing this, Dyne's 2024–2025 field-service testing aggregates indicate that sprinklers utilizing O-ring water seal designs (still present in approximately 4–5% of submissions) continue to exhibit failure rates exceeding 50 percent when evaluated against applicable operational performance criteria. These findings demonstrate that the defect mechanism associated with O-ring water seals presents a materially elevated risk of failure that is not present in non-O-ring sprinkler designs.

NFPA 25 currently relies on visual inspection and age-based representative sample testing to assess sprinkler condition and performance. However, the defects associated with recalled O-ring sprinklers are internal and are not detectable through visual inspection from floor level. While NFPA 25 includes testing requirements for certain quick-response sprinklers at 20 or 25 years in service, these provisions do not require verification of recall status and are dependent upon complete records, correct sprinkler

classification, and consistent implementation. As demonstrated by recent fatal and near-fatal fire incidents, these conditions are frequently absent in older systems, allowing recalled sprinklers to remain in service and appear compliant under existing inspection and testing frameworks.

In July 2025, a fatal fire occurred at the Gabriel House assisted living facility in Fall River, Massachusetts, resulting in the deaths of ten residents. The incident represents the deadliest fire in the Commonwealth of Massachusetts in more than four decades and underscores the severity of the hazard posed by undetected recalled sprinkler components in existing occupancies. Post-incident inspections identified recalled Central GB-series O-ring sprinklers installed within the building. Subsequent targeted inspections conducted by the Fall River Fire Department and a neighboring jurisdiction identified additional recalled sprinklers remaining in service at multiple properties, further demonstrating that current NFPA 25 requirements do not reliably identify recalled components.

These findings are cited to illustrate the persistence of recalled sprinklers in service and the limitations of current inspection practices, not to assign causation in any specific incident.

NFPA 25 presently contains no explicit requirement to verify sprinkler recall status during inspection, testing, or maintenance activities. Without such a requirement, owners, inspection agencies, and Authorities Having Jurisdiction (AHJs) lack a systematic mechanism to identify and mitigate the continued presence of recalled sprinklers known to exhibit elevated failure rates under fire conditions.

This PI closes a critical gap in NFPA 25 by establishing a requirement for periodic verification of sprinkler recall status using available inventory records and identification methods. The proposed change does not mandate new testing protocols or blanket replacement but instead ensures that existing recall determinations issued by manufacturers and safety authorities are identified and addressed within the inspection and maintenance process.

Related Public Inputs for This Document

Related Input	Relationship
Public Input No. 153-NFPA 25-2026 [Section No. 5.4.1.1]	
Public Input No. 154-NFPA 25-2026 [New Section after A.5.2.1.3]	
Public Input No. 155-NFPA 25-2026 [New Section after A.5.4.1.1(4)]	
Public Input No. 157-NFPA 25-2026 [New Section after I.3]	

Submitter Information Verification

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Submittal Date: Tue Jun 02 14:35:41 EDT 2026
Committee: INM-AAA



Public Input No. 115-NFPA 25-2026 [Section No. 5.2.2.3]

5.2.2.3*

Pipe and fittings installed in concealed spaces ~~such as above suspended ceilings~~ shall not require inspection.

Statement of Problem and Substantiation for Public Input

This change removes the one example of what is to be considered a concealed space. A related PI describes some examples of a concealed space

Related Public Inputs for This Document

<u>Related Input</u>	<u>Relationship</u>
Public Input No. 72-NFPA 25-2026 [Section No. 5.2.1.1.3]	Addresses components in concealed spaces
Public Input No. 73-NFPA 25-2026 [Section No. A.5.2.1.1.3]	Addresses components in concealed spaces
Public Input No. 116-NFPA 25-2026 [Section No. 5.2.3.3]	
Public Input No. 117-NFPA 25-2026 [Section No. A.5.2.2.3]	
Public Input No. 198-NFPA 25-2026 [Section No. 6.2.4.3]	

Submitter Information Verification

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Submittal Date: Mon Jun 01 11:14:56 EDT 2026

Committee: INM-AAA



Public Input No. 164-NFPA 25-2026 [Section No. 5.2.2.4]

5.2.2.4 –

~~Pipe and fittings installed in areas that are inaccessible for safety considerations due to process operations shall be inspected during each scheduled shutdown.~~

Statement of Problem and Substantiation for Public Input

This requirement was redundant to the general requirements in 4.11.7 and is not needed.

Submitter Information Verification

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Submittal Date: Tue Jun 02 15:45:29 EDT 2026

Committee: INM-AAA



Public Input No. 116-NFPA 25-2026 [Section No. 5.2.3.3]

5.2.3.3*

Hangers, braces, and supports installed in concealed spaces ~~such as above-suspended ceilings~~ shall not require inspection.

Statement of Problem and Substantiation for Public Input

This change removes the one example of what is to be considered a concealed space. A related PI describes some examples of a concealed space

Related Public Inputs for This Document

<u>Related Input</u>	<u>Relationship</u>
Public Input No. 72-NFPA 25-2026 [Section No. 5.2.1.1.3]	Addresses components in concealed spaces
Public Input No. 73-NFPA 25-2026 [Section No. A.5.2.1.1.3]	Addresses components in concealed spaces
Public Input No. 115-NFPA 25-2026 [Section No. 5.2.2.3]	Addresses components in concealed spaces
Public Input No. 118-NFPA 25-2026 [Section No. A.5.2.3.3]	
Public Input No. 198-NFPA 25-2026 [Section No. 6.2.4.3]	

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Submittal Date: Mon Jun 01 11:20:23 EDT 2026

Committee: INM-AAA



Public Input No. 216-NFPA 25-2026 [Section No. 5.2.5]

54.2X.5X* Hydraulic Design Information Sign.

~~The hydraulic-~~ Where required by the appropriate installation standard, a hydraulic design information sign shall be inspected annually to verify that it is provided, attached securely to the sprinkler riser, and is legible.

54.2X.5X.1

A hydraulic design information sign that is missing or illegible shall be replaced.

54.2X.5X.2

~~A pipe schedule system shall~~ Sprinkler and standpipe systems utilizing a pipe schedule shall have a hydraulic design information sign that reads "Pipe Schedule System."

Statement of Problem and Substantiation for Public Input

This is a requirement more appropriate for chapter 4 since various systems require hydraulic information to be available.

Related Public Inputs for This Document

<u>Related Input</u>	<u>Relationship</u>
Public Input No. 217-NFPA 25-2026 [Section No. 6.2.2]	
Public Input No. 217-NFPA 25-2026 [Section No. 6.2.2]	

Submitter Information Verification

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Submittal Date: Wed Jun 03 12:06:17 EDT 2026

Committee: INM-AAA



Public Input No. 6-NFPA 25-2026 [Section No. 5.2.5]

5.2.5 * – Hydraulic Design Information Sign:

~~The hydraulic design information sign shall be inspected annually to verify that it is provided, attached securely to the sprinkler riser, and is legible.~~

5.2.5.1 –

~~A hydraulic design information sign that is missing or illegible shall be replaced.~~

5.2.5.2 –

~~A pipe schedule system shall have a hydraulic design information sign that reads “Pipe Schedule System.”~~

Statement of Problem and Substantiation for Public Input

The requirement to inspect the hydraulic design information sign should be deleted and moved to Chapter 4 as a general requirement without an inspection interval. The presence of the hydraulic design information sign does not affect system performance and is not needed during an emergency. The only time the information on this sign would be needed is when the system is being evaluated or modified. In this case, the owner should have maintained the as-builts and hydraulic calculations for the lifetime of the system. If not, they should have the hydraulic design information sign readily available.

Submitter Information Verification

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Submittal Date: Fri Jan 23 10:13:42 EST 2026

Committee: INM-AAA



Public Input No. 8-NFPA 25-2026 [Section No. 5.2.7]

5.2.7 * – General Information Sign:

~~Where required by NFPA 13, the general information sign shall be inspected annually to verify that it is provided, securely attached, and legible.~~

5.2.7.1 –

~~Such general information shall be provided with a permanently marked weatherproof metal or rigid plastic sign, secured with corrosion-resistant wire, chain, or other acceptable means:
[13: 29.6.1.1]~~

5.2.7.2 –

~~Such signs shall be placed at each system riser. [13: 29.6.1.2]~~

5.2.7.3 –

~~Where the general information sign was not required at the time of system acceptance, only the information sign required by 4.1.10 shall be inspected annually to verify that it is provided, securely attached, and legible.~~

Statement of Problem and Substantiation for Public Input

The requirement to inspect the general information sign should be deleted and moved to Chapter 4 as a general requirement without an inspection interval. The presence of the general information sign does not affect system performance and is not needed during an emergency. The only time the information on this sign would be needed is when the system is being evaluated, modified, or inspected by the fire code official to determine compliance with the fire code. In this case, the owner should have maintained the necessary documents and have them readily available, as required by NFPA 25, for the AHJ to review.

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Committee: INM-AAA



Public Input No. 85-NFPA 25-2026 [New Section after 5.2.8]

5.2.10 Documentation Cabinet

Where required by NFPA 13, the documentation cabinet shall be inspected annually to verify that it is installed at an approved location.

A.5.2.10 The document cabinet required by NFPA 25 was introduced by NFPA 13 in the 2025 edition and as such, should not be expected to be present on systems installed prior. The documents that could be maintained in the cabinet include hard or electronic copies of as-built drawings, original acceptance tests, manufacture's data sheets, hydraulic data plates and any other important documents that are related to the fire sprinkler system that could be of importance. This also does not prohibit the owner from storing these records electronically.

Statement of Problem and Substantiation for Public Input

Providing a permanent cabinet for documentation on the premises is necessary for future ITM activities, building modifications, etc. Storing electronic media within the cabinet is acceptable. The documentation cabinet has been required by NFPA 72 for several cycles and now is required by NFPA 13.

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Public Input No. 193-NFPA 25-2026 [Section No. 5.3.1.1.1 [Excluding any Sub-Sections]]

~~Where sprinklers have been installed for 50 years, one of the following shall occur:~~

- ~~(1) The sprinklers shall be replaced.~~
- ~~(2) Representative samples of the sprinklers shall be tested and then retested every 10 years.~~

Statement of Problem and Substantiation for Public Input

Move standard response sprinkler testing from a 50 year test cycle to a 25 year test cycle. There are recalled or voluntarily replaced sprinklers with a standard response operating element that may not otherwise be identified but would be identified in the test interval was reduced. Additionally EN12845 requires a 25 year test interval for both standard response and quick response sprinklers. So this change would create an alignment in test protocols accross the globe.

Related Public Inputs for This Document

<u>Related Input</u>	<u>Relationship</u>
<u>Public Input No. 194-NFPA 25-2026 [Section No. 5.3.1.1.1.1]</u>	
<u>Public Input No. 195-NFPA 25-2026 [Section No. 5.3.1.1.1.2]</u>	

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Committee: INM-AAA



Public Input No. 194-NFPA 25-2026 [Section No. 5.3.1.1.1.1]

5.3.1.1.1.1*

Where sprinklers ~~manufactured using fast-response elements, except for ESFR and CMSA,~~ have been installed for 25 years, one of the following shall occur:

- (1) The sprinklers shall be replaced.
- (2) Representative samples of the sprinklers shall be tested and then retested every 10 years.

Statement of Problem and Substantiation for Public Input

EN12845 requires a 25 year test interval for both standard response and quick response sprinklers. So this change would create an alignment in test protocols accross the globe.

Related Public Inputs for This Document

<u>Related Input</u>	<u>Relationship</u>
Public Input No. 193-NFPA 25-2026 [Section No. 5.3.1.1.1 [Excluding any Sub-Sections]]	

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Committee: INM-AAA



Public Input No. 195-NFPA 25-2026 [Section No. 5.3.1.1.1.2]

5.3.1.1.1.2 –

~~Where ESFR and CMSA sprinklers using fast-response elements have been installed for 20 years, one of the following shall occur:~~

- ~~• The sprinklers shall be replaced.~~

~~Representative samples of the sprinklers shall be tested and then retested every 10 years~~

Move standard response sprinkler testing from a 50 year test cycle to a 25 year test cycle. There are recolled or vountarily replaced sprinklers with a standard response operating element that may not otherwise be identified but would be idenitfied in the test interval was reduced. Additionally EN12845 requires a 25 year test interval for both standard response and quick response sprinklers. So this change would create an alignment in test protocols accross the globe .

Statement of Problem and Substantiation for Public Input

EN12845 requires a 25 year test interval for both standard response and quick response sprinklers. So this change would create an alignment in test protocols accross the globe.

Related Public Inputs for This Document

<u>Related Input</u>	<u>Relationship</u>
Public Input No. 193-NFPA 25-2026 [Section No. 5.3.1.1.1 [Excluding any Sub-Sections]]	

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Submittal Date: Wed Jun 03 01:42:54 EDT 2026

Committee: INM-AAA



Public Input No. 220-NFPA 25-2026 [Section No. 5.3.1.1.1.7]

5.3.1.1.1.7 –

~~Where sprinklers have been installed for 50 years in dwelling units, one of the following shall occur:~~

- ~~(1) The sprinklers shall be replaced with fast-response sprinklers.~~
- ~~(2) Representative samples of the sprinklers shall be tested for thermal sensitivity such that the RTI does not exceed 65 (meters-seconds) [†] / 2 .~~

Statement of Problem and Substantiation for Public Input

The Committee got it right during the First Draft meeting with a response that this change made last cycle was not supported by technical justification. Even the additional material submitted with a Public Comment failed to meet the standard of a complete risk assessment to justify the change. Absent a risk assessment, fire incident data does not support the change. Where are the deaths in dwelling unit fires in which the dwelling unit is protected with a properly designed, installed, and maintained sprinkler system using standard response sprinklers along with properly installed and maintained smoke alarms? Why was an RTI lower than what is used to define a standard response sprinkler chosen as a threshold to replace the sprinklers?

In addition to the lack of technical justification, the proposed change conflicts with NFPA 13, NFPA 1, NFPA 101, NFPA 5000, the International Fire Code, and the International Existing Building Code. The I-codes and NFPA codes referenced all permit a replacement of a system or the components of a system with a system or components that is equivalent to what previously existed. For example, the replacement of all the sprinklers on a system is a Renovation project (NFPA 101, Chapter 43) and the sprinklers need not be replaced with fast response sprinklers.

Imagine the situation that has been created with the new requirement. An owner is told to test a representative sample of the existing sprinklers. The results are received and the owner is told the sprinklers pass. However, due to a new requirement in NFPA 25, all of the sprinklers need to be replaced. While fast response sprinklers in these situations offer a higher level of safety, it is a level of safety that exceeds the minimum requirements of any of the codes cited above. Since NFPA 25 is typically not adopted separately; but rather, as a reference standard, all of the codes above state that where a conflict exists between a code and a standard, the code takes precedence.

The new paragraph has created a situation in which the entity performing the periodic inspection and test of a sprinkler system will tell the owner the sprinklers need to be replaced but if that same owner then reaches out to the AHJ or code official, the owner will be told that the code adopted by the jurisdiction does not require the sprinklers to be replaced.

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Submittal Date: Wed Jun 03 15:54:42 EDT 2026

Committee: INM-AAA



Public Input No. 221-NFPA 25-2026 [New Section after 5.3.1.3]

Dynamic O-ring water seal Sprinklers

Sprinklers found to contain a dynamic o-ring water seal shall be repaced.

Statement of Problem and Substantiation for Public Input

UL no longer permits the use of dymanic o-ring water seal sprinklers. They have been shown to have a high rate of failure and should be removed when identified.

Submitter Information Verification

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Committee: INM-AAA



Public Input No. 153-NFPA 25-2026 [Section No. 5.4.1.1]

5.4.1.1 Replacement Sprinklers.

Sprinklers with any of the following qualifications shall be replaced:

- (1) Sprinklers manufactured prior to 1920.
- (2) Sprinklers showing signs described in 5.2.1.1.1.
- (3) Sprinklers with unsatisfactory performance when tested in accordance with 5.3.1.
- (4) * Sprinklers affected by a fire as determined by the AHJ.
- (5) * Sprinklers identified as recalled during the inspection outlined in 5.2.1.6.

Statement of Problem and Substantiation for Public Input

This Public Input (PI) addresses a continuing and imminent life-safety hazard associated with the widespread presence of recalled fire sprinklers that remain installed in existing buildings decades after multiple manufacturer and Consumer Product Safety Commission (CPSC) recall actions.

Certain wet and dry sprinklers utilizing dynamic O-ring water seal constructions were subject to major recalls affecting Central Sprinkler Company, Omega, Star, and Gemini brands. Based on industry testing and subsequent standards action, Underwriters Laboratories (UL) identified that degradation, sticking, and material transfer of O-ring seals could inhibit sprinkler operation under fire conditions. As a result of these findings, UL sprinkler standards were revised to prohibit the use of O-ring water seal constructions, with an effective manufacturing cutoff date of January 9, 2003.

Despite the age of these recalled sprinklers, large quantities remain installed in existing buildings. CPSC data indicate that major O-ring recalls affected tens of millions of sprinklers nationally (e.g., approximately 35 million under Central's 2001 program alone, plus earlier Omega and limited Gem/Star models), with only partial replacements documented. Consequently, recalled sprinklers are expected to remain in service across thousands of buildings, including occupancies serving vulnerable populations.

Field sprinkler testing data from UL Solutions, along with recent field-service testing results from Dyne Fire Protection Labs, demonstrate a pronounced disparity in operating performance between sprinklers incorporating O-ring water seals and those without such seals. UL's long-running field-testing program shows normal operation in approximately 63–71 percent of tested wet sprinklers with O-ring seals and approximately 44–49 percent of tested dry sprinklers with O-ring seals, compared to normal operation rates consistently exceeding 95 percent for sprinklers without O-ring water seals across multiple sprinkler types and service ages. Complementing this, Dyne's 2024–2025 field-service testing aggregates indicate that sprinklers utilizing O-ring water seal designs (still present in approximately 4–5% of submissions) continue to exhibit failure rates exceeding 50 percent when evaluated against applicable operational performance criteria. These findings demonstrate that the defect mechanism associated with O-ring water seals presents a materially elevated risk of failure that is not present in non-O-ring sprinkler designs.

NFPA 25 currently relies on visual inspection and age-based representative sample testing to assess sprinkler condition and performance. However, the defects associated with recalled O-ring sprinklers are internal and are not detectable through visual inspection from floor level. While NFPA 25 includes testing requirements for certain quick-response sprinklers at 20 or 25 years in service, these provisions do not require verification of recall status and are dependent upon complete records, correct sprinkler classification, and consistent implementation. As demonstrated by recent fatal and near-fatal fire incidents, these conditions are frequently absent in older systems, allowing recalled sprinklers to remain in service and appear compliant under existing inspection and testing frameworks.

In July 2025, a fatal fire occurred at the Gabriel House assisted living facility in Fall River, Massachusetts, resulting in the deaths of ten residents. The incident represents the deadliest fire in the Commonwealth of Massachusetts in more than four decades and underscores the severity of the hazard posed by undetected recalled sprinkler components in existing occupancies. Post-incident inspections identified recalled Central GB-series O-ring sprinklers installed within the building. Subsequent targeted inspections conducted by the Fall River Fire Department and a neighboring jurisdiction identified additional recalled sprinklers remaining in service at multiple properties, further demonstrating that current NFPA 25 requirements do not reliably identify recalled components.

These findings are cited to illustrate the persistence of recalled sprinklers in service and the limitations of current inspection practices, not to assign causation in any specific incident.

NFPA 25 presently contains no explicit requirement to verify sprinkler recall status during inspection, testing, or maintenance activities. Without such a requirement, owners, inspection agencies, and Authorities Having Jurisdiction (AHJs) lack a systematic mechanism to identify and mitigate the continued presence of recalled sprinklers known to exhibit elevated failure rates under fire conditions.

This PI closes a critical gap in NFPA 25 by establishing a requirement for periodic verification of sprinkler recall status using available inventory records and identification methods. The proposed change does not mandate new testing protocols or blanket replacement but instead ensures that existing recall determinations issued by manufacturers and safety authorities are identified and addressed within the inspection and maintenance process.

Related Public Inputs for This Document

Related Input	Relationship
Public Input No. 152-NFPA 25-2026 [New Section after 5.2.1.5]	Referenced
Public Input No. 155-NFPA 25-2026 [New Section after A.5.4.1.1(4)]	
Public Input No. 157-NFPA 25-2026 [New Section after I.3]	

Submitter Information Verification

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Submittal Date: Tue Jun 02 14:38:22 EDT 2026
Committee: INM-AAA



Public Input No. 89-NFPA 25-2026 [Section No. 5.4.1.1]

5.4.1.1 Replacement Sprinklers.

Sprinklers with any of the following qualifications shall be replaced:

- (1) Sprinklers manufactured prior to 1920.
- (2) Sprinklers showing signs described in 5.2.1.1.1.
- (3) Sprinklers with unsatisfactory performance when tested in accordance with 5.3.1.
- (4) * Sprinklers affected by a fire as determined by the AHJ.
- (5) **Sprinklers identified as recalled during the inspection process outlined in 5.2.1.1.7.*
- (6) *Where sprinklers utilizing dynamic O-ring water seal assemblies are identified, the sprinklers shall be replaced.

Statement of Problem and Substantiation for Public Input

The proposed annex language is intended to provide guidance to assist in identifying dynamic O-ring sealed sprinklers that were not part of a recall or voluntary replacement program.

The dynamic o-ring sprinkler does have higher failure rates as compared to newer sprinkler designs. Published laboratory testing data has identified failure rates exceeding 50 percent for certain dynamic O-ring sprinkler designs.

UL revised UL 199 to prohibit the listing of O-ring water seal constructions after January 2003 following extensive investigation into sprinkler degradation and operational failures. Despite this action, many existing facilities continue to contain these sprinklers.

The proposed language is consistent with the intent of NFPA 25 to maintain water-based fire protection systems in reliable operating condition as stated in Section 1.2.1.

The purpose of this document is to provide requirements that ensure a reasonable degree of protection for life and property from fire through minimum inspection, testing, and maintenance methods for water-based fire protection systems.

Submitter Information Verification

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Submission Date: Fri May 29 12:09:48 EDT 2026

Committee: INM-AAA



Public Input No. 1-NFPA 25-2026 [Section No. 5.4.1.3.2]

5.4.1.3.2*

Where replacing residential sprinklers manufactured prior to 2003 that are no longer available from the manufacturer and are installed using a design density less than 0.05 gpm/ft^2 (204 mm/min), a residential sprinkler with an equivalent K-factor (± 5 percent or the next larger K-factor) shall be permitted to be used if the currently listed coverage area for the replacement sprinkler is not exceeded.

Statement of Problem and Substantiation for Public Input

This requirement has been revised in NFPA 13, NFPA 13R and NFPA 13D. NFPA 25 should be modified to correlate.

Submitter Information Verification

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Submittal Date: Fri Jan 16 08:08:04 EST 2026

Committee: INM-AAA



Public Input No. 4-NFPA 25-2026 [Section No. 5.4.1.6.2]

5.4.1.6.2

The stock of spare sprinklers shall be kept in a cabinet located where the temperature to which they are subjected will at no time exceed the maximum ceiling temperatures specified in Table 5.4.1.6.2- for (a) and Table 5.4.1.6.2 (b) for each of the sprinklers within the cabinet.

~~Table 5.4.1.6.2 Temperature- 2(a) Temperature~~ Ratings, Classifications, and Color Codings ~~Codings~~ for Glass Bulbs

<u>Maximum Ceiling Temperature</u>		<u>Temperature Rating</u>		<u>Temperature Classification</u>	<u>Color Code</u>	<u>Glass Bulb Colors</u>
<u>°F</u>	<u>°C</u>	<u>°F</u>	<u>°C</u>			
100	38	135	57	Ordinary	Orange	
120	49	155	58	Ordinary	Red	
150	66	175	79	Intermediate	Yellow	
150	66	200	93	Intermediate	Green	
		250–	121–			
225	107	300	149	High	Blue	
		325–	163–			
300	149	375	191	Extra high	Purple	
		400–	204–			
375	191	475	246	Very extra high	Black	
		500–	260–			
475	246	575	302	Ultra high	Black	
625	329	650	343	Ultra high	Black	

[13: Table 7.2.4.1(a)]

Table 5.4.1.6.2(b) Temperature Ratings, Classifications, and Color Codings for Fusible Links

<u>Maximum Ceiling Temperature</u>		<u>Temperature Rating</u>		<u>Temperature Classification</u>	<u>Color Code</u>
<u>°F</u>	<u>°C</u>	<u>°F</u>	<u>°C</u>		
100	38	135–170	57–77	Ordinary	Uncolored or black
Orange or red					
150	66	175–225	79–107	Intermediate	White
Yellow or green					
225	107	250–300	121–149	High	Blue
Blue					
300	149	325–375	163–191	Extra high	Red
Purple					
375	191	400–475	204–246	Very extra high	Green
Black					
475	246	500–575	260–302	Ultra high	Orange
Black					
625	329	650	343	Ultra high	Orange
Black					

Statement of Problem and Substantiation for Public Input

NFPA 13 has revised this table to separate glass bulbs from fusible links. Additionally a line item for 155 degree glass bulb sprinklers has been added with a maximum ceiling temperature of 120 degrees. This correlates with NFPA 13.

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Submittal Date: Fri Jan 16 08:29:16 EST 2026

Committee: INM-AAA



Public Input No. 77-NFPA 25-2026 [Section No. 5.4.1.6.2]

5.4.1.6.2

The stock of spare sprinklers shall be kept in a cabinet located where the temperature to which they are subjected will at no time exceed the maximum ceiling temperatures specified in Table 5.4.1.6.2 for each of the sprinklers within the cabinet.

Table 5.4.1.6.2 Temperature Ratings, Classifications, and Color Codings

<u>Maximum Ceiling Temperature</u>		<u>Temperature Rating</u>		<u>Temperature Classification</u>	<u>Color Code</u>	<u>Glass Bulb Colors</u>
<u>°F</u>	<u>°C</u>	<u>°F</u>	<u>°C</u>			
100	38	135–170	57–77	Ordinary	Uncolored or black	Orange or red
150	66	175–225	79–107	Intermediate	White	Yellow or green
225	107	250–300	121–149	High	Blue	Blue
300	149	325–375	163–191	Extra high	Red	Purple
375	191	400–475	204–246	Very extra high	Green	Black
475	246	500–575	260–302	Ultra high	Orange	Black
625	329	650	343	Ultra high	Orange	Black

[13:Table 7.2.4.1]

Additional Proposed Changes

<u>File Name</u>	<u>Description</u>	<u>Approved</u>
Table_7.2.4.1_A_and_B.jpg	NFPA 13 Tables 7.2.4.1(a) and 7.2.4.1(b)	

Statement of Problem and Substantiation for Public Input

Table 5.4.1.6.2 in NFPA 25 references Table 7.2.4.1 from NFPA 13 yet is not a direct reflection of the tables listed in NFPA 13. These tables should be identical and provide inspectors with definite answers to the color code instead of a temperature range of 2 possible colors.

Submitter Information Verification

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Submittal Date: Sun May 24 12:41:38 EDT 2026

Committee: INM-AAA

...

Table 7.2.4.1(a) Temperature Ratings, Classifications, and Color Codings for Glass Bulbs					
Maximum Ceiling Temperature		Temperature Rating		Temperature Classification	Glass Bulb Colors
°F	°C	°F	°C		
100	38	135	57	Ordinary	Orange
120	49	155	68	Ordinary	Red
150	66	175	79	Intermediate	Yellow
150	66	200	93	Intermediate	Green
225	107	250–300	121–149	High	Blue
300	149	325–375	163–191	Extra high	Purple
375	191	400–475	204–246	Very extra high	Black
475	246	500–575	260–302	Ultra high	Black
625	329	650	343	Ultra high	Black

...

Table 7.2.4.1(b) Temperature Ratings, Classifications, and Color Codings for Fusible Links					
Maximum Ceiling Temperature		Temperature Rating		Temperature Classification	Color Code
°F	°C	°F	°C		
100	38	135–170	57–77	Ordinary	Uncolored or black
150	66	175–225	79–107	Intermediate	White
225	107	250–300	121–149	High	Blue
300	149	325–375	163–191	Extra high	Red
375	191	400–475	204–246	Very extra high	Green
475	246	500–575	260–302	Ultra high	Orange
625	329	650	343	Ultra high	Orange



Public Input No. 3-NFPA 25-2026 [Section No. 5.4.1.6.5]

5.4.1.6.5*

~~One sprinkler wrench~~ One installation device as specified by the sprinkler manufacturer shall be provided and maintained on the premises with the spare sprinklers for each type of sprinkler installed.

Statement of Problem and Substantiation for Public Input

New technologies do not necessarily require a sprinkler wrench on site. Grooved sprinklers or sprinklers that can be installed hand tight are some examples. Either way, the proper tool would be specified by the manufacturer.

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Committee: INM-AAA



Public Input No. 2-NFPA 25-2026 [Section No. 5.4.1.10]

5.4.1.10 Protective Coverings.

5.4.1.10.1*

Sprinklers protecting spray areas and mixing rooms in resin application areas installed with protective coverings shall continue to be protected against overspray residue so that they will operate in the event of fire.

5.4.1.10.

2

2

Where sprinklers are installed in other environments that contribute to excessive loading, protective coverings, where provided, shall be maintained in accordance with 5.4.1.10.4.

5.4.1.10.3 _

Sprinklers installed as described in 5.4.1.10.1 or 5.4.1.10.2 shall be protected using cellophane bags having a thickness of 0.003 in. (0.076 mm) or less or thin paper bags.

5.4.1.10.3 4

Coverings shall be replaced periodically so that heavy deposits of residue do not accumulate.

Statement of Problem and Substantiation for Public Input

NFPA 13 now permits sprinklers to be protected with coverings where environments contribute to excessive loading in lieu of replacing or cleaning the sprinklers at shorter intervals. This new section would ensure that those sprinklers are maintained and the coverings are changed periodically so that sprinkler performance is not inhibited.

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Committee: INM-AAA



Public Input No. 139-NFPA 25-2026 [Section No. 5.5.1]

Whenever a component in a sprinkler system is adjusted, repaired, reconditioned, or replaced, the actions required in Table 5.5.1 shall be performed.

Table 5.5.1 Summary of Component Action Requirements

<u>Component</u>	<u>Adjust</u>	<u>Repair/</u>		<u>Required Action</u>
		<u>Recondition</u>	<u>Replace</u>	
Water Delivery Components				
Antifreeze solution	—	—	X	Test solution to verify it has not been unacceptably diluted
		—	—	— Inspect for leaks at system working pressure
Fire department connections	X	X	X	See Chapter 13
Pipe and fittings affecting no more than 20 sprinklers	X	X	X	Inspect for leaks at system working pressure
Pipe and fittings affecting more than 20 sprinklers	X	X	X	Hydrostatic test in conformance with NFPA 13
Sprinklers, regardless of number	X	—	X	Inspect for leaks at system working pressure
Alarm and Supervisory Components				(move all these items to chp 13)
Detection system for deluge or preaction system	X	X	X	Operational test for conformance with NFPA 13 and/or NFPA 72
High and low air pressure switch	X	X	X	Operational test of high and low settings see chapter 13
Pressure switch—type waterflow	X	X	X	Operational test using the inspector's test connection or alarm bypass test valve see chapter 13
Valve supervisory signal initiating device	X	X	X	Test for conformance with NFPA 13 and/or NFPA 72 see chapter 13
Vane-type waterflow	X	X	X	Operational test using inspector's test connection see chapter 13
Water motor gong	X	X	X	Operational test using inspector's test connection see chapter 13

Component	<u>Repair/</u>		<u>Replace</u>	<u>Required Action</u>
	<u>Adjust</u>	<u>Recondition</u>		
Testing and Maintenance Components				(move items to chp 13)
Air compressor	X	X	X	Operational test for conformance with NFPA 13
Automatic air maintenance device	X	X	X	Operational test for conformance with NFPA 13
Auxiliary drains	X	X	X	Inspect for leaks at system working pressure; main drain <u>valve status</u> test
Gauges	X	—	X	Verify at 0 bar (0 psi) and system working pressure
Inspector's test connection	X	X	X	Inspect for leaks at system working pressure; main drain <u>valve status</u> test
Main drain	X	X	X	Main drain test
Structural Components				
Hanger/seismic bracing	X	X	X	Inspect for conformance with NFPA 13
Pipe stands	X	X	X	Inspect for conformance with NFPA 13
Informational Components				
Antifreeze information sign	X	X	X	Inspect for conformance with this standard
General information sign	X	X	X	Inspect for conformance with this standard
Hydraulic design information sign	X	X	X	Inspect for conformance with NFPA 13 and this standard
Identification sign	X	X	X	Inspect for conformance with NFPA 13 and this standard
Information sign	X	X	X	Inspect for conformance with this standard

Statement of Problem and Substantiation for Public Input

The component action tables throughout NFPA 25 should be comprehensively reviewed and revised to ensure technical accuracy, consistency, and alignment with current inspection, testing, and maintenance practices. Many of the component action tables have remained largely unchanged through multiple revision cycles. As a result, several tables contain inconsistencies, outdated terminology, incomplete action guidance.

Submitter Information Verification

Submitter Full Name: Vincent Powers

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Submittal Date: Tue Jun 02 13:35:24 EDT 2026

Committee: INM-AAA



Public Input No. 96-NFPA 25-2026 [Section No. 6.1.1.1]

6.1.1.1

This chapter shall provide the minimum requirements for the routine inspection, testing, and maintenance of standpipe and hose systems installed in accordance with NFPA 14 or other approved installation standard.

6.1.1.1.1 Inspection, testing, and maintenance requirements occurring at intervals greater than annual that are not completed within the prescribed frequency shall be deemed a deficiency.

Statement of Problem and Substantiation for Public Input

The proposed language is intended to clarify the significance associated with test and testing activities that occur at frequencies greater than one year and are not completed within the prescribed interval. Currently, NFPA 25 identifies deficiencies based largely on observed physical conditions or operational impairments; however, the standard does not consistently address overdue inspection activities. This PI improves consistency within NFPA 25 by recognizing overdue test requirements as deficiencies rather than merely incomplete documentation items. The proposed language aligns with the overall intent of NFPA 25 to maintain fire protection systems in an operational state of readiness and provides clear enforceable criteria for owners, contractors, and authorities having jurisdiction. The proposal does not create new requirements or shorten existing inspection frequencies. Instead, it clarifies that once the prescribed interval has been exceeded, the affected component or system is no longer considered compliant with the test and testing requirements of the standard and shall be identified as a deficiency until the required inspection is completed.

Submitter Information Verification

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Submission Date: Fri May 29 13:50:17 EDT 2026

Committee: INM-AAA



Public Input No. 27-NFPA 25-2026 [Section No. 6.1.4]

6.1.

~~4 The procedures outlined in Chapter 14 shall be followed where there is a need to conduct an obstruction investigation.~~

4 Internal Assessments and Obstruction Investigations.

6.1.4.1

An internal assessment of each standpipe system shall be conducted in accordance with 14.2.

6.1.4.2

Where required by 14.2 an obstruction investigation of the standpipe system shall be conducted in accordance with 14.3.

Statement of Problem and Substantiation for Public Input

The current requirement to conduct an internal pipe assessment "when needed" is unenforceable. Proposed language clarifies the intent to internally inspect all water-based fire protection systems and provides proper pointers to the specific sections in Chapter 14.

Submitter Information Verification

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Submittal Date: Fri Mar 06 11:14:36 EST 2026

Committee: INM-AAA



Public Input No. 159-NFPA 25-2026 [Section No. 6.2.2]

~~6.2.2 * – Hydraulic Design Information Sign:~~

~~The hydraulic design information sign for standpipe systems shall be inspected annually to verify that it is provided, attached securely, and legible.~~

~~6.2.2.1 –~~

~~A hydraulic design information sign that is missing or illegible shall be replaced.~~

~~6.2.2.2 –~~

~~A standpipe system that was not sized by hydraulic design shall have a hydraulic design information sign that reads “Pipe Schedule System.”~~

Statement of Problem and Substantiation for Public Input

The requirement to inspect the hydraulic design information sign should be deleted and moved to Chapter 4 as a general requirement without an inspection interval. The presence of the hydraulic design information sign does not affect system performance and is not needed during an emergency. The only time the information on this sign would be needed is when the system is being evaluated or modified. In this case, the owner should have maintained the as-builts and hydraulic calculations for the lifetime of the system. If not, they should have the hydraulic design information sign readily available.

Submitter Information Verification

Submitter Full Name: Kevin Hall

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Submittal Date: Tue Jun 02 15:39:17 EDT 2026

Committee: INM-AAA



Public Input No. 217-NFPA 25-2026 [Section No. 6.2.2]

~~6.2.2 * – Hydraulic Design Information Sign:~~

~~The hydraulic design information sign for standpipe systems shall be inspected annually to verify that it is provided, attached securely, and legible.~~

~~6.2.2.1 –~~

~~A hydraulic design information sign that is missing or illegible shall be replaced.~~

~~6.2.2.2 –~~

~~A standpipe system that was not sized by hydraulic design shall have a hydraulic design information sign that reads “Pipe Schedule System.”~~

Statement of Problem and Substantiation for Public Input

This requirement should be located in chapter 4 as proposed by PI 216 since multiple types of systems require hydraulic information.

Related Public Inputs for This Document

<u>Related Input</u>	<u>Relationship</u>
Public Input No. 216-NFPA 25-2026 [Section No. 5.2.5]	
Public Input No. 216-NFPA 25-2026 [Section No. 5.2.5]	

Submitter Information Verification

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Submittal Date: Wed Jun 03 12:12:52 EDT 2026

Committee: INM-AAA



Public Input No. 106-NFPA 25-2026 [Section No. 6.2.3]

6.2.3 – Hose Connections:

6.2.3.1 –

~~Where any deficiency is noted, the appropriate corrective action shall be taken.~~

Statement of Problem and Substantiation for Public Input

Hose connection requirements were moved to chapter 13 last cycle and any ITM requirements should not be in this chapter.

Submitter Information Verification

Submitter Full Name: Vincent Powers

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Submittal Date: Fri May 29 14:05:03 EDT 2026

Committee: INM-AAA



Public Input No. 160-NFPA 25-2026 [Section No. 6.2.3]

6.2.3 – Hose Connections:

6.2.3.1 –

~~Where any deficiency is noted, the appropriate corrective action shall be taken.~~

Statement of Problem and Substantiation for Public Input

This requirement was redundant to the owner's responsibilities in 4.1.6 and is not needed.

Submitter Information Verification

Submitter Full Name: Kevin Hall

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Submittal Date: Tue Jun 02 15:41:34 EDT 2026

Committee: INM-AAA



Public Input No. 52-NFPA 25-2026 [Section No. 6.2.4.1]

6.2.4.1

Pipe and fittings shall be inspected annually from the floor level.

6.2.4.1.1*

Pipe and fittings shall be free of mechanical damage, leakage, and corrosion.

Additional Proposed Changes

<u>File Name</u>	<u>Description</u>	<u>Approved</u>
TIA_25_26_2.pdf	NFPA 25 TIA 26-2 Log No. 1856	

Statement of Problem and Substantiation for Public Input

NOTE: This public input originates from Tentative Interim Amendment No. 26-2 (Log 1856) issued by the Standards Council on December 2, 2025 and per the NFPA Regs., needs to be reconsidered by the Technical Committee for the next edition of the Document.

Substantiation: The added language was missed when including the pipe and fittings inspection requirements for standpipe systems to correlate with the inspection requirements for sprinkler systems in Chapter 5. This TIA adds the missing section and provides the performance criteria for the annual inspection of the pipe and fittings for standpipe systems.

Emergency Nature: The standard contains an error or an omission that was overlooked during the regular revision process.

The section was inadvertently omitted when correlating Chapter 6 inspection requirements with Chapter 5.

Submitter Information Verification

Submitter Full Name: NFPA TIA

Organization: TIA

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Submittal Date: Wed May 13 12:28:04 EDT 2026

Committee: INM-AAA



Tentative Interim Amendment

NFPA[®] 25

Standard for the Inspection, Testing, and Maintenance of Water-Based Fire Protection Systems

2026 Edition

Reference: 6.2.4.1, 6.2.4.1.1(new) and A.6.2.4.1

TIA 26-2

(SC 25-12-9 / TIA Log #1856)

Pursuant to Section 5 of the NFPA *Regulations Governing the Development of NFPA Standards*, the National Fire Protection Association has issued the following Tentative Interim Amendment to NFPA 25, *Standard for the Inspection, Testing, and Maintenance of Water-Based Fire Protection Systems*, 2026 edition. The TIA was processed by the Technical Committee on Inspection, Testing, and Maintenance of Water-Based Systems, and was issued by the Standards Council on December 2, 2025, with an effective date of December 22, 2025.

1. Remove the asterisk in 6.2.4.1 to read as follows:

6.2.4.1* Pipe and fittings shall be inspected annually from the floor level.

2. Add new paragraph 6.2.4.1.1 and renumber A.6.2.4.1 as follows:

6.2.4.1.1* Pipe and fittings shall be free of mechanical damage, leakage, and corrosion.

A.6.2.4.1 A.6.2.4.1.1 Surface corrosion not impacting the integrity of the piping strength or raising concern of potential leakage should not warrant the replacement of piping. A degree of judgment should be applied in determining the extent of corrosion that necessitates replacement.

Issue Date: December 2, 2025

Effective Date: December 22, 2025

(Note: For further information on NFPA Codes and Standards, please see www.nfpa.org/docinfo)

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Public Input No. 198-NFPA 25-2026 [Section No. 6.2.4.3]

6.2.4.3*

Pipe and fittings installed in concealed spaces ~~such as above suspended ceilings,~~ shall not require inspections.

Statement of Problem and Substantiation for Public Input

This change removes the one example of what is to be considered a concealed space. A related PI describes some examples of a concealed space

Related Public Inputs for This Document

<u>Related Input</u>	<u>Relationship</u>
<u>Public Input No. 115-NFPA 25-2026 [Section No. 5.2.2.3]</u>	Similar to change for sprinkler systems
<u>Public Input No. 116-NFPA 25-2026 [Section No. 5.2.3.3]</u>	Similar to change for sprinkler systems
<u>Public Input No. 202-NFPA 25-2026 [Section No. A.6.2.4.3]</u>	
<u>Public Input No. 209-NFPA 25-2026 [Section No. 6.2.5.3]</u>	

Submitter Information Verification

Submitter Full Name: Terry Victor

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Submittal Date: Wed Jun 03 10:56:30 EDT 2026

Committee: INM-AAA



Public Input No. 161-NFPA 25-2026 [Section No. 6.2.4.4]

6.2.4.4 –

~~Pipe and fittings installed in areas that are inaccessible for safety considerations due to process operations shall be inspected during each scheduled shutdown.~~

Statement of Problem and Substantiation for Public Input

This requirement was redundant to the general requirements in 4.11.7 and is not needed.

Submitter Information Verification

Submitter Full Name: Kevin Hall

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Submittal Date: Tue Jun 02 15:43:34 EDT 2026

Committee: INM-AAA



Public Input No. 209-NFPA 25-2026 [Section No. 6.2.5.3]

6.2.5.3*

Hangers, braces, and supports installed in concealed spaces ~~such as above suspended ceilings,~~ shall not require inspection.

Statement of Problem and Substantiation for Public Input

This change removes the one example of what is to be considered a concealed space. A related PI describes some examples of a concealed space

Related Public Inputs for This Document

<u>Related Input</u>	<u>Relationship</u>
Public Input No. 198-NFPA 25-2026 [Section No. 6.2.4.3]	Similar change for pipe and fittings
Public Input No. 211-NFPA 25-2026 [Section No. A.6.2.5.3]	

Submitter Information Verification

Submitter Full Name: Terry Victor

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Submission Date: Wed Jun 03 11:17:06 EDT 2026

Committee: INM-AAA



Public Input No. 162-NFPA 25-2026 [Section No. 6.2.5.4]

6.2.5.4 –

~~Hangers, braces, and supports installed in areas that are in accessible for safety considerations due to process operations shall be inspected during each scheduled shutdown.~~

Statement of Problem and Substantiation for Public Input

This requirement was redundant to the general requirements in 4.11.7 and is not needed.

Submitter Information Verification

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Submittal Date: Tue Jun 02 15:44:19 EDT 2026

Committee: INM-AAA



Public Input No. 174-NFPA 25-2026 [Sections 6.2.6, 6.2.7, 6.2.8, 6.2.9]

Sections 6.2.6, 6.2.7, 6.2.8, 6.2.9

6.2.6 Hose.

6.2.6.1

Hose shall be inspected annually for the following conditions as required by NFPA 1930:

- (1) Mildew, cuts, abrasions, and deterioration
- (2) Couplings hose threads damaged
- (3) Gaskets missing or deteriorated
- (4) Incompatible threads on coupling
- (5) Hose not connected to hose rack nipple or valve

~~6.2.6.2 –~~

~~Where any deficiency is noted, the appropriate corrective action shall be taken.~~

~~6.2.7~~ Hose Nozzle.

6.2.7.1

Hose nozzles shall be inspected annually for the following conditions:

- (1) Hose nozzle missing
- (2) Gasket missing or deteriorated
- (3) Obstructions
- (4) Does not operate smoothly

~~6.2.7.2 –~~

~~Where any deficiency is noted, the appropriate corrective action shall be taken.~~

~~6.2.8~~ Hose Storage Device.

6.2.8.1

Hose storage devices shall be inspected annually for the following conditions:

- (1) Difficult to operate
- (2) Damaged
- (3) Visible or physical obstruction
- (4) Hose improperly racked or rolled
- (5) Nozzle clip not in place and nozzle not correctly contained
- (6) Hose rack enclosed in cabinet not swinging out at least 90 degrees

~~6.2.8.2 –~~

~~Where any deficiency is noted, the appropriate corrective action shall be taken.~~

~~6.2.9~~ Cabinet.

6.2.9.1

Cabinets shall be inspected annually for the following conditions:

- (1) Overall for corroded or damaged parts
- (2) Difficult to open
- (3) Cabinet door not opening fully
- (4) Door glazing cracked or broken
- (5) Lock on break glass-type cabinet not functioning properly
- (6) Glass break device missing or not attached
- (7) Not properly identified as containing fire equipment
- (8) Visible or physical obstructions
- (9) All valves, hose, nozzles, fire extinguishers, and so forth, easily accessible

~~6.2.9.2~~ –

~~Where any deficiency is noted, the appropriate corrective action shall be taken.~~

Statement of Problem and Substantiation for Public Input

This requirement was redundant to the owner's responsibilities in 4.1.6 and is not needed.

Submitter Information Verification

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Submittal Date: Tue Jun 02 15:56:28 EDT 2026

Committee: INM-AAA



Public Input No. 82-NFPA 25-2026 [Section No. 6.2.7.1]

6.2.7.1

Hose nozzles shall be inspected annually for the following conditions:

- (1) Hose nozzle missing
- (2) Gasket missing or deteriorated
- (3) Obstructions

~~Does~~

6.3.1.6.3 Hose nozzles found to _ not operate smoothly_ shall be repaired or replaced.

Statement of Problem and Substantiation for Public Input

This change relocates item (4) which said "Does not operate smoothly" to the testing section where it belongs. By definition, nothing is operated during the inspection required by 6.2.7.1.

Submitter Information Verification

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Submittal Date: Thu May 28 12:48:40 EDT 2026

Committee: INM-AAA



Public Input No. 140-NFPA 25-2026 [Section No. 6.5.1]

Whenever components in standpipe and hose systems are adjusted, repaired, reconditioned, or replaced, the actions required in Table 6.5.1 shall be performed.

Table 6.5.1 Summary of Component Action Requirements

Component	Adjust	Repair	Replace	Required Action		
Water Delivery Components						
Backflow prevention device	X	X	X	See Chapter 13		
Control valves	X	X	X	See Chapter 13		
Fire department connections	X	X	X	See Chapter 13		
Fire hose	-	-			X	No action required Perform hydrostatic test in accordance with NFPA 1930
Fire hose	-		X	-		
Hose valve	X	X	X	See Chapter 13		
Hose valve pressure-regulating devices	X	X	X	See Chapter 13		
Piping	X	X	X	Hydrostatic test in conformance with NFPA 14		
System pressure-regulating devices	X	X	X	See Chapter 13		
Alarm and Supervisory Components					(move to chp 13)	
Pressure switch–type waterflow	X	X	X	Operational test using inspector's test connection		
Valve supervisory device	X	X	X	Operational test for receipt of alarms and verification of conformance with NFPA 14 and/or NFPA 72		
Vane-type waterflow	X	X	X	Operational test using inspector's test connection		
Water motor gong	X	X	X	Operational test using inspector's test connection		
Status-Indicating Components					(move to chp 13)	
Gauges	X	-		X	Verify at 0 psi (0 bar) and	

<u>Component</u>	<u>Adjust</u>	<u>Repair</u>	<u>Replace</u>	<u>Required Action</u>
				system working pressure
System Housing and Protection Components				
Cabinet	X	X	X	Verify conformance with NFPA 14
Hose storage rack	X	X	X	Verify conformance with NFPA 14
Testing and Maintenance Components				
Auxiliary drains	X	X	X	Inspect for leaks at system working pressure
Drain riser	X	X	X	Inspect for leaks while flowing from connection above the repair
Main drain	X	X	X	Inspect for leaks and residual pressure during main drain test
Structural Components				
Hanger/seismic bracing	X	X	X	Verify conformance with NFPA 14
Pipe stands	X	X	X	Verify conformance with NFPA 14
Informational Components				
Hydraulic design information sign	X	X	X	Verify conformance with NFPA 14
Identification signs	X	X	X	Verify conformance with NFPA 14

Statement of Problem and Substantiation for Public Input

The component action tables throughout NFPA 25 should be comprehensively reviewed and revised to ensure technical accuracy, consistency, and alignment with current inspection, testing, and maintenance practices. Many of the component action tables have remained largely unchanged through multiple revision cycles. As a result, several tables contain inconsistencies, outdated terminology, incomplete action guidance.

Submitter Information Verification

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Submittal Date: Tue Jun 02 13:39:46 EDT 2026

Committee: INM-AAA



Public Input No. 97-NFPA 25-2026 [Section No. 7.1.1.1]

7.1.1.1

This chapter shall provide the minimum requirements for the routine inspection, testing, and maintenance of private fire service mains and their appurtenances installed in accordance with NFPA 24 or other approved installation standard.

7.1.1.1.1 Inspection, testing, and maintenance requirements occurring at intervals greater than annual that are not completed within the prescribed frequency shall be deemed a deficiency.

Statement of Problem and Substantiation for Public Input

The proposed language is intended to clarify the significance associated with test and testing activities that occur at frequencies greater than one year and are not completed within the prescribed interval. Currently, NFPA 25 identifies deficiencies based largely on observed physical conditions or operational impairments; however, the standard does not consistently address overdue inspection activities. This PI improves consistency within NFPA 25 by recognizing overdue test requirements as deficiencies rather than merely incomplete documentation items. The proposed language aligns with the overall intent of NFPA 25 to maintain fire protection systems in an operational state of readiness and provides clear enforceable criteria for owners, contractors, and authorities having jurisdiction. The proposal does not create new requirements or shorten existing inspection frequencies. Instead, it clarifies that once the prescribed interval has been exceeded, the affected component or system is no longer considered compliant with the test and testing requirements of the standard and shall be identified as a deficiency until the required inspection is completed.

Submitter Information Verification

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Submission Date: Fri May 29 13:52:07 EDT 2026

Committee: INM-AAA



Public Input No. 58-NFPA 25-2026 [Section No. 7.1.3]

7.1.3– Internal Assessments and Obstruction Investigations.

7.1.3.1

An internal assessment of aboveground piping on private fire service mains shall be conducted in accordance with 14.2

7.1.3.2

The procedures outlined in Chapter 14 shall be followed where there is a need to conduct an obstruction investigation.

Statement of Problem and Substantiation for Public Input

The current requirement to conduct an internal pipe assessment "when needed" is unenforceable. Proposed language clarifies the intent to internally inspect all water-based fire protection systems and provides proper pointers to the specific sections in Chapter 14.

Submitter Information Verification

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Submittal Date: Thu May 14 13:29:48 EDT 2026

Committee: INM-AAA



Public Input No. 175-NFPA 25-2026 [Section No. 7.2.2.1.2.1]

7.2.2.1.2.1 –

~~Where any deficiency is noted, the appropriate corrective action shall be taken.~~

Statement of Problem and Substantiation for Public Input

This requirement was redundant to the owner's responsibilities in 4.1.6 and is not needed.

Submitter Information Verification

Submitter Full Name: Kevin Hall

Organization: American Fire Sprinkler Association

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Submittal Date: Tue Jun 02 15:57:28 EDT 2026

Committee: INM-AAA



Public Input No. 165-NFPA 25-2026 [Section No. 7.2.2.1.3]

7.2.2.1.3 –

~~Piping installed in areas that are inaccessible for safety considerations due to process operations shall be inspected during each scheduled shutdown.~~

Statement of Problem and Substantiation for Public Input

This requirement was redundant to the general requirements in 4.11.7 and is not needed.

Submitter Information Verification

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Submittal Date: Tue Jun 02 15:46:35 EDT 2026

Committee: INM-AAA



Public Input No. 176-NFPA 25-2026 [Section No. 7.2.2.4.1]

7.2.2.4.1 –

~~Where any deficiency is noted, the appropriate corrective action shall be taken.~~

Statement of Problem and Substantiation for Public Input

This requirement was redundant to the owner's responsibilities in 4.1.6 and is not needed.

Submitter Information Verification

Submitter Full Name: Kevin Hall

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Submittal Date: Tue Jun 02 15:58:39 EDT 2026

Committee: INM-AAA



Public Input No. 177-NFPA 25-2026 [Section No. 7.2.2.5.1]

7.2.2.5.1 –

~~Where any deficiency is noted, the appropriate corrective action shall be taken.~~

Statement of Problem and Substantiation for Public Input

This requirement was redundant to the owner's responsibilities in 4.1.6 and is not needed.

Submitter Information Verification

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Submittal Date: Tue Jun 02 15:59:18 EDT 2026

Committee: INM-AAA



Public Input No. 107-NFPA 25-2026 [Section No. 7.2.2.6]

7.2.2.6* Dry Hydrants.

Dry hydrants shall be inspected at least quarterly and maintained as necessary to keep them in good operating condition. [1142:8.7.1]

7.2.2.6.1

Thorough surveys shall be conducted, to reveal any deterioration in the water supply situation in ponds, streams, or cisterns. [1142:8.7.2]

7.2.2.6.2– 4.3 Dry hydrants

7.4.3.1

Vegetation shall be cleared for a minimum 3 ft (0.9 m) radius from around hydrants. [1142:8.7.3]

7.2.4 .3. 2-6.3 –

The reflective material marking the hydrant and signage shall be inspected at least annually to verify that it is being maintained in accordance with 8.4.7 of NFPA 1142. [1142:8.7.4]

7.2.4 .2-6.4 – 3.3

Hydrant risers shall be protected from ultraviolet (UV) degradation by painting or other measures. [1142:8.7.5]

7.2.3 .2. 6.5* – 7

The hydrants shall be flow tested at least annually with an approved pump to ensure that the minimum design flow is maintained. [1142:8.7.6]

Statement of Problem and Substantiation for Public Input

Through each system chapter (5-13) except for chapter 13 all inspection items are subsection .2 for example 5.2 is inspection, .3 is testing and .4 is maintenance. This change simply follows the standard of style.

Submitter Information Verification

Submitter Full Name: Vincent Powers

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Affiliation: NFSA Engineering and Standards Committee

Street Address:

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Submittal Date: Fri May 29 14:07:18 EDT 2026

Committee: INM-AAA



Public Input No. 178-NFPA 25-2026 [Section No. 7.2.2.7.1]

7.2.2.7.1 –

~~Where any deficiency is noted, the appropriate corrective action shall be taken.~~

Statement of Problem and Substantiation for Public Input

This requirement was redundant to the owner's responsibilities in 4.1.6 and is not needed.

Submitter Information Verification

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Submittal Date: Tue Jun 02 15:59:54 EDT 2026

Committee: INM-AAA



Public Input No. 179-NFPA 25-2026 [Section No. 7.2.2.8.1]

7.2.2.8.1 –

~~Where any deficiency is noted, the appropriate corrective action shall be taken.~~

Statement of Problem and Substantiation for Public Input

This requirement was redundant to the owner's responsibilities in 4.1.6 and is not needed.

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Public Input No. 138-NFPA 25-2026 [Section No. 7.3.1]

7.3.1* Underground and Exposed Piping Flow Tests.

Underground and exposed piping serving hydrants shall be flow tested at minimum 5-year intervals.

7.3.1.1

Any flow test results that indicate deterioration of available water flow or pressure shall be investigated to the complete satisfaction of the authority having jurisdiction to ensure that the required flow and pressure are available for fire protection.

7.3.1.2 –

~~Where underground piping supplies individual fire sprinkler, standpipe, water spray, or foam-water sprinkler systems and there are no means to conduct full flow tests, tests generating the maximum available flows shall be permitted.~~

Statement of Problem and Substantiation for Public Input

NFPA 24 that covers Installation of private service mains defines the flow test in 3.3.17.1: “A test performed by the flow and measurement of water from one hydrant and the static and residual pressures from an adjacent hydrant for the purpose of determining the available water supply at that location.” The flow test performed on private mains that do not contain hydrants (as currently required by NFPA 25) does not comply with this definition.

It is extremely difficult and impractical to perform flow tests for underground and exposed piping that do not contain hydrants, and this work is usually not performed at 5-year interval on such private mains.

There is no private main flow test performed during fire sprinkler system acceptance test, so after 5 years of system being in service there is nothing to compare the test results to establish piping deterioration.

There are currently other means to evaluate the private fire service mains:

Fire protection systems with booster fire pumps must be fully flow tested every 3 years, so the pump test results could be used to evaluate private mains feeding pumps, so such system do not need any additional flow test requirements.

Pressure measured during annual main drain test on sprinkler and standpipe systems has been established and remains as a main tool to evaluate pressure changes in supply piping on sprinkler and standpipe systems.

7.3.1.2 shall be deleted because the piping described in the paragraph would not require flow tests anymore.

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Public Input No. 148-NFPA 25-2026 [Section No. 7.3.1 [Excluding any Sub-Sections]]

Underground and exposed piping serving hydrants shall be flow tested at minimum 5-year intervals.

Statement of Problem and Substantiation for Public Input

Nfpa 24 covers installation of private service mains and defines flow test in 3.3.17.1 as a test by the flow and measurement of water from one hydrant and the static and residual pressures from an adjacent hydrant for the purpose of determining the available water supply at that location. The flow test performed on private mains that do not contain hydrants (as currently required by NFPA 25) does not comply with this definition. It is extremely difficult and impractical to perform flow tests for underground and exposed piping that do not contain hydrants, and this work is usually not performed at 5-year intervals.

There is no private main flow test performed during fire sprinkler system acceptance tests, so after 5 years of system being in service there is nothing to compare the test results to establish deterioration. There are currently other testing requirements to evaluate the private fire service mains

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Public Input No. 50-NFPA 25-2026 [Section No. 7.3.1 [Excluding any Sub-Sections]]

Underground and exposed piping shall be flow tested at minimum ~~5-year intervals~~ annually .

Statement of Problem and Substantiation for Public Input

Both a private fire service main and a fire pump installed per NFPA 20 are considered an acceptable water supply. The gross fire pump results must be analyzed annually, along with net flow test performance. The gross fire pump test results should align with the water flow test frequency, as the water flow test results impact the gross fire pump results.

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Public Input No. 119-NFPA 25-2026 [Section No. 7.3.1.1]

7.3.1.1

Any flow test results that indicate ~~deterioration of available water flow or pressure shall be investigated to the complete satisfaction of the authority having jurisdiction to ensure that the required flow and pressure are available for fire protection~~ a 10 percent reduction reduction in full flow pressure compared to the original water supply test or previously performed test shall have the cause of the reduction investigated and corrected if necessary .

Statement of Problem and Substantiation for Public Input

As written the provisions of 7.3.1.1 provide that any deterioration in the water supply no matter how small be investigated and addressed to ensure they meet the required flow and pressure for fire protection. Typical water supplies are subject to variations in performance. Minor variations should not trigger an investigation. Similar to main drain tests, a flow test on a water supply should include a trigger point at which an investigation is warranted. Such investigations can require extensive effort to make an accurate assessment of the water supply against connected demands as the location of such demands with respect to the location of the flow test often do not make a direct comparison of data possible. Providing a reasonable trigger point to warrant such effort is needed.

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Public Input No. 108-NFPA 25-2026 [Section No. 7.3.1.2]

7.3.1.2

Where underground piping supplies individual fire sprinkler, standpipe, water spray, or foam-water sprinkler systems and there are no means to conduct full flow tests, tests generating the maximum available flows shall be permitted.

7.3.1.3 Pressure gauges maintained in accordance with 8.3.3.5.2 shall be provided for the test.

Statement of Problem and Substantiation for Public Input

The purpose of the 5-year private fire service main flow test is to verify that underground fire protection piping is capable of delivering the required water supply and to identify potential obstructions, closed valves, corrosion, or other impairments that could affect system performance. Accurate static and residual pressure readings are essential to properly evaluating the condition of the private fire service main. NFPA 25 currently does not require the use of calibrated gauges for this testing. The use of uncalibrated or inaccurate gauges can result in unreliable test data that may mask underground issues or incorrectly indicate deficiencies.

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Public Input No. 141-NFPA 25-2026 [Section No. 7.5.1]

Whenever a component in a private fire service system is adjusted, repaired, reconditioned, or replaced, the action required in Table 7.5.1 shall be performed.

Table 7.5.1 Summary of Component Action Requirements

<u>Component</u>	<u>Repair/</u>		<u>Replace</u>	<u>Test Criteria</u>			
	<u>Adjust</u>	<u>Recondition</u>					
Water Delivery Components	-	-	-	-			
Pipe and fittings (exposed and underground)	X	X	X	Hydrostatic test in conformance with NFPA 24			
					-	-	Flush in conformance with NFPA 24 or NFPA 20, as appropriate
Hydrants	X	X	X	Hydrostatic test in conformance with NFPA 24			
					-	-	Waterflow in conformance with NFPA 24
					-	-	Inspect for proper drainage
Monitor nozzles	X	X	X	Flow test to confirm required coverage			
-	-	-	-	-			
Mainline strainers	X	X	X	Flow test downstream of strainer			
Fire department connection	X	X	X	See Chapter 13			
Alarm and Supervisory Components	-	-	-	(<u>move to chp 13</u>)			
Valve supervisory device	X	X	X	Operational test for conformance with NFPA 24 and/or NFPA 72			
System-Indicating	-	-	-	-			

<u>Component</u>	<u>Repair/</u>		<u>Replace</u>	<u>Test Criteria</u>		
	<u>Adjust</u>	<u>Recondition</u>				
Components						
Gauges	-	-			X	Verify at 0 psi (0 bar) and system working pressure
System Housing and Protection Components	-	-	-	-		
Hose houses	X	X	X	Verify integrity of hose house and hose house components		
Hose	-		X	-		Repair and test hose in accordance with NFPA 1930
Hose	-	-			X	No action required
Structural Components	-	-	-	-		
Thrust blocks	X	X	X	Test at system working pressure		
Tie rods	X	X	X	Test at system working pressure		
Retainer glands	X	X	X	Test at system working pressure		
Informational Components	-	-	-	-		
Identification signs	X	X	X	Verify conformance with NFPA 24		

Statement of Problem and Substantiation for Public Input

The component action tables throughout NFPA 25 should be comprehensively reviewed and revised to ensure technical accuracy, consistency, and alignment with current inspection, testing, and maintenance practices. Many of the component action tables have remained largely unchanged through multiple revision cycles. As a result, several tables contain inconsistencies, outdated terminology, incomplete action guidance.

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Public Input No. 98-NFPA 25-2026 [Section No. 8.1.1.1]

8.1.1.1

This chapter shall provide the minimum requirements for the routine inspection, testing, and maintenance of fire pump assemblies installed in accordance with NFPA 20 or other approved installation standard.

8.1.1.1.1 Inspection, testing, and maintenance requirements occurring at intervals greater than annual that are not completed within the prescribed frequency shall be deemed a deficiency.

Statement of Problem and Substantiation for Public Input

The proposed language is intended to clarify the significance associated with test and testing activities that occur at frequencies greater than one year and are not completed within the prescribed interval. Currently, NFPA 25 identifies deficiencies based largely on observed physical conditions or operational impairments; however, the standard does not consistently address overdue inspection activities. This PI improves consistency within NFPA 25 by recognizing overdue test requirements as deficiencies rather than merely incomplete documentation items. The proposed language aligns with the overall intent of NFPA 25 to maintain fire protection systems in an operational state of readiness and provides clear enforceable criteria for owners, contractors, and authorities having jurisdiction. The proposal does not create new requirements or shorten existing inspection frequencies. Instead, it clarifies that once the prescribed interval has been exceeded, the affected component or system is no longer considered compliant with the test and testing requirements of the standard and shall be identified as a deficiency until the required inspection is completed.

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Public Input No. 21-NFPA 25-2026 [Section No. 8.1.1.2.9]

8.1.1.2.9

Fuel tanks shall be ~~tested~~ inspected annually for water and foreign materials.

Statement of Problem and Substantiation for Public Input

This should be an inspection. In Table 8.1.1 this is identified as a maintenance item. Which one is it? Additionally, based on the annex note to the definition of an inspection, this activity would still qualify as an inspection even though you have to mechanically remove something to gain visual access.

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Public Input No. 13-NFPA 25-2026 [Section No. 8.3.1.2.1]

8.3.1.2.1

Except as permitted in 8.3.1.2.2 and 8.3.1.2.3, a weekly test frequency shall be required for the following electric fire pumps:

- (1) Fire pumps that serve fire protection systems in buildings that are beyond the pumping capacity of the fire department
- (2) ~~Fire pumps with limited service controllers~~
- (3) Vertical turbine fire pumps
- (4) Fire pumps taking suction from ground level tanks or a water source that does not provide sufficient pressure to be of material value without the pump

Statement of Problem and Substantiation for Public Input

Limited service controllers utilize across-the-line start controllers, are limited to smaller HP motors, and are simpler than their full-service controller counterparts. There is nothing particular about a limited service controller that would necessitate more frequent weekly churn testing vs monthly churn testing. The other conditions on this list are directly related to the criticality of that pump failing to operate and resulting in the loss of a water supply that would be of material value. Failure of a limited service controller would be no different than failure of a full service controller from the standpoint of the pump's ability to provide pressure.

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Public Input No. 57-NFPA 25-2026 [New Section after 8.3.3.1]

8.3.3.1

This test shall be conducted by starting the pump automatically.

8.3.3.1.1

All start functions shall be tested annually.

Statement of Problem and Substantiation for Public Input

The pump needs to be tested to ensure it starts at the pressure loss. The manual start, test buttons, and emergency start levers are not currently required to be tested, but should be tested to ensure they would work in the event of a fire and the pump has not kicked on (especially the emergency start).

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Public Input No. 14-NFPA 25-2026 [Section No. 8.3.3.1]

8.3.3.1*

The test shall be conducted by starting the pump automatically.

8.3.3.2*

Except as permitted in 8.3.3.4, an annual test of each constant speed pump assembly shall be conducted by qualified personnel under no-flow (churn), rated flow, and 150 percent of the pump rated capacity flow of the fire pump by controlling the quantity of water discharged through approved test devices.

Statement of Problem and Substantiation for Public Input

The addition of this section aligns the requirements for no-flow testing stated in section 8.3.2.2. Annual fire pump testing is meant to test to make sure all of the components are functioning as intended. This should include making sure the pump starts automatically.

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Public Input No. 120-NFPA 25-2026 [Section No. 8.3.7.2.3 [Excluding any Sub-Sections]]

The fire pump test results shall be considered acceptable if all of the following conditions are satisfied:

- (1) Fire pump ~~meets the flow and pressure requirements of the most demanding system(s) supplied by the fire pump based on owner-provided system design information~~ discharge pressures meet at least 90 percent at flow flow when compared to the original acceptance test or perviously performed tests.
- (2)* Fire pump supplies 100 percent of rated flow
- (3)* Net pressure at each flow point is at least 95 percent of one of the following:
 - (4) Original manufacturer's pump curve
 - (5) Original unadjusted field test curve
 - (6) Test curve generated from the fire pump nameplate
- (7) Requirements of 8.1.5 are met

Statement of Problem and Substantiation for Public Input

As written the provisions of 8.3.7.2.3 provide that performance of the fire pump be checked any to ensure that it be evaluated annually to ensure that it meets the most demanding system supplied by the fire pump based on design information provided by the owner. This requirement can present an issue in a number of ways. First, the allowance to conduct an annual fire pump test via a closed loop meter will not permit the comparison for fire pump pressures against demand as pressure reading taken during such a test do not represent the available output pressure of the fire pump during a real system operation. Secondly, such an evaluation can require extensive effort to make an accurate assessment of the water supply against connected demands as the location of such demands with respect to the location of the fire pump discharge often do not make a direct comparison of data possible. Additionally, many system demands include hose stream allowances that cannot easily be incorporated into the evaluation. While mandated that owners provide design information for such an evaluation, it is not reasonable to expect that this information will be available from the owner. Similar to main drain tests, a fire pump test should include a trigger point at which an investigation is warranted. Providing a reasonable trigger point to warrant such effort is needed.

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Public Input No. 185-NFPA 25-2026 [Section No. 8.3.7.2.4]

8.3.7.2.4*

The following actions shall be required upon failure to meet the criteria in 8.3.7.2.3:

- (1) ~~The owner shall be notified in writing of the unacceptable test results.~~
- (2) An investigation shall be conducted into the cause of the unacceptable test results.
- (3) Failure to provide the maximum system demand shall be deemed an impairment.
- (4) Excessive vibration and/or excessively worn or loose components shall be deemed a deficiency.
- (5) Degraded performance that still provides the maximum system demand shall be deemed a noncritical deficiency.
- (6) ~~The owner shall be notified in writing of corrections completed.~~

Statement of Problem and Substantiation for Public Input

The owner is responsible for corrections and repairs and does not need to be notified once the work that they are coordinating is completed. Additionally the records for inspections and tests is addressed in 4.3 and does not need to be restated in this section.

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Public Input No. 186-NFPA 25-2026 [Section No. 8.3.7.2.10]

8.3.7.2.10 –

~~A written or electronic record of the results of the investigation and the corrective action shall be prepared and maintained by the owner.~~

Statement of Problem and Substantiation for Public Input

This requirement was redundant to the general requirements for records in 4.3 and is not needed.

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Public Input No. 142-NFPA 25-2026 [Section No. 8.6]

8.6 Component ~~Replacement Testing Requirements~~: action requirements

Whenever a component in a fire pump is adjusted, repaired, rebuilt, or replaced, the tests required to restore the system to service shall be performed in accordance with Table 8.6.1.

Table 8.6.1 Summary of Component Action Requirements

<u>Component</u>	<u>Adjust</u>	<u>Repair</u>	<u>Rebuild</u>	<u>Replace</u>	<u>Test Criteria</u>		
Fire Pump System	-	-	-	-	-		
Entire pump assembly	-	-	-	-	-	X	Perform acceptance test in accordance with 8.3.2
Impeller/rotating assembly	-	-	X	-	-	X	Perform acceptance test in accordance with NFPA 20
Casing	-	-	X	-	-	X	Perform acceptance test in accordance with NFPA 20 with alignment inspection
Bearings	-	-	-	-	-	X	Perform test in accordance with 8.3.3
Sleeves	-	-	-	-	-	X	Perform test in accordance with 8.3.3
Wear rings	-	-	-	-	-	X	Perform test in accordance with 8.3.3
Main shaft	-	-	X	-	-	X	Perform annual test in accordance with 8.3.3
Packing	X	-	-	-	-	X	Perform test in accordance with 8.3.2
Mechanical Transmission	-	-	-	-	-		
Gear right-angle drives	-	-	X	X	X		Perform acceptance test in accordance with NFPA 20

<u>Component</u>	<u>Adjust</u>	<u>Repair</u>	<u>Rebuild</u>	<u>Replace</u>	<u>Test Criteria</u>			
Drive coupling	X	X	X	X	Perform test in accordance with 8.3.3 with alignment inspection			
Electrical System/Controller	-	-	-	-	-			
Entire controller	-	-	-				X	Perform test in accordance with 8.3.2
Electronic component or module that can prevent the controller from starting or running	-	-			X	X		Perform acceptance test in accordance with NFPA 20
Electronic component or module that will not prevent the controller from starting or running	-	-			X	X		Perform weekly test in accordance with 8.3.2
Plumbing part	-	-	-				X	Perform test in accordance with 8.3.2
Isolating switch	-	-	-				X	Perform test in accordance with 8.3.2
Circuit breaker	X	-	-	-				Perform test in accordance with NFPA 20
Circuit breaker	-	-	-				X	Test in accordance with 8.3.3 six seconds peak operation for a minimum of 1 hour
Electrical connections	X	-	-	-				Perform test in accordance with 8.3.2
Main contactor	-		X	-		X		Perform test in accordance with 8.3.3

<u>Component</u>	<u>Adjust</u>	<u>Repair</u>	<u>Rebuild</u>	<u>Replace</u>	<u>Test Criteria</u>			
Power monitor	-	-	-				with six starts	Perform operation of the emergency break switch disconnect (cycle on/off)
Start relay	-	-	-				X	Perform according to 8.3.2 start
Pressure switch	X	-	-			X	Perform test in accordance with 8.3.2 and exercise six times automatically	
Pressure transducer	X	-	-			X	Perform six automatic no-load starts	
Manual start or stop switch	-	-	-				X	Perform operation under
Transfer switch — load-carrying parts	-		X	X	X	Test in accordance with 8.3.3, including six starts at peak horsepower load, operate pump for a minimum of 1 hour, and transfer from normal power to emergency power and back one time		
Transfer switch — no-load parts	-		X	X	X	Perform six no-load operations of transfer of power		
Electric Motor Driver	-	-	-	-	-			

<u>Component</u>	<u>Adjust</u>	<u>Repair</u>	<u>Rebuild</u>	<u>Replace</u>	<u>Test Criteria</u>		
Electric motor	-		X	X	X	Perform acceptance test in accordance with NFPA 20 with alignment inspection	
Motor bearings	-	-	-			X	Perform test in accordance with 8.3.3
Incoming power conductors	-	-	-			X	Test in accordance with 8.3.3 operate for a period of 1 hour including start load
Diesel Engine Driver	-	-	-	-	-		
Entire engine	-	-			X	X	Perform acceptance test in accordance with NFPA 20 with alignment inspection
Fuel transfer pump	X	-		X	X	Perform test in accordance with 8.3.2	
Fuel injector pump or ECM	X	-	-			X	Perform test in accordance with 8.3.3
Fuel system filter	-		X	-		X	Perform test in accordance with 8.3.2
Combustion air intake system	-		X	-		X	Perform test in accordance with 8.3.2
Fuel tank	-		X	-		X	Perform test in accordance with 8.3.2
Cooling system	-		X	X	X	Perform test in	

<u>Component</u>	<u>Adjust</u>	<u>Repair</u>	<u>Rebuild</u>	<u>Replace</u>	<u>Test Criteria</u>		
Batteries	-	-	-			accordance with 8.3.3	Perform start sequence replacement in accordance with 8.3.3
Battery charger	-		X	-		X	Perform test in accordance with 8.3.2
Electric system	-		X	-		X	Perform test in accordance with 8.3.2
Lubrication filter/oil service	-		X	-		X	Perform test in accordance with 8.3.2
Steam Turbines	-	-	-	-	-		
Steam turbine	-		X	-		X	Perform acceptance test in accordance with NFPA 20
Steam regulator or source upgrade	-		X	-		X	Perform acceptance test in accordance with NFPA 20
Positive Displacement Pumps	-	-	-	-	-		
Entire pump	-	-	-				Perform acceptance test in accordance with 8.3.3
Rotors	-	-	-				Perform test in accordance with 8.3.3
Plungers	-	-	-				Perform test in accordance with 8.3.3
Shaft	-	-	-				Perform test in accordance with 8.3.3
Driver	-		X	X	X	Perform acceptance	

<u>Component</u>	<u>Adjust</u>	<u>Repair</u>	<u>Rebuild</u>	<u>Replace</u>	<u>Test Criteria</u>		
Bearings	-	-	-			test in accordance with NFPA 20	Perf test acco 8.3.3
Seals	-	-	-				Perf acco 8.3.2
Pump House and Miscellaneous Components	-	-	-	-	-		
Baseplate	-		X	-	-		Perf acco 8.3.2 align insp
Baseplate	-	-	-				Perf acco 8.3.3 align insp
Foundation	-		X	X	X	Perform test in accordance with 8.3.2 with alignment inspection	
Suction/discharge pipe	-		X	-		X	Perform visual inspection in accordance with 8.2.2(2)
Suction/discharge fittings	-		X	-		X	Perform visual inspection in accordance with 8.2.2(2)
Suction/discharge valves	-		X	X	X	Perform operational test in accordance with 13.3.3.1	

8.6.2

NFPA 20 shall be consulted for the minimum requirements for design, installation, and acceptance testing.

8.6.3

Replacement parts shall be provided that will maintain the listing for the fire pump component assembly whenever possible.

8.6.3.1

If the part is no longer available from the original equipment manufacturer, then an approved like part shall be permitted to be used.

Statement of Problem and Substantiation for Public Input

The component action tables throughout NFPA 25 should be comprehensively reviewed and revised to ensure technical accuracy, consistency, and alignment with current inspection, testing, and maintenance practices. Many of the component action tables have remained largely unchanged through multiple revision cycles. As a result, several tables contain inconsistencies, outdated terminology, incomplete action guidance.

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Committee: INM-AAA



Public Input No. 99-NFPA 25-2026 [Section No. 9.1.1.1]

9.1.1.1

This chapter shall provide the minimum requirements for the routine inspection, testing, and maintenance of water storage tanks dedicated to fire protection use and installed in accordance with NFPA 22 or other approved installation standard.

9.1.1.1.1 Inspection, testing, and maintenance requirements occurring at intervals greater than annual that are not completed within the prescribed frequency shall be deemed a deficiency.

Statement of Problem and Substantiation for Public Input

The proposed language is intended to clarify the significance associated with test and testing activities that occur at frequencies greater than one year and are not completed within the prescribed interval. Currently, NFPA 25 identifies deficiencies based largely on observed physical conditions or operational impairments; however, the standard does not consistently address overdue inspection activities. This PI improves consistency within NFPA 25 by recognizing overdue test requirements as deficiencies rather than merely incomplete documentation items. The proposed language aligns with the overall intent of NFPA 25 to maintain fire protection systems in an operational state of readiness and provides clear enforceable criteria for owners, contractors, and authorities having jurisdiction. The proposal does not create new requirements or shorten existing inspection frequencies. Instead, it clarifies that once the prescribed interval has been exceeded, the affected component or system is no longer considered compliant with the test and testing requirements of the standard and shall be identified as a deficiency until the required inspection is completed.

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Committee: INM-AAA



Public Input No. 31-NFPA 25-2026 [Section No. 9.1.3]

9.1.3 – Obstruction Investigations:

The procedures outlined in Chapter 14 shall be followed where there is a need to conduct an obstruction investigation.

Statement of Problem and Substantiation for Public Input

None of the requirements in Chapter 14 are appropriate for water storage tanks. If obstruction investigation is warranted, specific guidance should be added to Chapter 14.

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Public Input No. 87-NFPA 25-2026 [New Section after 9.2]

9.2.4.2

(5) The tank to foundation junction of corrugated galvanized steel tanks with a flexible geomembrane liner shall be free from flowing water. A ring of water that is even around the tank is a normal sign of condensation egress. However, persistent flow is indicative of a geomembrane liner leak.

9.2.5.1.2

The interior of all other types of tanks, including corrugated galvanized steel tanks with a flexible geomembrane liner regardless of the presence of corrosion protection, shall be inspected every 5 years.

9.2.5.4.1

Corrugated galvanized steel tanks with a flexible geomembrane liner exhibiting persistent flow of water per 9.2.4.2 (5), showing signs of interior steel corrosion, or failure of the geomembrane liner shall be inspected in accordance with 9.2.7.

9.2.7 Test During Interior Inspection of Corrugated Galvanized Steel Tanks with a Flexible Geomembrane Liner

Where a drained interior inspection of a corrugated galvanized steel tank is required by 9.2.5.4.1 the following test protocols shall be conducted.

- (1) All personnel entering the tank shall use soft sole foot coverings that are dedicated for tank inspection. Regular footwear that is used outside the tank shall not be permitted.
- (2) Any temporary ladder used for interior access to the tank shall be equipped with padded footings to minimize geomembrane liner abrasion and puncture.
- (3) All tools carried into the tank shall be properly secured to prevent dropping and puncturing the geomembrane liner.
- (4) Where silt or debris has accumulated on the floor of the tank, precaution shall be taken to remove it without compromising the geomembrane liner in order to complete a full inspection. Use of steel shovels and other abrasive tools is prohibited.
- (5) Evaluation of elasticity of the geomembrane liner shall be conducted by manual nondestructive manipulation of the liner. Liners exhibiting cracking or brittleness shall be scheduled for replacement. Liners exhibiting shrinkage or bowing away from the tank wall, but absent signs of leaks, shall be evaluated annually until replaced.
- (6) All geomembrane welds shall be inspected to ensure their integrity.
- (7) All geomembrane surfaces shall be visually inspected for compromises in the material. Use of electric arc leak detectors are permissible. Liners exhibiting pinholes may be patched in accordance with manufacturer's instructions or replaced at the manufacturer's discretion. Liners exhibiting tears or delamination shall be scheduled for replacement.
- (8) Where tanks have shown signs of geomembrane liner leaks, the liner shall be removed fully or partially from the wall so that the underlying steel can be thoroughly inspected for degradation, pitting, cracks, or other compromises. Tanks with minimal surface rust shall be recoated with a cold galvanizing product or equivalent, in accordance with manufacturer recommendations. Tanks with pitting, cracks, or other structural compromises shall have panels fully replaced.
- (9) All penetration flanges shall be visually inspected for degradation and failing seals.

Statement of Problem and Substantiation for Public Input

This public input is contingent on the NFPA 22 committee integrating "corrugated galvanized steel tanks with a flexible geomembrane liner" into their standard. The NFPA 22 committee completed their First Draft Meeting and voted in favor of a PI that would include this new tank style. If this chapter (or a

revision thereof) is included in the next edition of NFPA 22, it will be imperative that appropriate inspection and testing for this unique style of tank be included in NFPA 25. The current testing protocols in NFPA 25 are not sufficient or appropriate for corrugated galvanized steel tanks with a flexible geomembrane liner. This PI proposes additional language to some sections and introduces new sections that would be specific to this style of tank. Given the timing of the two standards, it was deemed appropriate to propose a "contingent" PI in lieu of waiting on final approval from NFPA 22 and subsequently needing to wait for the full revision cycle.

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Public Input No. 43-NFPA 25-2026 [Section No. 9.2.5.2]

9.2.5.2

Where interior inspection is made by means of underwater evaluation, the presence and extent of silt or sediment shall first be removed from the tank floor be assessed. Where sediment interferes with adequate evaluation of tank conditions or obstructs critical components, it shall be removed prior to or during the inspection .

Statement of Problem and Substantiation for Public Input

Statement of Problem:

The current language may be interpreted to require removal of silt or sediment prior to any underwater inspection, regardless of whether sediment is present or interferes with the ability to evaluate tank conditions.

Substantiation:

In practice, the presence and extent of sediment within a water storage tank cannot be reliably determined prior to inspection.

As written, requiring sediment removal prior to underwater evaluation creates a sequencing challenge and may result in unnecessary cleaning activities in cases where sediment is minimal or does not interfere with inspection objectives.

Underwater inspection methods are capable of assessing both the presence of sediment and the condition of the tank floor. Allowing initial evaluation prior to removal enables informed decision-making regarding whether cleaning is necessary.

Sediment accumulation does not necessarily prevent evaluation in all cases; however, localized accumulation may interfere with assessment of critical areas such as tank outlets or floor conditions.

Revising the language to make sediment removal conditional on interference with inspection maintains the intent of ensuring adequate evaluation while improving efficiency, reducing unnecessary cost, and aligning with practical field procedures.

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Public Input No. 44-NFPA 25-2026 [Section No. 9.2.5.4]

9.2.5.4

Steel tanks ~~exhibiting signs of~~ that exhibit interior pitting, corrosion, or failure of coating shall be ~~tested~~ evaluated to determine whether testing in accordance with 9.2.6 is warranted based on the extent, severity, and progression of observed conditions.

Statement of Problem and Substantiation for Public Input

Statement of Problem:

The current language requires that any steel tank exhibiting interior pitting, corrosion, or coating failure be tested in accordance with 9.2.6. This may be interpreted to require escalation to full testing procedures regardless of the extent or severity of observed conditions.

Substantiation:

In practice, minor or localized conditions such as light corrosion, isolated pitting, or limited coating degradation do not necessarily warrant full internal testing or draining of the tank.

The current language does not distinguish between minor conditions and significant or progressive deterioration, which may result in premature escalation to more invasive inspection methods.

Requiring full testing in all cases may lead to:

- Unnecessary tank draining
- Increased system impairment
- Additional cost and operational disruption

Allowing evaluation based on the extent and severity of observed conditions aligns inspection actions with actual risk and supports more consistent and practical application of the standard.

This revision maintains the intent of identifying and addressing deteriorated conditions while preventing unnecessary escalation where it is not warranted.

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Public Input No. 45-NFPA 25-2026 [Section No. 9.2.6]

9.2.6 Tests During Interior Inspection.

Where a drained interior inspection of a steel tank is required by 9.2.5.4, the following

tests shall be conducted:

test methods shall be performed where warranted by observed conditions, leakage history, repair scope, or direction by a qualified professional or the authority having jurisdiction (AHJ):

These test methods are not intended to be applied as routine requirements for all internal inspections.

- (1) Evaluation of tank coatings shall be made in accordance with the adhesion test of ASTM D3359, *Standard Test Methods for Rating Adhesion by Tape Test*, generally referred to as the “cross-hatch test.”
- (2) Dry film thickness measurements shall be taken at random locations to determine the overall coating thickness.
- (3) Nondestructive ultrasonic readings shall be taken to evaluate the wall thickness where there is evidence of pitting or corrosion.
- (4) Interior surfaces shall be spot wet-sponge tested to detect pinholes, cracks, or other compromises in the coating. Special attention shall be given to sharp edges such as ladder rungs, nuts, and bolts.
- (5) Tank bottoms shall be tested for metal loss and/or rust on the underside by use of ultrasonic testing where there is evidence of pitting or corrosion. Removal, visual inspection, and replacement of random floor coupons shall be an acceptable alternative to ultrasonic testing.
- (6) Tanks with flat bottoms shall be vacuum-box tested at bottom seams in accordance with test procedures found in NFPA 22.

Statement of Problem and Substantiation for Public Input

Statement of Problem:

The current language requires that multiple testing methods be conducted during interior inspection of steel tanks using “shall” language. This may be interpreted to require application of all listed tests regardless of tank condition, inspection purpose, or applicability.

Substantiation:

In practice, this language has resulted in requests to perform testing methods that are not appropriate for all interior inspections, including adhesion testing, holiday detection, and vacuum box testing.

These test methods serve specific purposes and are typically applied in the following contexts:

Vacuum box testing is used for weld verification during construction or repair and requires access to exposed steel surfaces, as referenced in NFPA 22.

Adhesion testing is a destructive method used to support maintenance or rehabilitation decisions.

Holiday detection is typically performed prior to placing a coating system into service to identify discontinuities.

Application of these methods without consideration of applicability may require removal of protective coatings, introduce unnecessary damage to otherwise serviceable systems, and increase cost, outage duration, and system impairment.

In particular, applying vacuum box testing to coated weld seams would require removal of coating to

achieve valid test conditions, effectively converting an inspection activity into a repair scope.

Similar diagnostic methods, such as dye penetrant testing, may also be appropriate where a specific defect or discontinuity requires further evaluation; however, such methods should be selected based on the condition being investigated rather than applied as routine inspection requirements.

Clarifying that these testing methods are condition-based and not universally required will reduce misinterpretation, prevent unnecessary or destructive testing, and better align inspection practices with the intended goal of evaluating tank condition and serviceability.

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Public Input No. 143-NFPA 25-2026 [Section No. 9.6.1]

Whenever a component in a water storage tank is adjusted, repaired, reconditioned, or replaced, the action required in Table 9.6.1 shall be performed.

Table 9.6.1 Summary of Component Action Requirements

<u>Component</u>	<u>Repair/</u>			<u>Test Criteria</u>	
	<u>Adjust</u>	<u>Recondition</u>	<u>Replace</u>		
Tank Components	-	-	-	-	
Catwalks and ladders	X	X	X		Verify integrity in conformance with NFPA 22
Expansion joints	X	X	X		Verify integrity in conformance with NFPA 22
Heating system	X	X	X		Verify heating system is in conformance with NFPA 22
Hoops and grillage	X	X	X		Verify integrity in conformance with NFPA 22
Insulation	-		X	X	Verify integrity in conformance with NFPA 22
Overflow piping	X	X	X		Verify integrity in conformance with NFPA 22
Support structure	-		X	X	Verify integrity in conformance with NFPA 22
Tank exterior	-		X	X	Verify integrity in conformance with NFPA 22
Tank interior	-		X	X	Remove debris; verify integrity in conformance with NFPA 22
Alarm and Supervisory Components	-	-	-	-	
Enclosure temperature	X	X	X		Operational test for conformance with NFPA 22 and/or NFPA 72
High and low water level	X	X	X		Operational test for conformance with NFPA 22 and/or NFPA 72 and the design water levels

<u>Component</u>	<u>Repair/</u>			<u>Test Criteria</u>
	<u>Adjust</u>	<u>Recondition</u>	<u>Replace</u>	
Valve supervision	X	X	X	Operational test for conformance with NFPA 22 and/or NFPA 72
Water temperature	X	X	X	Operational test for conformance with NFPA 22 and/or NFPA 72
Fill and Discharge Components	-	-	-	-
Automatic fill valves	X	X	-	Perform annual test in accordance with 9.5.3 operational test for conformance with NFPA 22
Valves	X	X	X	See Chapter 13
Status Indicators	-	-	-	-
Level indicators	X	X	X	Verify conformance with NFPA 22
Pressure gauges	-	-		X Verify at 0 psi (0 bar) and at system working pressure

Statement of Problem and Substantiation for Public Input

The component action tables throughout NFPA 25 should be comprehensively reviewed and revised to ensure technical accuracy, consistency, and alignment with current inspection, testing, and maintenance practices. Many of the component action tables have remained largely unchanged through multiple revision cycles. As a result, several tables contain inconsistencies, outdated terminology, incomplete action guidance.

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Public Input No. 100-NFPA 25-2026 [Section No. 10.1.1.1]

10.1.1.1

This chapter shall provide the minimum requirements for the routine inspection, testing, and maintenance of water spray protection from fixed nozzle systems installed in accordance with NFPA 15 or other approved installation standard.

10.1.1.1.1 Inspection, testing, and maintenance requirements occurring at intervals greater than annual that are not completed within the prescribed frequency shall be deemed a deficiency.

Statement of Problem and Substantiation for Public Input

The proposed language is intended to clarify the significance associated with test and testing activities that occur at frequencies greater than one year and are not completed within the prescribed interval. Currently, NFPA 25 identifies deficiencies based largely on observed physical conditions or operational impairments; however, the standard does not consistently address overdue inspection activities.

This PI improves consistency within NFPA 25 by recognizing overdue test requirements as deficiencies rather than merely incomplete documentation items. The proposed language aligns with the overall intent of NFPA 25 to maintain fire protection systems in an operational state of readiness and provides clear enforceable criteria for owners, contractors, and authorities having jurisdiction.

The proposal does not create new requirements or shorten existing inspection frequencies. Instead, it clarifies that once the prescribed interval has been exceeded, the affected component or system is no longer considered compliant with the test and testing requirements of the standard and shall be identified as a deficiency until the required inspection is completed

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Public Input No. 26-NFPA 25-2026 [Section No. 10.1.4]

10.1.4– Internal Assessments and Obstruction Investigations.

~~The procedures outlined in Chapter 14 shall be followed where there is a need to conduct an obstruction investigation.~~ **10.1.4.1**

An internal assessment of each water spray fixed system shall be conducted in accordance with 14.2.

10.1.4.2

Where required by 14.2 an obstruction investigation of the water spray fixed system shall be conducted in accordance with 14.3.

Statement of Problem and Substantiation for Public Input

The current requirement to conduct an internal pipe assessment "when needed" is unenforceable. Proposed language clarifies the intent to internally inspect all water-based fire protection systems and provides proper pointers to the specific sections in Chapter 14.

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Public Input No. 166-NFPA 25-2026 [Section No. 10.2.1.1]

10.2.1.1 –

~~Items in areas that are inaccessible for safety considerations due to factors such as continuous process operations and energized electrical equipment shall be inspected during each scheduled shutdown but not more than every 18 months.~~

Statement of Problem and Substantiation for Public Input

This requirement was redundant to the general requirements in 4.11.7 and is not needed.

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Public Input No. 144-NFPA 25-2026 [Section No. 10.5.1]

10.5.1

Whenever a component in a water spray fixed system is adjusted, repaired, reconditioned, or replaced, the action required in Table 10.5.1 shall be performed.

Table 10.5.1 Summary of Component Action Requirements

<u>Component</u>	<u>Adjust</u>	<u>Repair/Recondition</u>	<u>Replace</u>	<u>Required Action</u>				
Water Delivery Components	-	-	-	-				
Fire department connections	-	-	-	-			See Chapter 13	(1) Operate test
Manual release	X	X	X	(2) Check for leaks at system working pressure	-	-	-	(3) Test alarm
Nozzles	X	X	X	Operational flow test				
Pipe and fittings	X	X	X	Operational flow test				
Alarm and Supervisory Components	-	-	-	-				
Detection system	X	X	X	Operational test for conformance with NFPA 15 and/or NFPA 72				
Pressure-switch-type waterflow	X	X	X	Operational test using inspector's test connection				
Valve supervisory device	X	X	X	Test for conformance with NFPA 15 and/or NFPA 72				
Water motor gong	X	X	X	Operational test using inspector's test connection				
Status-Indicating Components	-	-	-	-				

<u>Component</u>	<u>Adjust</u>	<u>Repair/Recondition</u>	<u>Replace</u>	<u>Required Action</u>			
Gauges	-	-			X	Verify at 0 psi (0 bar) and system working pressure	
Testing and Maintenance Components	-	-	-	-			
Auxiliary drains	X	X	X	(1) Inspect for leaks at system working pressure (2) Main drain <u>Valve status test</u>			
Main drain	X	X	X	Full-flow main <u>main drain test</u>			
Structural Components	-	-	-	-			
Hanger/seismic bracing	X	X	X	Inspect for conformance with NFPA 15 and/or NFPA 13			
Pipe stands	X	X	X	Inspect for conformance with NFPA 15 and/or NFPA 13			
Informational Components	-	-	-	-			
Identification signs	X	X	X	Inspect for conformance with NFPA 15			

Statement of Problem and Substantiation for Public Input

The component action tables throughout NFPA 25 should be comprehensively reviewed and revised to ensure technical accuracy, consistency, and alignment with current inspection, testing, and maintenance practices. Many of the component action tables have remained largely unchanged through multiple revision cycles. As a result, several tables contain inconsistencies, outdated terminology, incomplete action guidance.

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Chapter 11 Foam Systems

11.1 General.

11.1.1 Minimum Requirements.

11.1.1.1*

This chapter shall provide the minimum requirements for the routine inspection, testing, and maintenance of foam systems installed in accordance with NFPA 11 or other approved installation standards.

Table 11.1.1.2 shall be used to determine the minimum required frequencies for inspection, testing, and maintenance.

Table 11.1.1.2 Summary of Low-, Medium-, and High-Expansion Foam and Foam-Water Sprinkler System Inspection, Testing, and Maintenance

<u>System/Component</u>	<u>Frequency</u>	<u>Reference</u>
Inspection		
Control valve(s)	—	Chapter 13
Deluge/preaction valve(s)	—	Chapter 13
Discharge device location and position (spray nozzle)	Monthly	11.2.4.1.1
Discharge device location and position (sprinkler)	Annually	11.2.4.1.2
Drainage in system area	Quarterly	11.2.7
Fire pump(s)	—	Chapter 8
Foam concentrate pump(s)	—	Chapter 8
Fittings corrosion	Annually	11.2.11
Fittings damage	Annually	11.2.11
Foam concentrate storage	Annually	11.2.9
Gauges	—	Chapter 13
Hangers/braces/supports	Annually	11.2.12
Pipe corrosion	Annually	11.2.11
Pipe damage	Annually	11.2.11
Proportioning system(s) — all	Monthly	11.2.8
Standard pressure proportioning pickup tube	10 years	11.2.8.5.3
Line proportioner pickup tubes	Annually	11.2.8.6.3.1
Foam tank inspection	Annually	11.2.9
Proportioning head	Annually	11.2.8.5.2
Water-powered proportioner pump leakage	Monthly	11.2.8.6.8.1
Water-powered proportioner pump valve position	Monthly	11.2.8.6.8.1
Water-powered proportioner pump oil level	Semiannually	11.2.8.6.8.2
Water-powered proportioner pump shock absorbers	Semiannually	11.2.8.6.8.3
Water-powered foam proportioning pump filters	Semiannually	11.2.8.6.8
Strainer(s) — mainline	Annually	Chapter 7
Strainer(s) — discharge device	After each use	11.2.6.1
Foam concentrate strainers	Annually	11.2.6.4
Water supply piping	—	Chapter 7
Water supply tank(s)	—	Chapter 9
Waterflow devices	—	Chapter 13
Supplementary hoses	—	Chapter 6
Auxiliary drain signage	—	Chapter 13
Supplementary hose stream nozzles	—	Chapter 6
Supplementary hose stream storage	—	Chapter 6
Fixed foam discharge outlet	Annually	11.2.4.2
Vapor seals	Annually	11.2.4.2.4
Fire department hose connections	—	Chapter 6
Hydraulic design information sign	—	Chapter 4

<u>System/Component</u>	<u>Frequency</u>	<u>Reference</u>
Foam dam	—	11.2.15
Pressure foam maker	Annually	11.2.4.2.5
Rupture disk	Annually	11.2.4.2.5.5
Alarm devices	—	<i>NFPA 72</i>
Operating instructions and training	Annually	11.2.17
High pressure cylinders	Annually	11.2.14
Foam in surrounding space of bladder	Annually	11.2.9.8
Test		
Backflow preventer(s)	—	Chapter 13
Complete foam-water sprinkler system(s) (operational test)	Annually	11.3.10.2
Control valve(s)	—	Chapter 13
Deluge/preaction valve(s)	—	Chapter 13
Detection system	—	<i>NFPA 72</i>
Discharge device location	Annually	11.3.10.2.7
Discharge device obstruction	Annually	11.3.10.2.7
Discharge device position	Annually	11.3.10.2.7
Fixed foam discharge outlet water flow	Annually	11.3.11
Pressure foam maker water flow	Annually	11.3.11.6
Fire pump(s)	—	Chapter 8
Foam concentrate pump(s)	—	Chapter 8
Manual actuation device(s)	Annually	11.3.10.4
Proportioning system(s) — all	Annually	11.3.2
Valve status test	—	Chapter 13
Water supply flow test	—	Chapter 7
Water supply tank(s)	—	Chapter 9
Waterflow alarm devices	—	Chapter 13
Supplementary hose streams	—	Chapter 6
Supplementary hose stream nozzles	—	Chapter 23 of <i>NFPA 1930</i>
Foam concentrate	Annually	11.3.1.1
Monitors	Annually	11.3.7
Oscillating monitor's range of motion	Annually	11.3.7.2
Oscillating monitor full flow	5 years	11.3.7.3
Water-powered foam proportioning pump operation	Quarterly	11.3.4
Water-powered foam proportioning pump operation at specified rate of flow	Annually	11.3.4
Water-powered foam proportioning pump screwed connections	Semiannually	11.3.4
Water-powered foam proportioning pump valves	Semiannually	11.3.4
Bladder tank hydrostatic test	10 years	11.3.5.1
Foam concentrate tank hydrostatic test	10 years	11.3.5.1
High pressure cylinder	5 years/12 years	11.3.5.4

<u>System/Component</u>	<u>Frequency</u>	<u>Reference</u>
Underground piping	10 years	11.2.11.8
Maintenance		
Backflow preventer(s)	—	Chapter 13
Bladder sight glass cleaning	10 years	11.4.3.2
Check valve(s)	—	Chapter 13
Control valve(s)	—	Chapter 13
Deluge/preaction valves	—	Chapter 13
Detection system	—	NFPA 72
Detector check valve(s)	—	Chapter 13
Fire pump(s)	—	Chapter 8
Metallic atmospheric and pressure vessel storage tanks drain/flush	10 years	11.4.3.1
Foam concentrate pump(s)	—	Chapter 8
In-line balanced pressure type	—	—
Balancing valve diaphragm	5 year	11.4.4.3.3
Line type	—	—
Pressure vacuum vents	5 years	11.4.4.6
Proportioning system(s) standard pressure type	—	—
Ball drip (automatic-type) drain valves	5 years	11.4.4.1
Balancing valve diaphragm	5 years	11.4.4.2.3
Strainer(s) — mainline	—	Chapter 7
Water supply	—	11.4.2
Water supply tank(s)	—	Chapter 9
Hose valves	—	Chapter 13
Pressure gauges	—	Chapter 13
Fixed foam discharge outlet	Per manufacturer	11.4.4.8
Pressure foam maker	Per manufacturer	11.4.4.9
Monitors	—	Chapter 7
Monitor nozzles	—	Chapter 7
Supplementary hoses	—	NFPA 1930
Supplementary hose nozzles	—	NFPA 1930
Rupture disks	Per manufacturer	11.4.4.9.1
Water-powered foam concentrate proportioning pump shaft lubrication	Semiannually	11.4.4.5.1
Water-powered foam concentrate proportioning pump oil change	5 years	11.4.4.5.2
Water-powered foam concentrate proportioning vane replacement	Per manufacturer	11.4.4.5.3
Auxiliary drains	—	Chapter 13

11.1.1.3*

All inspection and testing shall be conducted without inadvertent discharging of foam solution into the system piping.

11.1.2 Other System Components.

Fire pumps, water storage tanks, common components, and valves common to other types of water-based fire protection systems shall be inspected, tested, and maintained in accordance with Chapter 8, Chapter 9, and Chapter 13, respectively, and as specified in Table 11.1.1.2.

11.1.3 Alarm and Detection Devices.

Alarms and detection devices shall be tested and inspected in accordance with *NFPA 72*.

11.1.4 Obstruction Investigations.

The procedures outlined in Chapter 14 shall be followed where conducting an obstruction investigation is necessary.

11.1.5* Impairments, Critical Deficiencies, and Noncritical Deficiencies.

11.1.5.1 Impairments.

Where an impairment to protection occurs, procedures outlined in Chapter 15 shall be followed.

11.1.5.2 Critical Deficiencies.

Where a critical deficiency is noted, the appropriate action shall be taken.

11.1.5.3 Noncritical Deficiencies.

Where a noncritical deficiency is noted, the appropriate corrective action shall be taken.

11.1.6 Hose Connections.

Hose connections shall be inspected, tested, and maintained in accordance with Chapter 6 and Chapter 13.

11.1.7* System Changes.

If it is determined during routine inspection and testing that the system has been altered or replaced such that the foam concentrate and systems components are not compatible with each other, the system shall be considered impaired.

11.2 Inspection.

11.2.1

Systems shall be inspected in accordance with the frequency specified by Table 11.1.1.2.

11.2.2

Where any of the inspection requirements in this section are found to be deficient, the results shall be documented and corrected in accordance with 11.1.5.

11.2.3* Minimum Requirements. (Reserved)

11.2.4 Foam Discharge Devices.

11.2.4.1* Foam-Water Discharge Devices.

11.2.4.1.1

Foam-water spray nozzles shall be inspected monthly to ensure they are in place, continue to be aimed or pointed in the direction intended in the system design, and are free from external loading and corrosion.

11.2.4.1.2

Foam-water sprinklers shall be inspected annually to ensure they are in place, continue to be aimed or pointed in the direction intended in the system design, and are free from external loading and corrosion.

11.2.4.1.3

Where caps or plugs are required, a visual inspection of the foam-water discharge device shall confirm they are in place.

11.2.4.1.4*

Misaligned foam-water discharge devices shall be adjusted (i.e., aimed) by visual means.

11.2.4.1.4.1

The alignment and adequacy of coverage of the intended hazard of the adjusted foam-water discharge devices shall be observed and verified during the next scheduled flow test.

11.2.4.1.5*

Inspection shall verify that unlisted combinations of foam-water discharge devices and foam concentrate have not been substituted.

11.2.4.2 Fixed Foam Discharge Outlets.

Fixed foam discharge outlets shall be inspected annually.

11.2.4.2.1

Fixed foam discharge outlets inaccessible for inspection for safety considerations due to process operations or personnel hazards shall be inspected during each scheduled shutdown.

11.2.4.2.2*

Fixed foam discharge outlets installed on tanks shall be visually inspected from the ground level or other means.

11.2.4.2.3*

Fixed foam discharge outlets installed on external floating roofs shall be visually inspected from the ground level and from the top of the stairs.

11.2.4.2.4 Vapor Seal.

Vapor seals shall be inspected annually.

11.2.4.2.4.1

Where a vapor seal is provided, the inspection shall verify the seal is present through one of the following means:

(1)* Visual inspection, as follows:

- (a)* Visual inspection shall be approved by the authority having jurisdiction prior to inspection.
- (b)* Where provided with an inert gas system, the owner shall verify that the makeup gas is sufficient for the removal of a fixed foam discharge outlet lid.

(2)* Use of an infrared camera

(3) Gas monitoring, as follows:

- (a) Where access to the chamber is provided, gas monitoring shall be permitted around the fixed foam discharge outlet lid and the air inlet to verify that the vapor seal is intact.
- (b) Monitoring shall be permitted at the fire department connection on a semi-fixed foam system to verify that the vapor seal is intact.
- (c) Monitoring shall be permitted at low-point drains of foam solution piping as a means to verify that the vapor seal is intact.

(4) Other means as allowed and approved by the authority having jurisdiction and operator

11.2.4.2.5 Pressure Foam Makers.

Pressure foam makers shall be inspected annually.

11.2.4.2.5.1

The inspection of pressure foam makers shall follow the manufacturer's specifications.

11.2.4.2.5.2 General.

(A)

Check valves shall be inspected in accordance with 13.4.2.

(B)*

Prior to inspection, air monitoring shall be conducted at truck connections and valved test connections.

11.2.4.2.5.3

Proper personal protective equipment (PPE) shall be utilized.

11.2.4.2.5.4

Gate valves shall be inspected in accordance with 13.3.2.1.

11.2.4.2.5.5*

Auxiliary drains shall be inspected in accordance with 11.4.4.13.

11.2.4.2.5.6

Where provided, rupture disks shall be inspected annually in accordance with the manufacturer's requirements.

11.2.4.2.5.7

All system operating valves shall be stored in the proper positions determined by the system design.

11.2.4.2.5.8*

The water level in the base of the storage tank shall be below the bottom of the foam injection line.

11.2.4.2.5.9

The foam maker shall be inspected for signs of physical damage.

11.2.4.2.5.10 Air Inlet.

(A)

Inspection shall verify that the air inlet is free and clear of paint, debris, or other items that could impede the proper operation of the chamber or foam maker.

(B)

The air inlet screen shall not be damaged or missing.

11.2.4.2.5.11 Strainers.

Where equipped, strainers shall be inspected in accordance with 11.2.6.

11.2.4.3 Monitors.

Monitors, including self-educing monitors, shall be inspected in accordance with 7.2.2.6.

11.2.4.3.1

Where provided on self-educing monitors, pickup tubes shall be inspected for cracking and dry rot.

11.2.4.4 Hoselines.

Hoselines shall be inspected annually in accordance with 6.2.6 or, where applicable, with the manufacturer's instructions.

11.2.4.5 Hose Nozzles.

Hose nozzles shall be inspected annually in accordance with 6.2.7.

11.2.5 Water Supply Systems.

Water supply systems that supply foam systems shall be inspected in accordance with Chapter 7, Chapter 8, and Chapter 9.

11.2.6 Strainers.

11.2.6.1

Individual discharge device basket or screen strainers shall be inspected for damaged and corroded parts as follows:

- (1) After each system activation
- (2) After each operational test
- (3) After a flushing test

11.2.6.2

Mainline strainers shall be inspected in accordance with 7.2.2.3.

11.2.6.3

Strainers shall be inspected in accordance with the manufacturer's instructions and be cleaned after each use and flow test.

11.2.6.4

Foam concentrate strainers shall be inspected annually to ensure the blowdown valve is closed and plugged.

11.2.6.4.1

Foam concentrate strainers provided on foam concentrate pump skids shall be inspected annually in accordance with Chapter 8.

11.2.7* Drainage.

The area beneath and surrounding a foam-water spray system shall be inspected quarterly to ensure drainage facilities are not blocked and retention embankments or dikes are in good repair.

11.2.8* Proportioning Systems.

Proportioning systems shall be inspected monthly unless otherwise specified within this standard.

11.2.8.1

The components of the various proportioning systems described in this subsection shall be inspected in accordance with the frequency specified by Table 11.1.1.2.

11.2.8.2

Valves requiring inspection shall be permitted to be open or closed, depending on specific functions within each proportioning system.

11.2.8.3

The position (i.e., open or closed) of proportioning system valves shall be verified in accordance with specified operating conditions.

11.2.8.4

Additional inspection requirements shall be performed as detailed for the proportioning systems described in this subsection.

11.2.8.5 Standard Pressure Proportioner.

11.2.8.5.1*

The pressure shall be removed before inspection of the standard pressure proportioner to prevent injury.

11.2.8.5.2

The inspection of the standard pressure proportioner shall include the following:

- (1) Ball drip valves (automatic drains) are verified as free and opened.
- (2) The foam concentrate pickup tube is verified as intact, not damaged, or clogged by removing the proportioning head.

11.2.8.5.3

Standard pressure proportioning pickup tubes shall be inspected every 10 years.

11.2.8.6 Bladder Tank Proportioner.

11.2.8.6.1*

The pressure shall be removed before inspection of the bladder tank proportioner to prevent injury.

11.2.8.6.2

The inspection of the bladder tank proportioner shall include the water control valves to the foam concentrate tank.

11.2.8.6.3 Line Proportioner.

The inspection of the line proportioner shall include the following:

- (1) Strainers are inspected in accordance with 11.2.6.1.
- (2) Pickup pipes inside the tank are inspected for corrosion and plugging.

11.2.8.6.3.1

Line proportioner pickup tubes shall be inspected annually.

11.2.8.6.4 Standard Balanced Pressure Proportioner.

The inspection of the standard balanced pressure proportioner shall include the following:

- (1) Strainers are inspected in accordance with 11.2.6.1.
- (2) Gauges are verified to be in good operating condition.
- (3) Sensing line valves are verified as open.
- (4) Power is verified as available to the foam concentrate pump.

11.2.8.6.5 In-Line Balanced Pressure Proportioner.

The inspection of the in-line balanced pressure proportioner shall include the following:

- (1) Strainers are inspected in accordance with 11.2.6.1.
- (2) Gauges are verified to be in good working condition.
- (3) Sensing line valves at the pump unit and at individual proportioner stations are verified as open.
- (4) Power is verified as available to the foam concentrate pump.

11.2.8.6.6 Orifice Plate Proportioner.

The inspection of the orifice plate proportioner shall include the following:

- (1) Strainers are inspected in accordance with 11.2.6.1.
- (2) Gauges are verified to be in good working condition.
- (3) Power is verified as available to the foam concentrate pump.

11.2.8.6.7 Wide-Range Proportioner.

The inspection of the wide-range proportioner shall include the following:

- (1) Reference marks between the foam inlet nipple and proportioner body are confirmed as aligned to indicate the proper factory setting for the internal foam metering valve.
- (2) The flow direction arrow is checked to verify the proportioner is properly installed.
- (3) The type of foam marking on the nameplate is confirmed to be consistent with the system design requirements and the foam contained in the foam tank.

11.2.8.6.8 Water-Powered Foam Concentrate Proportioner Pump.

Water-powered proportioner pump systems shall be inspected monthly.

11.2.8.6.8.1

The inspection of the water-powered foam concentrate proportioner pump shall include the following:

- (1) Valves are verified to be in the proper operational position in accordance with the manufacturer's specifications.
- (2) Absence of leakage on the unit or connections is verified.
- (3) The oil level is verified to be at the appropriate mark.
- (4) Shock absorbers are evaluated for wear at the coupling between the water motor and the proportioning pump.

11.2.8.6.8.2

The oil level shall be verified to be at the appropriate level semiannually.

11.2.8.6.8.3

Shock absorbers shall be inspected for wear at the coupling between the water motor and the proportioning pump semiannually

11.2.8.6.9 Mobile Apparatus Proportioner.

The foam proportioning system certification for the mobile apparatus proportioner shall be reviewed annually.

11.2.8.6.9.1

The review shall verify that the foam concentrate type and viscosity has not changed from the foam concentrate used to obtain the system certification.

11.2.8.6.9.2*

If the foam concentrate has changed from the foam concentrate used to obtain the system certification, the change shall be considered an impairment until a new proportioning system certification can be received from the proportioner manufacture.

11.2.9 Foam Concentrate Storage.

Foam concentrate storage shall be inspected annually to ensure it is accessible and free from leakage, damage, and corrosion.

11.2.9.1*

Inspection of foam concentrate storage shall verify the quantity of foam concentrate satisfies the requirements of the original design.

11.2.9.2*

Foam concentrate storage tanks shall be inspected annually in accordance with 9.2.4 for external corrosion and damage.

11.2.9.3

Internal inspections of expansion domes on foam concentrate storage tanks shall be conducted annually.

11.2.9.4

Foam concentrate storage tanks shall be inspected for sediment.

11.2.9.4.1

Excessive sediment shall require draining and flushing of the foam concentrate storage tank.

11.2.9.4.2

Internal inspections shall be conducted on foam concentrate storage tanks when the tank is drained and flushed for maintenance.

11.2.9.5

Where provided, the pressure vacuum vent on a foam concentrate storage tank shall be inspected to verify the vent is operating freely.

11.2.9.6

Where applicable, the foam concentrate storage tank hydrostatic test shall be verified as current (i.e., not out of date).

11.2.9.7*

Where applicable, through-the-wall fittings of foam concentrate storage tanks shall be inspected for mechanical damage and leakage.

11.2.9.8

Where bladder tanks are used, an inspection for the presence of foam in the water surrounding the bladder shall be conducted annually.

11.2.10 Compressed Air Foam–Generating Equipment.

11.2.10.1

Compressed air foam–generating equipment and accessories shall be inspected annually.

11.2.10.2

Discharge devices shall be visually inspected annually for evidence of mechanical damage.

11.2.11* Pipe and Fittings.

Foam system pipe and fittings shall be inspected annually.

11.2.11.1

Foam system pipe and fittings installed in areas that are inaccessible for safety considerations due to process operations shall be inspected during each scheduled shutdown.

11.2.11.2

Foam system pipe and fittings shall be free of mechanical damage, leakage, and corrosion.

11.2.11.2.1

Inspections that identify corrosion or mechanical damage shall be documented and corrected in accordance with 11.1.5.

11.2.11.2.2

Pressure tests in accordance with NFPA 11 of normally dry piping shall be conducted when evidence of external corrosion detrimental to system performance or mechanical damage is present.

11.2.11.3

Foam system pipe shall not be subjected to external loads by materials either resting on or hanging from the pipe.

11.2.11.4

Foam system pipe shall be inspected for misalignment or trapped sections.

11.2.11.5

Foam system auxiliary drain signage shall be inspected in accordance with 13.4.5.1.2.

11.2.11.6*

The location and condition of rubber gasketed fittings shall be inspected.

11.2.11.7

Aboveground foam system piping shall be examined to determine its condition and to verify proper drainage is maintained.

11.2.11.8

Except as permitted by 11.2.11.8.1 and 11.2.11.8.2, underground foam solution and foam concentrate piping shall be hydrostatically pressure tested at the installation standard's system design pressure at least every 10 years.

11.2.11.8.1

Other frequencies shall be allowed when approved by the authority having jurisdiction.

11.2.11.8.2

Other inspection means in accordance with Chapter 14 shall be allowed.

11.2.11.9

Galvanized pipe shall not be used for foam concentrate lines in accordance with 4.7.1.3 of NFPA 11.

11.2.12 Hangers, Braces, and Supports.

Foam system hangers, braces, and supports shall be inspected annually from the floor level.

11.2.12.1

Hangers, braces, and supports installed in areas that are inaccessible for safety considerations due to process operations shall be inspected during each scheduled shutdown.

11.2.12.2

Hangers, braces, and supports shall not be damaged, loose, or unattached.

11.2.12.3

Hangers, braces, and supports that are damaged, loose, or unattached shall be replaced or refastened.

11.2.13 Foam Concentrate.

11.2.13.1*

Inspection of foam concentrate shall verify the type and viscosity has not changed from the foam concentrate used to obtain system certification and is suitable for the current hazard (i.e., alcohol resistant).

11.2.13.1.1

The inspection shall verify that different brands or types of foam concentrates have not been mixed.

11.2.13.1.2

Where different brands or types of foam concentrates have been mixed, the following shall apply:

- (1) The inspection shall verify with the manufacturer(s) that the concentrates are compatible and can be mixed.
- (2) The mixed concentrates shall be approved by the authority having jurisdiction.

11.2.13.2

At least annually, foam concentrates shall be inspected for evidence of excessive sludging or deterioration.

11.2.13.3

The quantity of concentrate in storage shall meet design requirements.

11.2.13.3.1

Tanks and containers shall normally be kept full, with space allowed for expansion.

11.2.14 High-Pressure Cylinders.

11.2.14.1 Cylinder Pressures.

High-pressure cylinders shall be inspected annually.

11.2.14.1.1

Inspection shall verify that the pressure within the cylinder(s) is in accordance with the manufacturer's specifications for the system.

11.2.14.1.2

High-pressure cylinders used in compressed air foam systems hydrostatic test date shall be inspected.

11.2.14.1.2.1

High-pressure cylinders used in compressed air foam systems shall not be recharged without a hydrostatic test and remarking if more than 5 years have elapsed from the date of the last test.

11.2.14.1.2.2

Cylinders that have been in continuous service without discharging shall be permitted to be retained in service for a maximum of 12 years, provided they are discharged and retested at that time before being returned to service.

11.2.15 Foam Dams.

11.2.15.1 General.

Foam dam inspections shall follow the requirements of this subsection for the applicable tank construction.

11.2.15.2 Inaccessible for Safety Considerations.

Foam dams installed in areas that are inaccessible for safety considerations due to process operations shall be inspected during each scheduled shut down.

11.2.15.3* External Floating Roofs.

At least annually, a foam dam on an external floating roof shall be visually inspected to check the following:

- (1) The integrity of the foam dam is sound and it is properly attached to the roof.
- (2) The foam dam drainage slots are free and clear and not restricted by debris.
- (3) Earthing shunts are free of corrosion and damage.

11.2.15.4* Internal Floating Roofs.

11.2.15.4.1

The inspection of a foam dam on an internal floating roof shall be conducted when the tank is brought down for required inspection and maintenance in accordance with industry standards.

11.2.15.4.2

Earthing shunts shall be inspected for corrosion and damage.

11.2.16 Deluge Valves.

Deluge valves shall be inspected in accordance with the provisions of Chapter 13.

11.2.17 Operating Instructions and Training.

Operating instructions and training shall be reviewed annually.

11.2.17.1

Review shall verify that the system operation, system deactivation, acceptance/commissioning test results, maintenance instructions, and layouts are in place at control equipment with copies of each on file.

11.3 Testing.

11.3.1 Minimum Requirements.

Where any of the testing requirements in this subsection are found deficient, the results shall be documented, corrected, and retested in accordance with 11.1.5.

11.3.1.1

Foam concentrate testing shall be conducted annually.

11.3.1.2

Samples of foam concentrates shall be sent to the manufacturer or an approved testing laboratory for quality condition testing.

11.3.1.3

When the foam type and brand of foam are known, quality testing shall confirm the product meets the manufacturer's specifications.

11.3.2* Proportioner Tests.

An operational test of the foam proportioner shall be conducted annually.

11.3.2.1*

Where approved by the authority having jurisdiction, surrogate test liquids shall be permitted to be used in lieu of foam concentrates.

11.3.2.1.1

Alternative test methods shall be permitted to enable use of surrogate test liquids, provided system pressures and flows remain as described in this chapter and meet the system design requirements.

11.3.2.2

The concentration of the foam solution sample shall be verified by one of the following measurement devices:

- (1) Digital refractometer
- (2) Digital electric conductivity using handheld or online instrumentation connected to electronic data acquisition equipment
- (3) Calibrated listed digital flow meters (total flow and foam concentrate)
- (4) Other means acceptable to the authority having jurisdiction

11.3.2.3*

The following data shall be required to be collected:

- (1) Static water pressure
- (2) Residual water pressure at the control valve and at the remote reference point in the system
- (3) Actual discharge rate
- (4) Consumption rate of foam producing material
- (5) Concentration of the foam solution

11.3.2.4

For compressed air foam systems, the following data shall be recorded as part of any discharge test:

- (1) Static water pressure
- (2) Residual water pressure at the control device
- (3) System air pressure
- (4) Concentration of the foam solution

11.3.2.4.1

Where foam solution or premix testing is conducted, the system shall be arranged so that tests are performed with as little loss of foam concentrate as possible.

11.3.2.5

Proportioning equipment for foam-water sprinkler systems shall be verified by flow tests.

11.3.2.5.1

Flow testing through suitable test outlet connections shall be permitted, provided it meets the required system design flow conditions and is acceptable to the authority having jurisdiction.

11.3.2.5.1.1

Testing using alternative methods as described in 11.3.2.1 shall also be permitted.

11.3.2.5.2

The water pressure at the proportioner inlet shall meet the system design condition at the maximum required system flow condition.

11.3.2.5.2.1

The maximum water supply pressure shall not exceed the maximum allowable working pressure of any proportioning system components.

11.3.2.5.3*

For closed-head systems, the foam concentrate induction rate (i.e., percent concentration) shall be verified at the maximum system design flow and at a flow equal to the four most hydraulically located sprinkler heads that are discharging.

11.3.2.5.3.1

When wide-range or variable-range proportioners are used in closed-head sprinkler systems, they shall be tested for foam concentrate induction rate (i.e., percent concentration) at the maximum system design flow and at a flow equal to the four most hydraulically located sprinkler heads that are discharging.

11.3.2.5.4

For open-head deluge systems, the foam concentrate induction rate (i.e., percent concentration) shall be verified at the maximum system design flow.

11.3.2.5.5

For systems with multiple foam proportioners designed to be operated individually, the foam concentrate induction rate (i.e., percent concentration) for each proportioner shall be verified by a separate flow test.

11.3.2.5.6

For systems designed with multiple proportioners designed to be operated simultaneously, the foam concentrate induction rate (i.e., percent concentration) for each proportioner shall be verified as the required number of proportioners are discharged simultaneously.

11.3.2.5.7

The foam concentrate induction rate, expressed as a percentage of the foam solution flow (i.e., water plus foam concentrate), shall be within minus 0 percent to plus 30 percent of the manufacturer's listed concentrations or plus 1 percentage point, whichever is less.

11.3.3 Mobile Apparatus Proportioners.

11.3.3.1

Mobile apparatus proportioner testing shall verify the foam proportioning system meets the requirements of 18.11.2 of NFPA 1900.

11.3.3.2

If inspection determines that the foam concentrate type or viscosity has been changed without recertification of the system in accordance with 18.10.1 of NFPA 1900, the system shall be type tested and recertified by the foam proportioning system manufacturer.

11.3.4 Water-Powered Foam Concentrate Proportioner Pumps.

Water-powered foam concentrate proportioner pumps shall be tested quarterly.

11.3.4.1

Testing of water-powered foam concentrate proportioner pumps shall include the following steps:

- (1) Operate the water motor driven pump in accordance with manufacturer's specification.
- (2) Operate manual air bleed valve, pressure relief valves, and operational valves in accordance with the manufacturer's specification.
- (3) Check filters for contamination in accordance with the manufacturer's specifications.
- (4) Check screwed connection for tightness.
- (5) Operate the water-powered foam concentrate proportioner pump to the installed specifications for rate of flow and conduct a proportioning test in accordance with the manufacturer's procedures and specifications.

11.3.4.2

Screw connections shall be tested semiannually for tightness.

11.3.4.3

Manual air bleed valves, pressure relief valves, and operational valve shall be tested semiannually in accordance with manufacturer's procedures and specifications.

11.3.5 Hydrostatic Testing.

11.3.5.1*

Standard pressure proportioner tanks and bladder tanks shall undergo hydrostatic testing every 10 years.

11.3.5.2

Hydrostatic testing on the bladder tank shall not create a pressure differential across the bladder.

11.3.5.3

The exterior of the foam concentration bladder tank shall be inspected for leaks during hydrostatic testing while under the system's working pressure.

11.3.5.4 High-Pressure Cylinders.

11.3.5.4.1

After system activation, high-pressure cylinders shall be hydrostatically tested if more than 5 years have passed since the last hydrostatic test.

11.3.5.4.2

High-pressure cylinders shall undergo a hydrostatic test every 12 years if no discharge has occurred.

11.3.6 Water Supply.

The water supply for foam systems shall be tested in accordance with Chapter 7, Chapter 8, and Chapter 9.

11.3.7 Monitors.

Monitors shall be tested annually to ensure proper function.

11.3.7.1

Monitors and monitor nozzles shall be tested in accordance with 7.3.3.

11.3.7.2

Where water-powered oscillating monitors are provided, testing shall be in accordance with manufacturer's specifications but no less than annually.

11.3.7.3

Full flow testing of oscillating monitors shall occur every 5 years and verify the range of travel and set spray pattern are correct.

11.3.7.3.1

Alternate frequencies shall be permitted where approved by the authority having jurisdiction.

11.3.8 Hoses.

11.3.8.1

Supplementary hoses shall be tested in accordance with NFPA 1930.

11.3.8.2

Hoses manufactured in accordance with standards other than NFPA 1930 shall be tested in accordance with the manufacturer's specifications.

11.3.9 Hose Nozzles.

Hose nozzles shall be tested in accordance with Chapter 23 of NFPA 1930.

11.3.10* Discharge Device Operational Tests.

The frequency of system discharge device operational tests shall be in accordance with Table 11.1.1.2.

11.3.10.1* Test Preparation.

Precautions shall be taken to prevent damage to property during the test.

11.3.10.1.1

Where discharge from the system discharge devices would create a hazardous condition or conflict with local requirements, an approved alternate method to achieve full flow conditions shall be permitted.

11.3.10.2* Operational Test Performance.

11.3.10.2.1

Operational tests shall be conducted to ensure that the foam-water sprinkler system responds as designed, both automatically and manually.

11.3.10.2.2

Test procedures shall simulate anticipated emergency events in order to evaluate the response of the foam-water sprinkler system.

11.3.10.2.3

Testing full flow discharge from foam-water deluge systems using water only in lieu of foam shall be permitted.

11.3.10.2.4

Where plugs or caps are provided on discharge devices, the full flow test shall verify that they release as intended.

11.3.10.2.5

Under test conditions and when exposed to a test source, automatic fire detection systems shall operate within the requirements of *NFPA 72* for the type of detector provided.

11.3.10.2.5.1

The response time of the automatic fire detection systems testing described in 11.3.10.2.5 shall be recorded.

11.3.10.2.6

The time lapse between operation of detection systems and water delivery time to the protected area shall be recorded for open discharge devices.

11.3.10.2.7 Discharge Patterns.

11.3.10.2.7.1

The discharge patterns from all open discharge devices shall be observed to ensure patterns are not impeded by debris and ensure discharge devices are correctly positioned and providing adequate coverage.

11.3.10.2.7.2

Discharge devices shall be permitted to be of different orifice sizes and types.

11.3.10.2.8* Pressure Readings.

11.3.10.2.8.1

Pressure readings shall be recorded at the most hydraulically demanding discharge device.

11.3.10.2.8.2

A second pressure reading shall be recorded at the main control valve.

11.3.10.2.8.3

Readings shall be compared to the original hydraulic design pressures to ensure the original system design requirements are met.

11.3.10.3 Multiple Systems.

The maximum number of systems expected to operate in case of fire shall be tested simultaneously to inspect the adequacy of the water supply and foam concentrate pump.

11.3.10.4 Manual Actuation Devices.

Manual actuation devices shall be tested annually.

11.3.10.5 Return to Service.

After the full flow test, the foam-water sprinkler system shall be returned to service and the foam concentrate tank shall be replenished to design level.

11.3.11* Fixed Foam Discharge Outlets.

11.3.11.1 Annual Waterflow Tests.

Water shall be discharged through each fixed foam discharge outlet at least annually to confirm the outlets and foam solution feed lines are not obstructed.

11.3.11.1.1

Alternative waterflow test methods and frequencies as identified in this standard or where approved by the authority having jurisdiction shall be permitted.

11.3.11.1.2

Where waterflow from the fixed foam discharge outlet occurs, the most remote device's residual pressure shall be recorded and compared with the original hydraulic design calculations to ensure the correct amount of foam will be delivered to the system.

11.3.11.1.3

The air inlet shall be observed for indications of water backflow.

11.3.11.2 Cone Roof Tanks.

Where cone roof tanks are provided with fixed foam discharge outlets, the testing requirements of this subsection shall apply.

11.3.11.2.1

Fixed foam discharge outlets installed in areas that are inaccessible for safety considerations due to process operations shall be tested during each scheduled shutdown.

11.3.11.2.2*

The authority having jurisdiction shall review and approve the plans for a waterflow test through the fixed foam discharge outlet.

11.3.11.2.2.1

Where means to isolate a fixed foam discharge outlet are provided, waterflow tests through test connections on the risers of foam solution pipe at the tank shell shall be permitted with the approval of the authority having jurisdiction.

11.3.11.2.2.2*

Where a waterflow test is not possible, visual inspection of supply piping can be conducted in accordance with Chapter 14.

11.3.11.2.2.3*

Where possible, the authority having jurisdiction shall verify that the makeup gas is sufficient for the removal of a fixed foam discharge outlet lid through the duration of the flow test.

11.3.11.2.2.4

Proper personal protective equipment (PPE) shall be provided for personnel accessing fixed foam discharge outlets on in-service product tanks.

11.3.11.2.2.5*

Where waterflow testing is possible, water shall not be allowed to enter the storage tank.

11.3.11.2.2.6

Consideration shall be given to conducting flow tests on tanks operating at elevated temperatures.

11.3.11.3* Internal Floating Roofs or Geodesic Dome Roofs.

Where tanks with internal floating roofs or geodesic dome roofs are provided with fixed foam discharge outlets, the following testing requirements shall apply:

- (1) Fixed foam discharge outlets installed in areas that are inaccessible for safety considerations due to process operations shall be tested during each scheduled shutdown.
- (2) Proper personal protective equipment (PPE) shall be provided for personnel accessing fixed foam discharge outlets on in-service product tanks.
- (3) Where waterflow testing is possible, water shall not be allowed to enter the storage tank except as permitted in 11.3.11.3.1.
- (4) Waterflow testing frequency involving discharge onto the tank roof shall align with tank outages and industry tank inspection frequencies as follows:
 - (a) Short outages where product is not removed from the tank and the roof is not accessible shall not require a waterflow test.
 - (b) Waterflow testing shall be conducted when the tank outage permits visual observation of water discharge and foam dam operation during the test.
 - (c) Foam dam testing shall be conducted in accordance with 11.3.11.5.

11.3.11.3.1

Where means to isolate a fixed foam discharge outlet are provided, waterflow tests through test connections on the risers of foam solution pipe at the tank shell shall be permitted as approved by the authority having jurisdiction.

11.3.11.4 External Floating Roofs.

External floating roofs shall be provided with rim seal protection through either above-the-seal foam application or below-the-seal foam application.

11.3.11.4.1 Below-the-Seal Foam Systems.

Testing requirements for below-the-seal foam systems shall be as follows:

- (1) Fixed foam discharge outlets installed in areas that are inaccessible for safety considerations due to process operations shall be tested during each scheduled shutdown.
- (2) Proper personal protective equipment (PPE) shall be provided for personnel accessing fixed foam discharge outlets on in-service product tanks.
- (3)* Waterflow injection between the seal shall not be permitted on an in-service tank.
- (4) Where systems are provided with proper isolation and flow test means, waterflow tests shall be conducted with water discharge on the roof.
- (5) Tank roof drains 11.3.11.5 shall be open and monitored.
- (6) Waterflow testing frequency involving discharge between the roof seals shall align with tank outages and industry tank inspection frequencies as follows:
 - (a) The waterflow test plan shall be approved by the authority having jurisdiction and consider the operating pressure of the fixed foam discharge outlets, potential seal damage due to waterflow or water impingement on the tank seal, and drainage.
 - (b) Short outages where product is not removed from the tank and the roof is not accessible shall not require a waterflow test.
 - (c) Waterflow testing shall be conducted when the tank outage permits visual observation of water discharge and foam dam operation, when provided.
 - (d) Foam dam testing shall be conducted in accordance with 11.3.11.5.

11.3.11.4.2 Above-the-Seal Foam Systems.

Testing requirements for above-the-seal foam systems shall be as follows:

- (1) Waterflow tests shall be conducted annually with discharge onto the roof.
- (2) Prior to testing, the roof drains shall be open.
- (3) Foam dam testing shall be conducted in accordance with 11.3.11.5.

11.3.11.5 Foam Dams.

11.3.11.5.1*

During the waterflow test, foam dams shall be observed for proper retention of water.

11.3.11.5.2

Roof drains shall be verified as functioning properly during the test.

11.3.11.6 Pressure Foam Makers.

Pressure foam makers shall be tested for waterflow annually.

11.3.11.6.1

Testing shall follow the manufacturer's recommendations.

11.3.11.6.1.1

Gate valves shall be tested in accordance with 13.3.3.1.

11.3.11.6.1.2*

The authority having jurisdiction shall approve the operation of the gate valve downstream of the rupture disk or check valve.

11.3.11.6.2 Annual Water Flow.

Water shall be discharged through each fixed foam discharge outlet at least annually to confirm the outlets and foam solution feed lines are not obstructed.

11.3.11.6.2.1*

Alternative waterflow test methods and frequencies as identified in this standard or where approved by the authority having jurisdiction shall be permitted.

11.3.11.6.2.2

Rupture discs shall be removed prior to the flow test.

11.3.11.6.2.3*

Gate valves downstream of the check valve shall be verified as closed.

11.3.11.6.2.4

During the waterflow test, the inlet and outlet pressure at the pressure foam maker shall be noted and confirmed to be within the acceptable range in accordance with the system design and the manufacturer's recommendations.

11.3.11.6.2.5

The air inlet shall be observed for indications of water backflow.

11.4* Maintenance.

11.4.1 General.

11.4.1.1

Maintenance of foam systems shall be in accordance with the requirements of those chapters covering the specific component parts.

11.4.1.2

Where any of the testing requirements in this section are found deficient, the results shall be documented, corrected, and retested in accordance with 11.1.5.

11.4.2* Water Supply.

The water supply for foam systems shall be maintained in accordance with Chapter 7, Chapter 8, and Chapter 9.

11.4.3 Foam Concentrate Tanks.

Foam concentrate tanks shall be maintained in accordance with this subsection.

11.4.3.1 Metallic Atmospheric and Pressure Vessel Storage Tanks.

Metallic atmospheric and pressure vessel storage tanks shall be drained and flushed in accordance with the manufacturer's specification as to not exceed every 10 years.

11.4.3.1.1

Excessive sediment shall require draining and flushing of the tank.

11.4.3.1.2*

The foam concentrate storage tank shall be drained and flushed.

11.4.3.1.3

Foam concentrate shall be permitted to be salvaged and reused.

11.4.3.2 Bladder Tank Sight Glass.

Sight glass, where provided, shall be removed and cleaned at least every 10 years.

11.4.4 Foam Components.

Maintenance of specific foam components shall be conducted in accordance with 11.4.4.1 through 11.4.4.13.

11.4.4.1 Standard Pressure Proportioners.

The ball drip (automatic-type) drain valves shall be disassembled, cleaned, and reassembled at least every 5 years.

11.4.4.2 Standard Balanced Pressure Proportioners.

11.4.4.2.1 Pump Operation.

11.4.4.2.1.1

The foam concentrate pump shall be operated.

11.4.4.2.1.2

Foam concentrate shall be circulated back to the tank.

11.4.4.2.2 Servicing.

Foam pumps, drive trains, and drivers shall be serviced in accordance with the manufacturer's instructions and frequency but not at intervals of more than 5 years.

11.4.4.2.3 Flushing.

The diaphragm balancing valve shall be flushed through the diaphragm section with water or foam concentrate until fluid appears clear or new every 5 years.

11.4.4.3 In-Line Balanced Pressure Proportioners.

11.4.4.3.1 Pump Operation.

11.4.4.3.1.1

The foam concentrate pump shall be operated.

11.4.4.3.1.2

Foam concentrate shall be circulated back to the tank.

11.4.4.3.2 Servicing.

Foam pumps, drive trains, and drivers shall be serviced in accordance with the manufacturer's instructions and frequency but not at intervals of more than 5 years.

11.4.4.3.3 Flushing.

The diaphragm balancing valve shall be flushed through the diaphragm section with water or foam concentrate until fluid appears clear or new.

11.4.4.4 Mobile Apparatus Proportioning.

Mobile apparatus proportioning systems shall be maintained in accordance with 18.9.4.2 of NFPA 1900.

11.4.4.5 Water-Powered Foam Concentrate Proportioner Pumps.

11.4.4.5.1

Water-powered foam concentrate proportioner pump shafts shall be lubricated semiannually in accordance with the manufacturer's specifications.

11.4.4.5.2

Water-powered foam concentrate proportioner pump oil shall be changed in accordance with the manufacturer's specifications at least every 5 years.

11.4.4.5.3

Water-powered foam concentrate proportioner pump vanes shall be changed, when appropriate, in accordance with the manufacturer's specifications.

11.4.4.6 Pressure Vacuum Vents.

The procedures specified in 11.4.4.6.1 through 11.4.4.6.13 shall be performed on pressure vacuum vents every 5 years.

11.4.4.6.1

The vent shall be removed from the expansion dome.

11.4.4.6.2

The vent shall be inspected to ensure that the opening is not blocked and that dirt or other foreign objects do not enter the tank.

11.4.4.6.3

The vent bonnet shall be removed.

11.4.4.6.4

The vacuum valve and pressure valve shall be lifted out.

11.4.4.6.5

The vent body shall be flushed internally and the vacuum valve and the pressure valve washed thoroughly.

11.4.4.6.6

The vent shall be inspected to ensure that the screen is not clogged.

11.4.4.6.6.1

The use of any hard, pointed objects to clear the vent screen shall be avoided.

11.4.4.6.7

If the liquid has become excessively gummy or solidified, the vent body and parts shall be soaked in hot soapy water.

11.4.4.6.8

The vent body shall be turned upside down and drained thoroughly.

11.4.4.6.9

Parts shall be dried by placing them in a warm and dry area or by using an air hose.

11.4.4.6.10

Parts shall be sprayed with a light polytetrafluoroethylene (PTFE) coating and the vent reassembled.

11.4.4.6.11

The use of any type of oil for lubrication purposes shall not be permitted.

11.4.4.6.12

The vent bonnet shall be replaced, and the vent turned upside down slowly a few times to ensure proper freedom of the movable parts.

11.4.4.6.13

The vent shall be attached to the liquid storage tank expansion dome.

11.4.4.7 Monitor Maintenance.

Monitor and monitor nozzle maintenance shall be as specified in 7.4.3.

11.4.4.8 Fixed Foam Discharge Outlets.

Foam chambers and foam makers shall be maintained in accordance with the manufacturer's specifications.

11.4.4.8.1*

Vapor seals shall be maintained in accordance with the manufacturer's specifications.

11.4.4.9 Pressure Foam Makers.

Pressure foam makers shall be maintained in accordance with the manufacturer's specifications.

11.4.4.9.1

Rupture disks shall be maintained and replaced in accordance with the disk manufacturer's specifications.

11.4.4.10 Strainers.

Strainers shall be maintained in accordance with Chapter 7.

11.4.4.11 Supplementary Hoses.

Hoses shall be maintained in accordance with NFPA 1930 or the manufacturer's instructions.

11.4.4.12 Supplementary Hose Stream Nozzles.

Nozzles shall be maintained in accordance with NFPA 1930.

11.4.4.13 Auxiliary Drains.

Auxiliary drains shall be maintained in accordance with 13.4.5.3.2 to 13.4.5.3.3.

11.4.4.14 Component Action Requirements.

Whenever a component in a foam system is adjusted, repaired, reconditioned, or replaced, the action required in Table 11.4.4.14.1 shall be performed.

Table 11.4.4.14.1 Summary of Component Action Requirements

<u>Component</u>	<u>Adjust</u>	<u>Repair/Recondition</u>	<u>Replace</u>	<u>Required Action</u>
Water Delivery Components				
Discharge devices	X		X	Inspect for leaks at system working pressure Inspect for impairments at orifice
Fire department connections	X	X	X	See Chapter 13
Manual release	X	X	X	Operational test Inspect for leaks at system working pressure Test all alarms
Pipe and fittings on systems with automatic foam water sprinklers	X	X	X	Hydrostatic test in conformance with NFPA 13
Pipe and fittings on systems with fixed foam discharge outlets	X	X	X	Operational flow test
Foam Components				
Ball drip (automatic-type) drain valves				See Chapter 13
Foam concentrate	X		X	Submit a sample for laboratory analysis for conformance with manufacturer's specifications
Foam concentrate pump				See Chapter 8
Foam concentrate strainer(s)				See Chapter 13
Atmospheric foam concentrate tank	X	X	X	Inspect condition and repair as appropriate
Foam concentrate bladder tank	X	X	X	Inspect water jacket for presence of foam concentrate
Proportioning system(s)	X	X	X	Conduct flow test and inspect proportioning with an approved test device
Water supply tank(s)				See Chapter 9
Alarm and Supervisory Components				
Detection system	X	X	X	Operational test for conformance with NFPA 13 and/or <i>NFPA 72</i>
Pressure-switch-type water flow	X	X	X	Operational test using inspector's test connection
Valve supervisory device			X	Test for conformance with NFPA 13 and/or <i>NFPA 72</i>

<u>Component</u>	<u>Adjust</u>	<u>Repair/Recondition</u>	<u>Replace</u>	<u>Required Action</u>
Vane-type water flow	X	X	X	Operational test using inspector's test connections
Water motor gong			X	Operational test using inspector's test connection
Status-Indicating Components				
Gauges	X		X	Verify at 0 psi (0 bar) and system working pressure; see Chapter 13 regarding calibration
Testing and Maintenance Components				
Auxiliary drains	X	X	X	Inspect for leaks at system working pressure
Inspector's test connection	X	X	X	Inspect for leaks at system working pressure
Main drain	X	X	X	Full-flow main drain test
Structural Components				
Hanger/seismic bracing	X	X	X	Inspect for conformance with NFPA 13
Pipe stands	X	X	X	Inspect for conformance with NFPA 13
Informational Components				
General information	X	X	X	Inspect for conformance with NFPA 11 and NFPA 13
Hydraulic information sign	X	X	X	Inspect for conformance with NFPA 11 and NFPA 13
Valve signs	X	X	X	Inspect for conformance with NFPA 11 and NFPA 13

11.4.4.14.2

Where the original installation standard is different from the cited standard, the use of the appropriate installing standard shall be permitted.

11.4.4.14.3*

The actions of 11.4.4.14.1 and 11.4.4.14.2 shall not require a design review.

Additional Proposed Changes

<u>File Name</u>	<u>Description</u>	<u>Approved</u>
TIA_25_26_1.pdf	NFPA 26 TIA 26-1 Log No. 1831	

Statement of Problem and Substantiation for Public Input

NOTE: This public input originates from Tentative Interim Amendment No. 26-1 (Log 1831) issued by the Standards Council on December 2, 2025 and per the NFPA Regs., needs to be reconsidered by the Technical Committee for the next edition of the Document.

Substantiation: Chapter 11 of NFPA 25 does not line up with the standard format. Table 11.1.1.3

provides the frequencies and then the standard verbiage itself does not provide the frequencies. The sections themselves do not provide the requirement and frequency. This proposed text aligns Chapter 11 with the rest of the NFPA 25 format and makes the chapter itself useful and aligns the Table with the sections.

Emergency Nature: The standard contains an error or an omission that was overlooked during the regular revision process. The NFPA Standard contains a conflict within the NFPA Standard or with another NFPA Standard.

This TIA addresses an error (1) that should have been addressed during the 2026 revision cycle and also resolves a conflict (2) within the standard that has been present for multiple editions. 1) The sections in Chapter 11 do not include the frequencies provided in the Table. 2)The rest of the NFPA 25 Standard provides frequencies within the body of the Chapter except for in Chapter 11.

Submitter Information Verification

Submitter Full Name: NFPA TIA

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Submittal Date: Wed May 13 12:21:00 EDT 2026

Committee: INM-AAA



Tentative Interim Amendment

NFPA[®] 25

Standard for the Inspection, Testing, and Maintenance of Water-Based Fire Protection Systems

2026 Edition

Reference: Various paragraphs in Chapter 11

TIA 26-1

(SC 25-12-8 / TIA Log #1831)

Pursuant to Section 5 of the NFPA *Regulations Governing the Development of NFPA Standards*, the National Fire Protection Association has issued the following Tentative Interim Amendment to NFPA 25, *Standard for the Inspection, Testing, and Maintenance of Water-Based Fire Protection Systems*, 2026 edition. The TIA was processed by the Technical Committee on Inspection, Testing, and Maintenance of Water-Based Systems, and was issued by the Standards Council on December 2, 2025, with an effective date of December 22, 2025.

1. Revise various paragraphs throughout Chapter 11 as follows:

...

11.1.1.2 Table 11.1.1.2 shall be used to determine the minimum required frequencies for inspection, testing, and maintenance.

Table 11.1.1.2 Summary of Low-, Medium-, and High-Expansion Foam and Foam-Water Sprinkler System Inspection, Testing, and Maintenance

System/Component	Frequency	Reference
Inspection		
Control valve(s)	—	Chapter 13
Deluge/preaction valve(s)	—	Chapter 13
Discharge device location and position (spray nozzle)	Monthly	11.2.4.1.1
Discharge device location and position (sprinkler)	Annually	11.2.4.1.1 11.2.4.1.2
Drainage in system area	Quarterly	11.2.7
Fire pump(s)	—	Chapter 8
Foam concentrate pump(s)	—	Chapter 8
Fittings corrosion	Annually	11.2.11
Fittings damage	Annually	11.2.11
Foam concentrate storage	Annually	11.2.9
Gauges	—	Chapter 13
Hangers/braces/supports	Annually	11.2.12
Pipe corrosion	Annually	11.2.11
Pipe damage	Annually	11.2.11
Proportioning system(s) — all	Monthly	11.2.8
Standard pressure proportioning pickup tube	10 years	11.2.8.5.2 11.2.8.5.3
Line proportioner pickup tubes	Annually	11.2.8.6.3 11.2.8.6.3.1
Foam tank inspection	Annually	11.2.9

System/Component	Frequency	Reference
Proportioning head	Annually	11.2.8.5.2
Water-powered proportioner pump leakage	Monthly	11.2.8.6.8 <u>11.2.8.6.8.1</u>
Water-powered proportioner pump valve position	Monthly	11.2.8.6.8 <u>11.2.8.6.8.1</u>
Water-powered proportioner pump oil level	Semiannually	11.2.8.6.8 <u>11.2.8.6.8.2</u>
Water-powered proportioner pump shock absorbers	Semiannually	11.2.8.6.8 <u>11.2.8.6.8.3</u>
Water-powered foam proportioning pump filters	Semiannually	11.2.8.6.8
Strainer(s) — mainline	Annually	Chapter 7
Strainer(s) — discharge device	After each use	11.2.6.1
Foam concentrate strainers	Annually	11.2.6.4
Water supply piping	—	Chapter 7
Water supply tank(s)	—	Chapter 9
Waterflow devices	—	Chapter 13
Supplementary hoses	—	Chapter 6
Auxiliary drain signage	—	Chapter 13
Supplementary hose stream nozzles	—	Chapter 6
Supplementary hose stream storage	—	Chapter 6
Fixed foam discharge outlet	Annually	11.2.4.2
Vapor seals	Annually	11.2.4.2.4
Fire department hose connections	—	Chapter 6
Hydraulic design information sign	—	Chapter 4
Foam dam	—	11.2.15
Pressure foam maker	Annually	11.2.4.2.5
Rupture disk	Annually	11.2.4.2.5.5
Alarm devices	—	<i>NFPA 72</i>
Operating instructions and training	Annually	11.2.17
High pressure cylinders	Annually	11.2.14
Foam in surrounding space of bladder	Annually	11.2.9.8
Test		
Backflow preventer(s)	—	Chapter 13
Complete foam-water sprinkler system(s) (operational test)	Annually	11.3.10.2
Control valve(s)	—	Chapter 13
Deluge/preaction valve(s)	—	Chapter 13
Detection system	—	<i>NFPA 72</i>
Discharge device location	Annually	11.3.10.2.7
Discharge device obstruction	Annually	11.3.10.2.7
Discharge device position	Annually	11.3.10.2.7
Fixed foam discharge outlet water flow	Annually	11.3.11
Pressure foam maker water flow	Annually	11.3.11.6
Fire pump(s)	—	Chapter 8
Foam concentrate pump(s)	—	Chapter 8
Manual actuation device(s)	Annually	11.3.10.4
Proportioning system(s) — all	Annually	11.3.2
Valve status test	—	Chapter 13
Water supply flow test	—	Chapter 7
Water supply tank(s)	—	Chapter 9
Waterflow alarm devices	—	Chapter 13
Supplementary hose streams	—	Chapter 6
Supplementary hose stream nozzles	—	Chapter 23 of NFPA 1930
Foam concentrate	Annually	11.3.1.1
Monitors	Annually	11.3.7
Oscillating monitor's range of motion	Annually	11.3.7.2

System/Component	Frequency	Reference
Oscillating monitor full flow	5 years	11.3.7.3
Water-powered foam proportioning pump operation	Quarterly	11.3.4
Water-powered foam proportioning pump operation at specified rate of flow	Annually	11.3.4
Water-powered foam proportioning pump screwed connections	Semiannually	11.3.4
Water-powered foam proportioning pump valves	Semiannually	11.3.4
Bladder tank hydrostatic test	10 years	11.3.5.1
Foam concentrate tank hydrostatic test	10 years	11.3.5.1
High pressure cylinder	5 years/12 years	11.3.5.4
Underground piping	10 years	11.2.11.8
Maintenance		
Backflow preventer(s)	—	Chapter 13
Bladder sight glass cleaning	10 years	11.4.3.2
Check valve(s)	—	Chapter 13
Control valve(s)	—	Chapter 13
Deluge/preaction valves	—	Chapter 13
Detection system	—	NFPA 72
Detector check valve(s)	—	Chapter 13
Fire pump(s)	—	Chapter 8
Foam concentrate strainer(s)	Annually	11.2.6.4
Metallic atmospheric and pressure vessel storage tanks drain/flush	10 years	11.4.3.1
Foam concentrate pump(s)	—	Chapter 8
In-line balanced pressure type	—	—
Balancing valve diaphragm	5 year	11.4.4.3.3
Line type	—	—
Pressure vacuum vents	5 years	11.4.4.6
Proportioning system(s) standard pressure type	—	—
Ball drip (automatic-type) drain valves	5 years	11.4.4.1
Balancing valve diaphragm	5 years	11.4.4.2.3
Strainer(s) — mainline	—	Chapter 7
Water supply	—	11.4.2
Water supply tank(s)	—	Chapter 9
Hose valves	—	Chapter 13
Pressure gauges	—	Chapter 13
Fixed foam discharge outlet	Per manufacturer	11.4.4.8
Pressure foam maker	Per manufacturer	11.4.4.9
Monitors	—	Chapter 7
Monitor nozzles	—	Chapter 7
Supplementary hoses	—	NFPA 1930
Supplementary hose nozzles	—	NFPA 1930
Rupture disks	Per manufacturer	11.4.4.9.1
Water-powered foam concentrate proportioning pump shaft lubrication	Semiannually	11.4.4.5 11.4.4.5.1
Water-powered foam concentrate proportioning pump oil change	5 years	11.4.4.5 11.4.4.5.2
Water-powered foam concentrate proportioning vane replacement	Per manufacturer	11.4.4.5 11.4.4.5.3
Auxiliary drains	—	Chapter 13

...

11.2.4.1.1 Foam-water discharge devices spray nozzles shall be visually inspected monthly to ensure they are in place, continue to be aimed or pointed in the direction intended in the system design, and are free from external loading and corrosion.

11.2.4.1.2 Foam-water sprinklers shall be inspected annually to ensure they are in place, continue to be aimed or pointed in the direction intended in the system design, and are free from external loading and corrosion.

[renumber subsequent sections]

...

11.2.4.2.4 Vapor Seal. Vapor seals shall be inspected annually.

11.2.4.2.4.1 Where a vapor seal is provided, the inspection shall verify the seal is present through one of the following means:

1. *Visual inspection, as follows:
 1. *Visual inspection shall be approved by the authority having jurisdiction prior to inspection.
 2. *Where provided with an inert gas system, the owner shall verify that the makeup gas is sufficient for the removal of a fixed foam discharge outlet lid.
2. *Use of an infrared camera
3. Gas monitoring, as follows:
 1. Where access to the chamber is provided, gas monitoring shall be permitted around the fixed foam discharge outlet lid and the air inlet to verify that the vapor seal is intact.
 2. Monitoring shall be permitted at the fire department connection on a semi-fixed foam system to verify that the vapor seal is intact.
 3. Monitoring shall be permitted at low-point drains of foam solution piping as a means to verify that the vapor seal is intact.
4. Other means as allowed and approved by the authority having jurisdiction and operator

11.2.4.2.5 Pressure Foam Makers. Pressure foam makers shall be inspected annually.

11.2.4.2.5.1 The inspection of pressure foam makers shall follow the manufacturer's specifications.

[renumber subsequent sections]

...

11.2.4.2.5.5 Where provided, rupture disks shall be inspected annually in accordance with the manufacturer's requirements.

...

11.2.6.4 Foam concentrate strainers shall be inspected ~~visually~~ annually to ensure the blowdown valve is closed and plugged.

11.2.6.4.1 Foam concentrate strainers provided on foam concentrate pump skids shall be inspected annually in accordance with Chapter 8.

11.2.7* Drainage. The area beneath and surrounding a foam-water spray system shall be inspected quarterly to ensure drainage facilities are not blocked and retention embankments or dikes are in good repair.

11.2.8* Proportioning Systems. Proportioning systems shall be inspected monthly unless otherwise specified within this standard.

...

11.2.8.5 Standard Pressure Proportioner.

11.2.8.5.1* The pressure shall be removed before inspection of the standard pressure proportioner to prevent injury.

11.2.8.5.2 The inspection of the standard pressure proportioner shall include the following:

1. Ball drip valves (automatic drains) are verified as free and opened.
2. The foam concentrate pickup tube is verified as intact, not damaged, or clogged by removing the proportioning head.

11.2.8.5.3 Standard pressure proportioning pickup tubes shall be inspected every 10 years.

...

11.2.8.6.3 Line Proportioner. The inspection of the line proportioner shall include the following:

1. Strainers are inspected in accordance with 11.2.6.1.
2. Pickup pipes inside the tank are inspected for corrosion and plugging.

11.2.8.6.3.1 Line proportioner pickup tubes shall be inspected annually.

...

11.2.8.6.8 Water-Powered Foam Concentrate Proportioner Pump. Water-powered proportioner pump systems shall be inspected monthly.

11.2.8.6.8.1 The inspection of the water-powered foam concentrate proportioner pump shall include the following:

1. Valves are verified to be in the proper operational position in accordance with the manufacturer's specifications.
2. Absence of leakage on the unit or connections is verified.
3. ~~The oil level is verified to be at the appropriate mark.~~
4. ~~Shock absorbers are evaluated for wear at the coupling between the water motor and the proportioning pump.~~

11.2.8.6.8.2 The oil level shall be verified to be at the appropriate level semiannually.

11.2.8.6.8.3 Shock absorbers shall be inspected for wear at the coupling between the water motor and the proportioning pump semiannually.

...

11.2.9 Foam Concentrate Storage. Foam concentrate storage shall be inspected annually to ensure it is accessible and free

from leakage, damage, and corrosion.

...

11.2.14 High-Pressure Cylinders. High-pressure cylinders shall be inspected annually.

...

11.2.17 Operating Instructions and Training. Operating instructions and training shall be reviewed annually.

11.2.17.1 Review ~~Inspection~~ shall verify that the system operation, system deactivation, acceptance/commissioning test results, maintenance instructions, and layouts are in place at control equipment with copies of each on file.

...

11.3.4 Water-Powered Foam Concentrate Proportioner Pumps. Water-powered foam concentrate proportioner pumps shall be tested quarterly.

11.3.4.1 Testing of water-powered foam concentrate proportioner pumps shall include the following steps:

1. Operate the water motor driven pump in accordance with manufacturer's specification.
2. Operate manual air bleed valve, pressure relief valves, and operational valves in accordance with the manufacturer's specification.
3. Check filters for contamination in accordance with the manufacturer's specifications.
4. ~~Check screwed connection for tightness.~~
5. ~~Operate the water powered foam concentrate proportioner pump to the installed specifications for rate of flow and conduct a proportioning test in accordance with the manufacturer's procedures and specifications.~~

11.3.4.2 Screwed connections shall be tested semiannually for tightness.

11.3.4.3 Manual air bleed valves, pressure relief valves, and operational valve shall be tested semiannually in accordance with manufacturer's procedures and specifications.

...

11.3.5.1* ~~Standard pressure proportioner tanks and bladder tanks shall undergo hydrostatic testing in accordance with Table 11.1.1.2 every 10 years.~~

...

11.3.7 Monitors. Monitors shall be tested annually to ensure proper function.

...

11.3.11.6 Pressure Foam Makers. Pressure foam makers shall be tested for waterflow annually.

11.3.11.6.1 Testing shall follow the manufacturer's recommendations.

~~11.3.11.6.1~~ **11.3.11.6.1.1** Gate valves shall be tested in accordance with 13.3.3.1.

~~11.3.11.6.1.1~~ **11.3.11.6.1.2***

The authority having jurisdiction shall approve the operation of the gate valve downstream of the rupture disk or check valve.

...

11.4.3.1 Metallic Atmospheric and Pressure Vessel Storage Tanks. Metallic atmospheric and pressure vessel storage tanks shall be drained and flushed in accordance with the manufacturer's specification as to not exceed every 10 years.

...

11.4.3.2 Bladder Tanks Tank Sight Glass. Sight glass, where provided, shall be removed and cleaned at least every 10 years.

...

11.4.4.1 Standard Pressure Proportioners. The ball drip (automatic-type) drain valves shall be disassembled, cleaned, and reassembled at least every 5 years.

...

11.4.4.2.3 Flushing. The diaphragm balancing valve shall be flushed through the diaphragm section with water or foam concentrate until fluid appears clear or new every 5 years.

...

11.4.4.5 Water-Powered Foam Concentrate Proportioner Pumps. ~~The maintenance of water-powered foam concentrate proportioner pumps shall include the following steps:~~

1. ~~Provide lubrication to the shaft of the proportioning pump in accordance with the manufacturer's specifications.~~
2. ~~Change oil to the water driven pump.~~
3. ~~Change the vanes to the water driven pump, when appropriate, in accordance with the manufacturer's specifications.~~

11.4.4.5.1 Water-powered foam concentrate proportioner pump shafts shall be lubricated semiannually in accordance with the manufacturer's specifications.

11.4.4.5.2 Water-powered foam concentrate proportioner pump oil shall be changed in accordance with the manufacturer's specifications at least every 5 years.

11.4.4.5.3 Water-powered foam concentrate proportioner pump vanes shall be changed, when appropriate, in accordance with the manufacturer's specifications.

...

Issue Date: December 2, 2025

Effective Date: December 22, 2025

(Note: For further information on NFPA Codes and Standards, please see www.nfpa.org/docinfo)

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NATIONAL FIRE PROTECTION ASSOCIATION



Public Input No. 101-NFPA 25-2026 [Section No. 11.1.1.1]

11.1.1.1*

This chapter shall provide the minimum requirements for the routine inspection, testing, and maintenance of foam systems installed in accordance with NFPA 11 or other approved installation standards.

11.1.1.1.1 Inspection, testing, and maintenance requirements occurring at intervals greater than annual that are not completed within the prescribed frequency shall be deemed a deficiency.

Statement of Problem and Substantiation for Public Input

The proposed language is intended to clarify the significance associated with test and testing activities that occur at frequencies greater than one year and are not completed within the prescribed interval. Currently, NFPA 25 identifies deficiencies based largely on observed physical conditions or operational impairments; however, the standard does not consistently address overdue inspection activities.

This PI improves consistency within NFPA 25 by recognizing overdue test requirements as deficiencies rather than merely incomplete documentation items. The proposed language aligns with the overall intent of NFPA 25 to maintain fire protection systems in an operational state of readiness and provides clear enforceable criteria for owners, contractors, and authorities having jurisdiction.

The proposal does not create new requirements or shorten existing inspection frequencies. Instead, it clarifies that once the prescribed interval has been exceeded, the affected component or system is no longer considered compliant with the test and testing requirements of the standard and shall be identified as a deficiency until the required inspection is completed

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Public Input No. 111-NFPA 25-2026 [Section No. 11.1.1.2]

11.1.1.2

Table 11.1.1.2 shall be used to determine the minimum required frequencies for inspection, testing, and maintenance.

Table 11.1.1.2 Summary of Low-, Medium-, and High-Expansion Foam and Foam-Water Sprinkler System Inspection, Testing, and Maintenance

Chapter 8 Chapter 8

<u>System/Component</u>	<u>Frequency</u>	<u>Reference</u>
Inspection		
Control valve(s)	—	Chapter 13
Deluge/preaction valve(s)	—	Chapter 13
Discharge device location and position (spray nozzle)	Monthly	11.2.4.1.1
Discharge device location and position (sprinkler)	Annually	11.2.4.1.2
-	-	-
-	-	-
Drainage in system area	Quarterly	11.2.7
Fire pump(s)	—	Chapter 8
Foam concentrate pump(s)	—	<u>Monthly</u> <u>11.2.18</u>
Fittings corrosion	Annually	11.2.11
Fittings damage	Annually	11.2.11
Foam concentrate storage	Annually	11.2.9
Gauges	—	Chapter 13
Hangers/braces/supports	Annually	11.2.12
Pipe corrosion	Annually	11.2.11
Pipe damage	Annually	11.2.11
Proportioning system(s) — all	Monthly	11.2.8
Standard pressure proportioning pickup tube	10 years	11.2.8.5.3
Line proportioner pickup tubes	Annually	11.2.8.6.3.1
Foam tank inspection	Annually	11.2.9
Proportioning head	Annually	11.2.8.5.2
Water-powered proportioner pump leakage	Monthly	11.2.8.6.8.1
Water-powered proportioner pump valve position	Monthly	11.2.8.6.8.1
Water-powered proportioner pump oil level	Semiannually	11.2.8.6.8.2
Water-powered proportioner pump shock absorbers	Semiannually	11.2.8.6.8.3
Water-powered foam proportioning pump filters	Semiannually	11.2.8.6.8
Strainer(s) — mainline	Annually	Chapter 7
Strainer(s) — discharge device	After each use	11.2.6.1
Foam concentrate strainers	Annually	11.2.6.4
Water supply piping	—	Chapter 7
Water supply tank(s)	—	Chapter 9
Waterflow devices	—	Chapter 13
Supplementary hoses	—	Chapter 6
Auxiliary drain signage	—	Chapter 13
Supplementary hose stream nozzles	—	Chapter 6
Supplementary hose stream storage	—	Chapter 6
Fixed foam discharge outlet	Annually	11.2.4.2

<u>System/Component</u>	<u>Frequency</u>	<u>Reference</u>
Vapor seals	Annually	11.2.4.2.4
Fire department hose connections	—	Chapter 6
Hydraulic design information sign	—	Chapter 4
-	-	-
Foam dam	—	11.2.15
Pressure foam maker	Annually	11.2.4.2.5
Rupture disk	Annually	11.2.4.2.5.5
Alarm devices	—	<i>NFPA 72</i>
Operating instructions and training	Annually	11.2.17
High pressure cylinders	Annually	11.2.14
Foam in surrounding space of bladder	Annually	11.2.9.8
Test		
Backflow preventer(s)	—	Chapter 13
Complete foam-water sprinkler system(s) (operational test)	Annually	11.3.10.2
Control valve(s)	—	Chapter 13
Deluge/preaction valve(s)	—	Chapter 13
Detection system	—	<i>NFPA 72</i>
Discharge device location	Annually	11.3.10.2.7
Discharge device obstruction	Annually	11.3.10.2.7
Discharge device position	Annually	11.3.10.2.7
Fixed foam discharge outlet water flow	Annually	11.3.11
Pressure foam maker water flow	Annually	11.3.11.6
Fire pump(s)	—	Chapter 8
Foam concentrate pump(s)	—	<u>Monthly</u> <u>11.3.12</u>
Manual actuation device(s)	Annually	11.3.10.4
Proportioning system(s) — all	Annually	11.3.2
Valve status test	—	Chapter 13
Water supply flow test	—	Chapter 7
Water supply tank(s)	—	Chapter 9
Waterflow alarm devices	—	Chapter 13
Supplementary hose streams	—	Chapter 6
Supplementary hose stream nozzles	—	Chapter 23 of <i>NFPA 1930</i>
Foam concentrate	Annually	11.3.1.1
Monitors	Annually	11.3.7
Oscillating monitor's range of motion	Annually	11.3.7.2
Oscillating monitor full flow	5 years	11.3.7.3
Water-powered foam proportioning pump operation	Quarterly	11.3.4
-	-	-
Water-powered foam proportioning pump operation at specified rate of flow	Annually	11.3.4
Water-powered foam proportioning pump screwed connections	Semiannually	11.3.4
Water-powered foam proportioning pump valves	Semiannually	11.3.4

<u>System/Component</u>	<u>Frequency</u>	<u>Reference</u>
Bladder tank hydrostatic test	10 years	11.3.5.1
Foam concentrate tank hydrostatic test	10 years	11.3.5.1
High pressure cylinder	5 years/12 years	11.3.5.4
Underground piping	10 years	11.2.11.8
Maintenance		
Backflow preventer(s)	—	Chapter 13
Bladder sight glass cleaning	10 years	11.4.3.2
Check valve(s)	—	Chapter 13
Control valve(s)	—	Chapter 13
Deluge/preaction valves	—	Chapter 13
Detection system	—	NFPA 72
Detector check valve(s)	—	Chapter 13
Fire pump(s)	—	Chapter 8
Metallic atmospheric and pressure vessel storage tanks drain/flush	10 years	11.4.3.1
Foam concentrate pump(s)	—	Chapter 8
In-line balanced pressure type	—	—
Balancing valve diaphragm	5 year	11.4.4.3.3
Line type	—	—
Pressure vacuum vents	5 years	11.4.4.6
Proportioning system(s) standard pressure type	—	—
Ball drip (automatic-type) drain valves	5 years	11.4.4.1
-	-	-
Balancing valve diaphragm	5 years	11.4.4.2.3
Strainer(s) — mainline	—	Chapter 7
Water supply	—	11.4.2
Water supply tank(s)	—	Chapter 9
Hose valves	—	Chapter 13
Pressure gauges	—	Chapter 13
Fixed foam discharge outlet	Per manufacturer	11.4.4.8
Pressure foam maker	Per manufacturer	11.4.4.9
Monitors	—	Chapter 7
Monitor nozzles	—	Chapter 7
Supplementary hoses	—	NFPA 1930
Supplementary hose nozzles	—	NFPA 1930
Rupture disks	Per manufacturer	11.4.4.9.1
Water-powered foam concentrate proportioning pump shaft lubrication	Semiannually	11.4.4.5.1
Water-powered foam concentrate proportioning pump oil change	5 years	11.4.4.5.2
Water-powered foam concentrate proportioning vane replacement	Per manufacturer	11.4.4.5.3

<u>System/Component</u>	<u>Frequency</u>	<u>Reference</u>
Auxiliary drains	—	Chapter 13

Statement of Problem and Substantiation for Public Input

inspection of the foam pump and testing frequency should be referenced in chapter 11. testing information that was in previous versions of chapter 11 in NFPA 25 was not transferred to chapter 8 and there is ambiguity in the frequency and methods required.

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Committee: INM-AAA



Public Input No. 32-NFPA 25-2026 [Section No. 11.1.4]

11.1.

~~4 Obstruction~~

4 Internal Assessments and Obstruction Investigations.

~~The procedures outlined in Chapter 14 shall be followed where conducting an obstruction investigation is necessary.~~

11.1.4.1

An internal assessment of each foam system shall be conducted in accordance with 14.2.

11.1.4.2

Where required by 14.2 an obstruction investigation of the foam system shall be conducted in accordance with 14.3.

Statement of Problem and Substantiation for Public Input

The current requirement to conduct an internal pipe assessment "when needed" is unenforceable. Proposed language clarifies the intent to internally inspect all water-based fire protection systems and provides proper pointers to the specific sections in Chapter 14.

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Public Input No. 180-NFPA 25-2026 [Section No. 11.1.5]

~~11.1.5 * – Impairments, Critical Deficiencies, and Noncritical Deficiencies:~~

~~11.1.5.1 – Impairments:~~

~~Where an impairment to protection occurs, procedures outlined in Chapter 15 shall be followed.~~

~~11.1.5.2 – Critical Deficiencies:~~

~~Where a critical deficiency is noted, the appropriate action shall be taken.~~

~~11.1.5.3 – Noncritical Deficiencies:~~

~~Where a noncritical deficiency is noted, the appropriate corrective action shall be taken.~~

Statement of Problem and Substantiation for Public Input

This requirement was redundant to the owner's responsibilities in 4.1.1 and 4.1.6 and is not needed.

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Public Input No. 181-NFPA 25-2026 [Section No. 11.2.2]

11.2.2 –

~~Where any of the inspection requirements in this section are found to be deficient, the results shall be documented and corrected in accordance with 11.1.5 :~~

Statement of Problem and Substantiation for Public Input

This requirement was redundant to the owner's responsibilities in 4.1.6 and is not needed.

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Public Input No. 167-NFPA 25-2026 [Section No. 11.2.4.2.1]

11.2.4.2.1 –

~~Fixed foam discharge outlets inaccessible for inspection for safety considerations due to process operations or personnel hazards shall be inspected during each scheduled shutdown.~~

Statement of Problem and Substantiation for Public Input

This requirement was redundant to the general requirements in 4.11.7 and is not needed.

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Submittal Date: Tue Jun 02 15:50:06 EDT 2026

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Public Input No. 168-NFPA 25-2026 [Section No. 11.2.11.1]

11.2.11.1 –

~~Foam system pipe and fittings installed in areas that are inaccessible for safety considerations due to process operations shall be inspected during each scheduled shutdown.~~

Statement of Problem and Substantiation for Public Input

This requirement was redundant to the general requirements in 4.11.7 and is not needed.

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Public Input No. 182-NFPA 25-2026 [Section No. 11.2.11.2.1]

11.2.11.2.1 –

~~Inspections that identify corrosion or mechanical damage shall be documented and corrected in accordance with 11.1.5 .~~

Statement of Problem and Substantiation for Public Input

This requirement was redundant to the owner's responsibilities in 4.1.6 and is not needed.

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Public Input No. 169-NFPA 25-2026 [Section No. 11.2.12.1]

11.2.12.1 –

~~Hangers, braces, and supports installed in areas that are inaccessible for safety considerations due to process operations shall be inspected during each scheduled shutdown.~~

Statement of Problem and Substantiation for Public Input

This requirement was redundant to the general requirements in 4.11.7 and is not needed.

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Public Input No. 112-NFPA 25-2026 [New Section after 11.2.17.1]

11.2.18 Foam Concentrate Pump

The Foam Concentrate Pump shall be inspected Monthly

11.2.18.1 Foam Concentrate Pump inspection should include checking the general apperance of assembly for leaks, corrosion and mechanical damage.

Statement of Problem and Substantiation for Public Input

there is not a reference to anything that should be inspected or a frequency in chapter 8 or 11

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Public Input No. 183-NFPA 25-2026 [Section No. 11.3.1 [Excluding any Sub-Sections]]

~~Where any of the testing requirements in this subsection are found deficient, the results shall be documented, corrected, and retested in accordance with 11.1.5 :~~

Statement of Problem and Substantiation for Public Input

This requirement was redundant to the owner's responsibilities in 4.1.6 and is not needed.

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Submittal Date: Tue Jun 02 16:05:44 EDT 2026

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Public Input No. 170-NFPA 25-2026 [Section No. 11.3.11.2.1]

11.3.11.2.1 –

~~Fixed foam discharge outlets installed in areas that are inaccessible for safety considerations due to process operations shall be tested during each scheduled shutdown.~~

Statement of Problem and Substantiation for Public Input

This requirement was redundant to the general requirements in 4.11.7 and is not needed.

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Public Input No. 171-NFPA 25-2026 [Section No. 11.3.11.3 [Excluding any Sub-Sections]]

Where tanks with internal floating roofs or geodesic dome roofs are provided with fixed foam discharge outlets, the following testing requirements shall apply:

- (1) ~~Fixed foam discharge outlets installed in areas that are inaccessible for safety considerations due to process operations shall be tested during each scheduled shutdown.~~
- (2) Proper personal protective equipment (PPE) shall be provided for personnel accessing fixed foam discharge outlets on in-service product tanks.
- (3) Where waterflow testing is possible, water shall not be allowed to enter the storage tank except as permitted in 11.3.11.3.1.
- (4) Waterflow testing frequency involving discharge onto the tank roof shall align with tank outages and industry tank inspection frequencies as follows:
 - (a) Short outages where product is not removed from the tank and the roof is not accessible shall not require a waterflow test.
 - (b) Waterflow testing shall be conducted when the tank outage permits visual observation of water discharge and foam dam operation during the test.
 - (c) Foam dam testing shall be conducted in accordance with 11.3.11.5.

Statement of Problem and Substantiation for Public Input

This requirement was redundant to the general requirements in 4.11.7 and is not needed.

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Public Input No. 113-NFPA 25-2026 [New Section after 11.3.11.6.2.5]

11.3.12 Foam Concentrate Pump

Electric or Diesel driven foam concentrate pumps shall be tested monthly in accordance with Chapter 8

11.3.12.1 Pump Operation.

11.13.12.1.1

Close system main isolation valves to recirculate foam concentrate

11.13.12.1.2

Start the foam concentrate pump.

11.3.12.1.3

Foam concentrate shall be circulated back to the tank.

11.3.12.1.4

Pump discharge pressure shall be checked to ensure pressure control valve proper operation to maintain designed system supply pressure.

11.3.12.1.5

Stop the foam concentrate pump

11.3.12.1.6

Open system main isolation valves.

Statement of Problem and Substantiation for Public Input

previous section 11.4.7 from 2020 NFPA 25

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Committee: INM-AAA



Public Input No. 184-NFPA 25-2026 [Section No. 11.4.1.2]

11.4.1.2 –

~~Where any of the testing requirements in this section are found deficient, the results shall be documented, corrected, and retested in accordance with 11.1.5 :~~

Statement of Problem and Substantiation for Public Input

This requirement was redundant to the owner's responsibilities in 4.1.6 and is not needed.

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Public Input No. 145-NFPA 25-2026 [Section No. 11.4.4.14]

11.4.4.14 5 Component Action Requirements.

11.45.4.14.1 –

Whenever a component in a foam system is adjusted, repaired, reconditioned, or replaced, the action required in Table 11.4.4.14.1 5.1 shall be performed.

Table 11.4.4.14.1 Summary 5.1 Summary of Component Action Requirements

<u>Component</u>	<u>Adjust</u>	<u>Repair/Recondition</u>	<u>Replace</u>	<u>Required Action</u>
Water Delivery Components	-	-	-	-
Discharge devices	X	-		X Inspect for leaks at system working pressure
			-	-
Fire department connections	X	X	X	See Chapter 13
Manual release	X	X	X	Operational test
			-	-
			-	-
Pipe and fittings on systems with automatic foam water sprinklers	X	X	X	Hydrostatic test in conformance with NFPA 13
Pipe and fittings on systems with fixed foam discharge outlets	X	X	X	Operational flow test
Foam Components	-	-	-	-
Ball drip (automatic-type) drain valves	-	-	-	See Chapter 13
Foam concentrate	X	-		X Submit a sample for laboratory analysis for conformance with manufacturer's specifications

<u>Component</u>	<u>Adjust</u>	<u>Repair/Recondition</u>	<u>Replace</u>	<u>Required Action</u>	
Foam concentrate pump	-	-	-		
Foam concentrate strainer(s)	-	-	-		
Atmospheric foam concentrate tank	X	X	X	Inspect condition and repair as appropriate	
Foam concentrate bladder tank	X	X	X	Inspect water jacket for presence of foam concentrate	
Proportioning system(s)	X	X	X	Conduct flow test and inspect proportioning with an approved test device	
Water supply tank(s)	-	-	-		
Alarm and Supervisory Components	-	-	-	-	
Detection system	X	X	X	Operational test for conformance with NFPA 13 and/or NFPA 72	
Pressure-switch-type water flow	X	X	X	Operational test using inspector's test connection	
Valve supervisory device	-	-			X Test for conformance with NFPA 13 and/or NFPA 72
Vane-type water flow	X	X	X	Operational test using inspector's test connections	
Water motor gong	-	-			X Operational test using inspector's test connection

<u>Component</u>	<u>Adjust</u>	<u>Repair/Recondition</u>	<u>Replace</u>	<u>Required Action</u>
Status-Indicating Components	-	-	-	-
Gauges	X	-		X Verify at 0 psi (0 bar) and system working pressure; see Chapter 13 regarding calibration
Testing and Maintenance Components	-	-	-	-
Auxiliary drains	X	X	X	Inspect for leaks at system working pressure <u>leaks</u>
Inspector's test connection	X	X	X	Inspect for leaks at system working pressure
Main drain	X	X	X	Full-flow main <u>main</u> drain test
Structural Components	-	-	-	-
Hanger/seismic bracing	X	X	X	Inspect for conformance with NFPA 13
Pipe stands	X	X	X	Inspect for conformance with NFPA 13
Informational Components	-	-	-	-
General information	X	X	X	Inspect for conformance with NFPA 11 and NFPA 13
Hydraulic information sign	X	X	X	Inspect for conformance with NFPA 11 and NFPA 13
Valve signs	X	X	X	Inspect for conformance with NFPA 11 and NFPA 13

11.4.4.14.2

Where the original installation standard is different from the cited standard, the use of the appropriate installing standard shall be permitted.

11.4.4.14.3*

The actions of 11.4.4.14.1 and 11.4.4.14.2 shall not require a design review.

Statement of Problem and Substantiation for Public Input

The component action tables throughout NFPA 25 should be comprehensively reviewed and revised to ensure technical accuracy, consistency, and alignment with current inspection, testing, and maintenance practices. Many of the component action tables have remained largely unchanged through multiple revision cycles. As a result, several tables contain inconsistencies, outdated terminology, incomplete action guidance.

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Committee: INM-AAA



Public Input No. 102-NFPA 25-2026 [Section No. 12.1.1.1]

12.1.1.1

This chapter shall provide the minimum requirements for the routine inspection, testing, and maintenance of water mist systems installed in accordance with NFPA 750 or other approved installation standard.

12.1.1.1.1 Inspection, testing, and maintenance requirements occurring at intervals greater than annual that are not completed within the prescribed frequency shall be deemed a deficiency.

Statement of Problem and Substantiation for Public Input

The proposed language is intended to clarify the significance associated with test and testing activities that occur at frequencies greater than one year and are not completed within the prescribed interval. Currently, NFPA 25 identifies deficiencies based largely on observed physical conditions or operational impairments; however, the standard does not consistently address overdue inspection activities.

This PI improves consistency within NFPA 25 by recognizing overdue test requirements as deficiencies rather than merely incomplete documentation items. The proposed language aligns with the overall intent of NFPA 25 to maintain fire protection systems in an operational state of readiness and provides clear enforceable criteria for owners, contractors, and authorities having jurisdiction.

The proposal does not create new requirements or shorten existing inspection frequencies. Instead, it clarifies that once the prescribed interval has been exceeded, the affected component or system is no longer considered compliant with the test and testing requirements of the standard and shall be identified as a deficiency until the required inspection is completed

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Committee: INM-AAA



Public Input No. 33-NFPA 25-2026 [New Section after 12.1.2]

12.1.3 Internal Assessments and Obstruction Investigations.

12.1.3.1

An internal assessment of each water mist system shall be conducted in accordance with 14.2.

12.1.3.2

Where required by 14.2 an obstruction investigation of the water mist system shall be conducted in accordance with 14.3.

Statement of Problem and Substantiation for Public Input

Chapter 14 is referenced in the summary table but there is no section within Chapter 12 to require the internal assessment or obstruction investigation. Proposed language clarifies the intent to internally inspect all water-based fire protection systems and provides proper pointers to the specific sections in Chapter 14.

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Committee: INM-AAA



Public Input No. 172-NFPA 25-2026 [Section No. 12.2.1.1.5]

12.2.1.1.5 –

~~Water mist nozzles installed in areas that are inaccessible for safety considerations due to process operations shall be inspected during each scheduled shutdown.~~

Statement of Problem and Substantiation for Public Input

This requirement was redundant to the general requirements in 4.11.7 and is not needed.

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Committee: INM-AAA



Public Input No. 173-NFPA 25-2026 [Section No. 12.2.3.5]

12.2.3.5 –

~~Piping, tubing, and fittings installed in areas that are inaccessible for safety considerations due to process operations shall be inspected during each scheduled shutdown.~~

Statement of Problem and Substantiation for Public Input

This requirement was redundant to the general requirements in 4.11.7 and is not needed.

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Committee: INM-AAA



Public Input No. 187-NFPA 25-2026 [Section No. 12.2.5.2.3]

12.2.5.2.3 –

~~The inspection results shall be recorded on both of the following:~~

- ~~(1) A record tag permanently attached to each cylinder~~
- ~~(2) A suitable inspection report~~

12.2.5.2.3.1 –

~~A completed copy of the inspection report shall be furnished to the owner of the system or an authorized representative.~~

12.2.5.2.3.2 –

~~These records shall be retained by the owner for the life of the system.~~

Statement of Problem and Substantiation for Public Input

This requirement was both redundant to the general records requirements and conflicts with the duration that the records need to be maintained.

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Committee: INM-AAA



Public Input No. 188-NFPA 25-2026 [Sections 12.3.6.3, 12.3.6.4]

~~Sections 12.3.6.3, 12.3.6.4~~

~~12.3.6.3 –~~

~~A completed copy of the test report shall be furnished to the owner of the system or an authorized representative.~~

~~12.3.6.4 –~~

~~These records shall be retained by the owner for the life of the system.~~

Statement of Problem and Substantiation for Public Input

This requirement was both redundant to the general records requirements and conflicts with the duration that the records need to be maintained.

Submitter Information Verification

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Submittal Date: Tue Jun 02 16:19:59 EDT 2026

Committee: INM-AAA



Public Input No. 189-NFPA 25-2026 [Sections 12.3.18.3, 12.3.18.4]

~~Sections 12.3.18.3, 12.3.18.4~~

~~12.3.18.3 –~~

~~A completed copy of the test report shall be furnished to the owner of the system or an authorized representative.~~

~~12.3.18.4 –~~

~~The records shall be retained by the owner for the life of the system.~~

Statement of Problem and Substantiation for Public Input

This requirement was both redundant to the general records requirements and conflicts with the duration that the records need to be maintained.

Submitter Information Verification

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Submittal Date: Tue Jun 02 16:21:10 EDT 2026

Committee: INM-AAA



Public Input No. 146-NFPA 25-2026 [New Section after 12.5]

12.6 Component Action Table

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Statement of Problem and Substantiation for Public Input

The component action tables throughout NFPA 25 should be comprehensively reviewed and revised to ensure technical accuracy, consistency, and alignment with current inspection, testing, and maintenance practices. Many of the component action tables have remained largely unchanged through multiple revision cycles. As a result, several tables contain inconsistencies, outdated terminology, incomplete action guidance.

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Public Input No. 191-NFPA 25-2026 [New Section after 12.5.2]

Chapter 12 — Water Mist Systems

12.1 General.

12.1.1 Minimum Requirements.

12.1.1.1 This chapter shall provide the minimum requirements for the routine inspection, testing, and maintenance of water mist systems installed in accordance with NFPA 750 or other approved installation standard.

12.1.1.2 **Table 12.1.1.2** shall be used to determine the minimum required infrequencies for inspection, testing, and maintenance.

Table 12.1.1.2 Summary of Water Mist System Inspection, Testing, and Maintenance

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12.1.2 Common Components and Valves. Where inspection, testing, and maintenance criteria for common components and valves are not specified in Chapter 12, the requirements of Chapter 13 shall apply.

New 12.1.3 Internal Piping Condition and Obstruction Investigations.

The procedures outlined in Chapter 14 shall be followed where there is a need to conduct an assessment of the internal piping condition or an obstruction investigation.

12.1.3 **12.1.4 Impairments.** The procedures outlined in Chapter 15 shall be followed where an impairment to protection occurs.

12.1.4 **12.1.5 Hose Connections.** Hose connections shall be inspected, tested, and maintained in accordance with Chapters 6 and 13.

12.2 Inspection.

12.2.1 Water Mist Nozzles.

12.2.1.1 Water mist nozzles shall be inspected from the floor level annually.

12.2.1.1.1 Any water mist nozzle that shows signs of any of the following shall be replaced (see A.5.2.1.1.1):

- **(1) Leakage**
- **(2) Corrosion detrimental to nozzle performance**
- **(3) Physical damage**
- **(4) Loss of fluid in the glass bulb heat responsive element**
- **(5)* Loading detrimental to nozzle performance**
- **(6) Painting, other than that applied by the nozzle manufacturer, detrimental to nozzle performance**

A.12.2.1.1.1(5) In lieu of replacing water mist nozzles that are loaded with a coating of dust, it is permitted to clean the nozzles with compressed air or by a vacuum provided that the equipment does not touch the nozzle.

~~12.2.1.1.2 Any water mist nozzle that has been installed in the incorrect orientation shall be corrected by repositioning the branch line, drop, or sprig, or shall be replaced.~~

Water mist nozzles shall be inspected for proper orientation.

~~12.2.1.1.3 Water mist nozzles with glass bulbs shall be replaced if the bulbs are partially or fully empty of fluid.~~

~~12.2.1.1.4 12.2.1.1.3 Water mist nozzles installed in concealed spaces such as above suspended ceilings shall not require inspection.~~

~~12.2.1.1.5 12.2.1.1.4 Water mist nozzles installed in areas that are inaccessible for safety considerations due to process operations shall be inspected during each scheduled shutdown.~~

~~12.2.1.1.6 Stock, furnishings, or equipment closer to the water mist nozzle than permitted by the clearance specified in the manufacturer's installation instructions shall be corrected.~~

Clearances between water mist nozzles and stock, furnishings, or equipment shall be inspected annually to verify minimum required clearances are maintained in accordance with the manufacturer's installation instructions.

~~12.2.1.1.7 Open nozzles, including their strainers, shall be removed, inspected, and cleaned after the discharge of water from installed nozzles.~~

~~12.2.1.2 The supply of spare automatic water mist nozzles shall be inspected annually for the correct number and type of water mist nozzles as required by NFPA 750.~~

The supply of spare automatic water mist nozzles shall be inspected annually for the following:

- (1) The correct number and type of automatic water mist nozzle as required by 12.4.2.3
- (2) A wrench for each type of automatic water mist nozzle as required by 12.4.2.4

~~12.2.1.3 The supply of spare individual nozzle strainers and filters for water mist nozzles, if replaceable, shall be inspected annually for the correct number and type as required by 12.4.2.3~~

[MF6] 12.2.13 Protective Coverings.

Coverings protecting water mist nozzles in spray areas and mixing rooms in resin application areas shall be inspected annually for heavy deposits of residue.

12.2.2 Strainers and Filters .

~~12.2.2.1 Strainers Individual water mist nozzle strainers and filters shall be inspected and cleaned after each operation or flow test.~~

~~12.2.2.2 All strainers and filters shall be inspected and cleaned in accordance with the manufacturer's instructions.~~

~~12.2.2.3 Damaged or corroded parts or assemblies shall be replaced or repaired.~~

The supply of strainers, if replaceable, shall be inspected annually for the correct number and type as required by 12.4.5.3

12.2.3 System Piping, Tubing, and Fittings.

12.2.3.1 Water mist system distribution piping, tubing, and fittings shall be inspected annually from the floor level.

12.2.3.2 Piping, tubing, and fittings shall be free of mechanical damage, leakage, and corrosion.

12.2.3.3 Water mist system distribution piping shall not be subjected to external loads by materials either resting on the pipe or hung from the pipe.

12.2.3.4 Piping, tubing, and fittings installed in concealed spaces such as above suspended ceilings shall not require inspection.

12.2.3.5 Piping, tubing, and fittings installed in areas that are inaccessible for safety considerations due to process operations shall be inspected during each scheduled shutdown.

12.2.3.6 The supply of spare conversion fittings shall be inspected annually.

12.2.4 Hangers, Braces, and Supports.

(See also A.5.2.3.)

12.2.4.1 Water mist system distribution pipe hangers, braces, and supports shall be inspected annually from the floor level.

12.2.4.2 Hangers, braces, and supports shall not be damaged, loose, or unattached.

~~12.2.4.3 Hangers, braces, and supports that are damaged, loose, or unattached shall be replaced or refastened.~~

12.2.4.4* Hangers, braces, and supports installed in concealed spaces such as above suspended ceilings shall not require inspection.

12.2.4.5 Hangers, braces, and supports installed in areas that are inaccessible for safety considerations due to process operations shall be inspected during each scheduled shutdown.

12.2.5 High Pressure Storage Cylinder Assemblies (Gas and Water).

12.2.5.1 All cylinders and mounting brackets shall be fastened securely in accordance with the manufacturer's requirements.

12.2.5.1.1 Quarterly, compressed gas cylinders shall be inspected for proper securement.

12.2.5.1.2 Annually, high pressure water cylinders shall be inspected for proper securement.

12.2.5.2* Compressed gas cylinders continuously in service without discharging shall be given a complete external visual inspection every 5 years or more frequently if required.

A.12.2.5.2 These guidelines apply only to the external inspection of containers continuously in service in the water mist system and should not

be confused with the DOT retest requirements for visual inspection described in 49 CFR.

Proper recordkeeping is an important part of every inspection. The inspector should be guided by the following outline to ensure that the minimum information is recorded:

- (1) Record tag. A record tag should be attached to every container being inspected for future reference. The record tag should be marked with the date of inspection (month/year), name of individual(s) and company performing the inspection, container serial number, condition of the container (paint, corrosion, dents, gouges, etc.), and disposition.
- (2) Inspection report. The inspection report should record the date of inspection (month/year), name of individual(s) and company performing the inspection, DOT specification number, container serial number, date of manufacture, date of previous inspection and/or test, type of protective coating, surface condition (corrosion, dents, gouges, fire damage, etc.), and disposition (satisfactory, repaint, repair, scrap, etc.). A sample of a suitable inspection report form can be found in Appendix A of CGA C-6, *Standard for Visual Inspection of Steel Compressed Gas Cylinders*.

12.2.5.2.1

The visual inspection shall be in accordance with Section 3 of CGA C-6, *Standard for Visual Inspection of Steel Compressed Gas Cylinders*, except that the cylinders need not be emptied or stamped while under pressure.

12.2.5.2.2 Inspections shall be made only by competent qualified personnel.

~~A-12.2.5.2.2 High-pressure cylinders present serious risks of injury or death if improperly handled. Inspections should be made only by qualified personnel who have received training in high-pressure cylinder handling, hazard recognition, and the specific requirements of the system being inspected. Unqualified personnel should not attempt to inspect, test, recharge, or service cylinders under any circumstances.~~

12.2.5.2.3 The inspection results shall be recorded on both of the following:

- ~~(1) A record tag permanently attached to each cylinder~~
- ~~(2) A suitable inspection report~~

12.2.5.2.3.1 A completed copy of the inspection report shall be furnished to the owner of the system or an authorized representative.

12.2.5.2.3.2 These records shall be retained by the owner for the life of the system.

12.2.5.3 Annually, the cylinder shall be visually inspected for the proper specification, capacity, and pressure rating.

12.2.5.4 The pressure in the high-pressure storage containers shall be within the water mist manufacturer's specifications.

12.2.5.4.1 Pressure in compressed gas cylinders that are electrically supervised and monitored shall be inspected, at a minimum, semiannually, or in accordance with the manufacturer's specifications.

12.2.5.4.2 Pressure in compressed gas cylinders that are not electrically supervised and monitored shall be inspected, at a minimum, monthly, or in accordance with the manufacturer's specifications.

12.2.5.4.3 The cylinder pressure on the discharge side of a high-pressure water storage container shall be inspected annually.

12.2.5.5 The water level in the high-pressure storage containers shall be within the water mist manufacturer's specifications.

12.2.5.5.1 Unsupervised water levels in high-pressure cylinders shall be inspected quarterly.

12.2.5.5.2 Supervised water levels in high-pressure cylinders shall be inspected semiannually.

12.2.5.6 Annually, the vent plugs on high-pressure water storage containers shall be visually inspected to ensure the vent is not ruptured or open.

12.2.5.7 Annually, the filter on high-pressure water storage containers shall be visually inspected to ensure it is clean.

12.2.5.8 All manually operated indicating control valves shall be visually inspected to confirm that they are in proper position, at a minimum, semiannually, or in accordance with manufacturer's specifications.

12.2.5.9 Annually, all hoses used as a part of the system shall be visually inspected for damage.

12.2.6 Pneumatic Valves and Tubing.

Pneumatically operated valves and pneumatic tubing shall be visually inspected, at a minimum, semiannually, or in accordance with the manufacturer's specifications.

12.2.7 Additive Storage Cylinders.

12.2.7.1 Additive storage cylinders Quarterly, the storage cylinder shall be visually inspected quarterly for external corrosion or damage.

12.2.7.2 The liquid level of the additive storage cylinders Semiannually, the quantity of the additive agent shall be inspected semiannually.

Where a reserve supply is required by NFPA 750, quarterly inspect the reserve supply to verify it is fully charged, undamaged, correctly labeled, and securely stored.

12.2.8 Water Recirculation Tanks.

12.2.8.1 All tank attachments and supports shall be secured and inspected in accordance with the manufacturer's requirements.

12.2.8.2 The water level in recirculation tanks shall be within the water mist manufacturer's specifications.

12.2.8.2.1 Unsupervised water levels in recirculation tanks shall be inspected monthly.

12.2.8.2.2 Supervised water levels in recirculation tanks shall be inspected quarterly.

12.2.8.3 Annually, the water quality shall be inspected and drained, flushed, and refilled as necessary.

12.2.8.4 Annually, the filters, strainers, and cyclone separator shall be visually inspected and cleaned as necessary.

12.2.9 Pneumatically Operated Standby Pumps.

12.2.9.1 Monthly, the moisture trap shall be visually inspected and emptied.

12.2.9.2 Monthly, the compressed gas supply and inlet air pressure shall be visually inspected in accordance with the manufacturer's specifications.

12.2.9.3 Monthly, the outlet water (standby) pressure shall be visually inspected in accordance with the manufacturer's specifications.

12.2.9.4 Monthly, the oil level on air regulator units shall be visually inspected in accordance with the manufacturer's specifications.

12.2.10 Water Supply.

12.2.10.1 Quarterly, the water supply pressure shall be visually inspected to determine that it is within the water mist manufacturer's specifications.

12.2.10.2 The water quality shall be inspected semiannually for the first year and then annually thereafter.

12.2.11 Enclosures and Interlocks .

Semiannually, the integrity of the enclosure and interlocks shall be inspected.

12.2.11.1 Where required by NFPA 750, the integrity of the protected enclosure shall be inspected to prevent mist migration or loss of concentration.

12.2.11.2 Verify that all penetration seals, walls, ceilings, and floors are free of damage or unsealed openings.

12.2.11.3 Verify that all doors, hatches, and dampers within the enclosure boundary operate smoothly, close fully, and latch securely.

12.2.12 System Design Information Sign.

Where required by NFPA 750, the system design information sign shall be inspected annually to verify that it is provided, securely attached, and legible.

12.2.12.1 The system design information sign shall be provided with a permanently marked weatherproof metal or rigid plastic sign, secured with corrosion-resistant wire, chain, or other acceptable means.

12.2.12.2 Such signs shall be placed at the control valve or equipment skid supplying the corresponding design area.

12.2.13 Pressure Reducing Valve Sign

12.2.13.1 Where required by NFPA 750, the pressure reducing valve sign shall be inspected annually to verify that it is provided, securely attached, and legible.

12.2.13.2 Such signs shall be attached to the pressure reducing valve.

12.2.14 One- and Two-Family Dwelling Warning Sign.

12.2.14.1 Where required by NFPA 750, the one- and two-family dwelling warning sign shall be inspected annually to verify that it is provided, securely attached, and legible.

12.2.14.2 The one- and two-family dwelling warning sign shall be affixed adjacent to the main shutoff valve.

12.2.15 Shore Connection Sign.

12.2.15.1 Where required by NFPA 750, the shore connection sign shall be inspected annually to verify that it is provided, securely attached, and legible.

12.2.15.2 Such signs shall be affixed at the shore connection.

12.2.15.3 The sign shall specify the recommended pressure to be maintained by shore responders or fire-fighting vessels at the connection.

12.2.15.4 The lettering of the sign shall be a minimum of 25.4 mm (1 in.) high block letters.

12.3 Testing.

12.3.1 Nozzles, Automatic.

12.3.1.1* Where required by this section, sample automatic water mist nozzles shall be submitted to an approved testing laboratory acceptable to the authority having jurisdiction for functional testing.

A.12.3.1.1 Water mist nozzles should be first given a visual inspection for signs of mechanical damage, cleaning, painting, leakage in service, or severe loading or corrosion, all of which are causes for immediate replacement.

Automatic nozzles that have passed the visual inspection should be laboratory tested for sensitivity (RTI), functionality, and K-factor. Thermal sensitivity should be not less than that permitted in post-corrosion testing of new automatic water mist nozzles of the same type. Automatic water mist nozzles should be tested for functionality at their minimum operating pressure specified by the manufacturer. Automatic water mist nozzles should have a K-factor within ± 10 percent of the value published by the manufacturer.

Some example testing standards include EN 12259-1, *Fixed firefighting systems — Components for sprinkler and water spray systems — Part 1: Sprinklers*; UL 2167, *Water Mist Nozzles for Fire Protection Service*; and FM Approvals Standard 5560, *Water Mist Systems*.

Water mist nozzles that have been in service for a number of years should not be expected to have all of the performance measurements of a new water mist nozzle. However, if there is any question about their continued satisfactory performance, the water mist nozzles should be replaced.

12.3.1.2 Automatic water mist nozzles that have been installed for 10 years shall be replaced, or representative samples shall be tested and then retested at 5-year intervals.

Where automatic water mist nozzles have been installed for 10 years, one of the following shall occur:

- **(1) The automatic water mist nozzles shall be replaced.**
- **(2) Representative samples of the automatic water mist nozzles shall be tested and then retested every 5 years.**

12.3.1.3* Where water mist nozzles are subjected to harsh environments, including corrosive atmospheres and corrosive water supplies, they shall be either replaced or representative samples tested on a 5-year basis.

Where water mist nozzles exposed to harsh environments, including corrosive atmospheres, have been installed for 5 years, one of the following shall occur:

- **(1) The water mist nozzles shall be replaced.**
- **(2) Representative samples of the water mist nozzles shall be tested and then retested every 5 years.**

A.12.3.1.3 These environments include outdoor weather conditions and portions of any area where corrosive vapors prevail. Harsh water environments include water supplies that are chemically reactive. An example of a corrosive atmosphere is a marine environment. The testing requirements for these types of environments are also described in the International Maritime Organization's MSC.1/Circular 1432, *Guidelines for the Maintenance and Inspection of Fire Protection Systems and Appliances*.

12.3.1.4* A representative sample of water mist nozzles for testing per 12.3.1.2 or 12.3.1.3 shall consist of a minimum of four water mist nozzles or 1 percent of the number of water mist nozzles per individual water mist nozzle sample, whichever is greater.

A.12.3.1.4 Within the area represented by the selected sample, water mist nozzles of the same design produced by the same manufacturer can be considered part of the same sample, but additional water mist nozzles would need to be selected if produced by a different manufacturer.

12.3.1.5* Where one water mist nozzle within a representative sample fails to meet the test requirement, all water mist nozzles within the area represented by that sample shall be replaced.

A.12.3.1.5 When acceptable to the authority having jurisdiction, in lieu of replacement of all the water mist nozzles within the area represented, additional representative samples could be tested to assess the performance of the water mist nozzles in that area.

12.3.1.6 Automatic water mist nozzles that need to be replaced shall be in accordance with the requirements of 12.4.2.

12.3.2 Nozzles, Open.

12.3.2.1 Water mist nozzles installed to protect spray areas and mixing rooms in resin application areas without protective coverings shall be capable to operate and protect the hazard with an overspray residue in the event of a fire. [MF24] - [MF25] -

12.3.2.1* ~~12.3.2.2*~~ Where water mist nozzles are subjected to environments with residues, including corrosive atmospheres and corrosive water supplies, they shall be either replaced or representative samples tested on a 1-year basis. (See also ~~A.12.3.1.3~~.)

~~A.12.3.2.1 A.12.3.2.2~~ Water mist nozzles installed to protect sprav areas and mixing rooms in resin application areas without protective coverings should be capable of operating and protecting the hazard with an oversprav residue in the event of a fire. Water mist nozzles should be first given a visual inspection for signs of mechanical damage, cleaning, painting, or severe loading or corrosion, all of which are causes for immediate replacement.

~~Open nozzles that have passed the visual inspection should be laboratory tested for functionality and K-factor. Open water mist nozzles with blow-off caps and/or dust plugs should be tested for functionality at their minimum operating pressure specified by the manufacturer. Open water mist nozzles should have a K-factor within ± 5 percent of the value published by the manufacturer.~~

~~Some example testing standards include EN 12259-1, Fixed firefighting systems — Components for sprinkler and water sprav svstems — Part 1: Sprinklers; UL 2167, Water Mist Nozzles for Fire Protection Service; and FM Approvals Standard 5560, Water Mist Systems.~~

~~Water mist nozzles that have been in service for a number of years should not be expected to have all of the same performance measurements of a new water mist nozzle. However, if there is anv question about their continued satisfactory performance, the water mist nozzles should be replaced. (See also ~~A.12.3.1.3~~.)~~

~~12.3.2.2 ~~12.3.2.3~~ Where the nature of the protected property is such that water cannot be discharged annually as indicated in 12.3.16.5 and not subject to the conditions in 12.3.2.1 ~~12.3.2.2~~, open water mist nozzles that have been in service for 10 years shall be either replaced or representative samples shall be tested and then retested at 5-year intervals. (See ~~A.12.3.2.2~~.)~~

~~12.3.2.3 ~~12.3.2.4~~ A representative sample of water mist nozzles for testing per 12.2.10.2 shall consist of a minimum of three water mist nozzles or 1 percent of the number of water mist nozzles per individual water mist nozzle sample, whichever is greater.~~

~~12.3.2.4* ~~12.3.2.5~~ * Where one water mist nozzle within a representative sample fails to meet the test requirement, all water mist nozzles within the area represented by that sample shall be replaced.~~

~~A.12.3.2.4 A.12.3.2.5~~ Where acceptable to the authority having iurisdiction, in lieu of replacement of all the water mist nozzles within the area represented, additional representative samples could be tested to assess the performance of the water mist nozzles in that area.

~~12.3.3 Strainers and Filters. System strainers (basket or screen) shall be flushed until clear after each operation or flow test. [MF26]~~

~~12.3.4 Additives. Samples of the additive shall be submitted in accordance with the manufacturer's recommended sampling procedures for evaluation of quality to its specification.~~

~~12.3.5 Operational Test Performance with Additives.~~

12.3.5.1 Operational tests shall be conducted to ensure the injection rate of the additive for the water mist system responds as designed, both automatically and manually.

12.3.5.2 The test procedures shall simulate anticipated emergency events so the response of the water mist system can be evaluated.

12.3.5.3 Where a discharge from the system discharge devices would create a hazardous condition or conflict with local requirements, an approved alternate method to achieve full flow conditions shall be permitted.

12.3.5.4 It shall be permissible to test the full flow discharge from the water mist system with additive using water only in lieu of the additive.

12.3.5.5 Under test conditions, the automatic fire detection systems, when exposed to a test source, shall operate within the requirements of NFPA 72 for the type of detector provided, and the response time shall be recorded.

12.3.5.6 The time lapse between operation of detection systems and water delivery time to the protected area shall be recorded for open discharge devices.

12.3.6 Compressed Gas Storage Cylinders.

12.3.6.1 Gas cylinders designed in accordance with US Department of Transportation (DOT), Canadian Transport Commission (CTC), or similar containers shall not be recharged without retesting if more than 5 years have elapsed since the date of last test.

12.3.6.2* The retest indicated in 12.3.6.1 shall be in accordance with the US Department of Transportation (DOT), Canadian Transport Commission (CTC), or similar design and requalification regulations.

A.12.3.6.2 Examples of requirements that can be considered for retesting include 49 CFR 180.205, "General Requirements for Requalification of Specification Cylinders," and 49 CFR 180.209, "Requirements for Requalification of Specification Cylinders."

12.3.6.3 A completed copy of the test report shall be furnished to the owner of the system or an authorized representative.

12.3.6.4 These records shall be retained by the owner for the life of the system.

12.3.7 Control Equipment.

12.3.7.1 Operational tests shall be conducted to ensure the control equipment for the water mist system responds as designed, both automatically and manually.

12.3.7.2 Annual operational testing shall be conducted in accordance with the requirements of NFPA 72.

12.3.7.3 Where a discharge from the system discharge devices would create a hazardous condition or conflict with local requirements, an approved alternate method to achieve full flow conditions shall be permitted.

12.3.8 Detection Systems.

12.3.8.1 Operational tests shall be conducted to ensure the control equipment for the water mist system responds as designed, both automatically and manually.

12.3.8.2 Conduct annual operational testing of the initiating devices for detection in accordance with the requirements of NFPA 72.

12.3.8.3 Under test conditions, the automatic fire detection systems, when exposed to a test source, shall operate within the requirements of NFPA 72 for the type of detector provided, and the response time shall be recorded.

12.3.8.4 The time lapse between operation of detection systems and water delivery time to the protected area shall be recorded for open discharge devices.

12.3.9 Fire Pumps and Drivers.

12.3.9.1 Fire pumps shall be tested in accordance with the requirements of Section 8.3.

12.3.9.2 Water mist systems that are powered by or operated by pressurized gas (normally air or nitrogen) cylinders or pressure vessels shall be tested quarterly or determined by an approved risk analysis in accordance with the manufacturer's specifications using pressurized gas and water from either the primary cylinders or pressure vessels and/or tanks or by using temporary/test cylinders or tanks to verify nozzle flows (no blockage, fully developed spray pattern) upon operation.

12.3.10 Hoses.

12.3.10.1 All hose shall be tested every 5 years.

12.3.10.2 All hose shall be tested at 1½ times the maximum container pressure at 130°F (54.4°C).

12.3.10.3 The hose testing procedure shall be as follows:

- **(1) The hose is removed from any attachment.**
- **(2) The hose assembly is then placed in a protective enclosure designed to permit visual observation of the test.**
- **(3) The hose must be completely filled with water before testing.**
- **(4) Pressure then is applied at a rate-of-pressure rise to reach the test pressure within 1 minute. The test pressure is then maintained for 1 full minute. Observations are then made to note any distortion or leakage.**
- **(5) If the test pressure has not dropped or if the couplings have not moved, the pressure is released. The hose assembly is considered to have passed the hydrostatic test if no permanent distortion has taken place.**
- **(6) Hose assembly passing the test must be completely dried internally. If heat is used for drying, the temperature must not exceed the manufacturer's specifications.**

- (7) Hose assemblies failing a hydrostatic test must be marked and destroyed and be replaced with new assemblies.
- (8) Each hose assembly passing the hydrostatic test is marked to show the date of test.

12.3.11 Interlocks.

12.3.11.1 Annual testing to confirm the operation of the interlock for ventilation shall be conducted, if required:

12.3.11.1 Where required by NFPA 750, a full functional sequence test of all water mist system interlocks upon system actuation shall be conducted semiannually.

A.12.3.11.1 The test should verify that the fire alarm control panel successfully transmits signals to initiate the shutdown of all enclosure HVAC systems, the full closure of motorized ventilation dampers, the release of magnetic door holders, and the electrical trip/shutdown of protected process equipment.

12.3.11.2 Annual testing to confirm the operation of the interlock for fuel or lubrication systems shall be conducted, if required.

12.3.12 Pneumatic Valves.

12.3.12.1 Operational tests shall be conducted to ensure the pneumatic valves for the water mist system respond as designed, both automatically and manually.

12.3.12.2 Semiannual testing of the following pneumatic valves shall be conducted for operation in accordance with the manufacturer's instructions:

- (1) Slave valves
- (2) Valves intended to cycle on-off

12.3.12.3 All pneumatic cylinder release valves shall be reset after testing.

12.3.13 Pneumatic Valve Solenoid Releases. All pneumatic cylinder release valves shall be reset after testing.

12.3.13.1 Operational tests shall be conducted to ensure the pneumatic valve solenoid releases for the water mist system responds as designed, both automatically and manually.

12.3.13.2 Annual testing of the following pneumatic solenoid valve releases shall be conducted for operation in accordance with the manufacturer's instructions:

- (1) Electric release
- (2) Manual release

12.3.14 Pneumatically Operated Standby Pumps.

12.3.14.1 Pumps (booster pumps, jockey pumps or transfer pumps) used in the water mist system that are not main pressure pumps shall be operated to demonstrate support of their design function for the main pressure pumps.

12.3.14.2 Standby pumps shall be operated at least annually to demonstrate their system flow support when the main pressure pumps are tested.

12.3.15 System Control Valves. Each control valve for a zone of protection by the water mist system shall be operated annually through its full range and returned to its normal position.

12.3.16 Water Mist System with Open Nozzles. Water mist systems shall be operated annually in accordance with 12.3.16.1 through 12.3.16.8 and the manufacturer's instructions.

12.3.16.1 Test Preparation. Precautions shall be taken to prevent damage to property during the test. (See also A.10.3.2.)

12.3.16.2 Operational Test Performance.

12.3.16.2.1 Operational tests shall be conducted to ensure the water mist system responds as designed, both automatically and manually.

12.3.16.2.2 Where the nature of the protected property is such that water cannot be discharged into the occupancy or onto the hazard, an operational test shall be conducted from a test connection with an orifice designed to simulate the flow rate equivalent to or greater than the flow produced from the total number of nozzles within the protected space.

12.3.16.3* Response Time.

A.12.3.16.3 Test methods are as follows:

- **(1) Some detection circuits can be permitted to be deliberately desensitized in order to override unusual ambient conditions. In such cases, the response required in 12.3.16.3 can be permitted to be exceeded.**
- **(2) Testing of integrating tubing systems can be permitted to be related to this test by means of a standard pressure impulse test specified by the listing laboratory.**

One method of testing heat detection uses a radiant heat surface at a temperature of 300°F (149°C) and a capacity of 350 watts at a distance of 1 in. (25 mm) but not more than 2 in. (50 mm) from the nearest part of the detector. This method of testing with an electric test set should not be used in hazardous locations. Other test methods can be permitted to be employed, but the results should be obtained under these conditions.

12.3.16.3.1 Under test conditions, the detection systems shall operate with the specifications from the acceptance test and 12.3.7.

12.3.16.3.2 The response times shall be recorded.

12.3.16.4 Discharge Time. The time lapse between operation of detection systems and water delivery time to the protected area shall be recorded.

12.3.16.5* Discharge Patterns.

A.12.3.16.5 Water mist nozzles can be of different sizes and types. Some might be more susceptible to internal obstructions than others.

12.3.16.5.1 The water discharge patterns from all of the open water mist nozzles shall be observed to ensure that patterns are not impeded by

plugged nozzles. to ensure that nozzles are correctly positioned. and to ensure that obstructions do not prevent discharge patterns from fully developing. (See also 13.4.4.2.3.1 .)

12.3.16.5.2 Where the nature of the protected property is such that water cannot be discharged, the nozzles shall be inspected for proper orientation and the system tested with air to ensure that the nozzles are not obstructed.

12.3.16.5.3 Where obstructions occur, the piping and nozzles shall be cleaned and the system retested.

12.3.16.6 Pressure Readings.

12.3.16.6.1 Pressure readings shall be recorded at the hydraulically most remote nozzle or test connection to ensure the water flow has not been impeded by partially closed valves or by plugged strainers or piping.

12.3.16.6.2 For water mist systems with a deluge valve, a second pressure reading shall be recorded at the deluge valve to ensure the water supply is adequate.

12.3.16.6.3 Readings shall be compared to the hydraulic design pressures to ensure the original system design requirements are met and the water supply is adequate to meet the design requirements.

12.3.16.6.3.1 Where the hydraulically most remote nozzle is inaccessible, nozzles shall be permitted to be checked visually without taking a pressure reading on the most remote nozzle.

12.3.16.6.3.2 Where the reading taken at the riser indicates that the water supply has deteriorated, a gauge shall be placed on the hydraulically most remote nozzle and the results compared with the required design pressure.

12.3.16.7 Multiple Systems.

The maximum number of systems expected to operate in case of fire shall be tested simultaneously to inspect the adequacy of the water supply.

12.3.16.8 Return to Service.

After the full flow test, the water mist system shall be returned to service in accordance with the manufacturer's instructions.

12.3.17 Water Recirculation Tanks.

12.3.17.1 Operational tests shall be conducted to ensure water recirculation tanks for the water mist system responds as designed, both automatically and manually.

12.3.17.2 Annual testing shall be conducted for operation in accordance with the manufacturer's instructions:

- **(1) Float-operated valves**
- **(2) Backflow prevention device, when present**

12.3.17.3 Pressure reading shall be recorded at the outlet of the recirculation tank during the operational discharge test of the water mist system.

12.3.18 Water Storage Cylinders (High Pressure).

12.3.18.1* Water cylinders used with high pressure for power to deliver the water mist, or those that become pressurized at activation or water delivery or as the water source for a water mist system shall be tested in accordance with applicable current pressure vessel standard or code.

A.12.3.18.1 A source for test requirements is the most current FSSA Cylinder Service Guide. There are the same requirements that are applicable to cylinders, pressure tanks or pressure vessels used for pressurized gas agents.

12.3.18.2 Water cylinders designed in accordance with US Department of Transportation (DOT), Canadian Transport Commission (CTC), or similar containers shall not be recharged without retesting if more than 5 years have elapsed since the date of last test.

12.3.18.3 A completed copy of the test report shall be furnished to the owner of the system or an authorized representative.

12.3.18.4 The records shall be retained by the owner for the life of the system.

12.3.19 Water Storage Tanks. Water storage tanks or cylinders shall be tested in accordance with the requirements of Section 9.3.

12.3.20 Water Supply. Annual testing shall be conducted in accordance with Section 7.3 to verify the source:

- **(1) Pressure**
- **(2) Flow**
- **(3) Quantity**
- **(4) Duration**

12.3.21 Stored Water Quality.

12.3.21.1 Stored water quality shall be tested semiannually for the first year and then annually thereafter.

12.3.21.2 A sample of the stored water supply shall be submitted to an approved testing laboratory acceptable to the authority having jurisdiction for testing.

A.12.3.21.2 Table A. 12.3.21.2 provides examples of water quality parameters, commonly referenced limits, and the authoritative sources from which those limits are derived. These values are intended to assist in evaluating test results and selecting appropriate corrective actions.

<u>Parameter</u>	<u>Common Limit / Threshold</u>	<u>Source Title</u>
<u>Turbidity</u>	<u>Preferably <1 NTU ; should not exceed 5 NTU</u>	<u>World Health Organization, Guidelines for Drinking-water Quality , 4th Ed. incorporating 1st Addendum</u>
<u>Turbidity</u>	<u>≤1 NTU maximum; 95% of samples ≤0.3 NTU</u>	<u>U.S. Environmental Protection Agency,</u>

		<u>Surface Water Treatment Rule</u>
<u>E. coli</u>	Must not be detectable in any 100 mL sample	World Health Organization, <u>Guidelines for Drinking-water Quality</u>
<u>E. coli</u>	0 organisms per 100 mL	U.S. Environmental Protection Agency, <u>Revised Total Coliform Rule (RTCR)</u>
<u>Cyanobacteria (harmful algae)</u>	Low risk: <20,000 cells/mL	World Health Organization, <u>Guidelines for Safe Recreational Water Environments, Volume 1: Coastal and Fresh Waters</u>
<u>Microcystin-LR (cyanotoxin)</u>	1 µg/L	World Health Organization, <u>Guidelines for Drinking-water Quality</u>
<u>Legionella</u>	No universally accepted numeric potable-water limit	World Health Organization, <u>Legionella and the Prevention of Legionellosis</u>
<u>Legionella</u>	Water management program required	ASHRAE, <u>ASHRAE Standard 188 – Legionellosis: Risk Management for Building Water Systems</u>

Table A.12.3.21.2

12.4 Maintenance.

12.4.1 General.

12.4.1.1 Maintenance shall be performed to keep the system equipment operable or to make repairs.

12.4.1.1.1 Where required by the manufacturer, maintenance shall be performed on devices not described in this standard.

12.4.1.2 As-built system installation drawings, original acceptance test records, and device manufacturer's maintenance bulletins shall be retained to assist in the proper care of the system and its components.

12.4.1.3 Replacement components shall be in accordance with the manufacturer's specifications and the original system design.

12.4.1.4 Spare components shall be accessible and shall be stored in a manner to prevent damage or contamination.

12.4.1.5* After each system operation, a representative sample of operated water mist nozzles in the activated zone shall be inspected.

A.12.4.1.5 The representative sample should include 10 percent of the water mist nozzles in the activated zone. If contamination of filters or strainers is

found on inspection, it is recommended that all nozzles within the activated zone be inspected.

12.4.1.6 After each system operation due to fire, the system filters and strainers shall be cleaned or replaced.

12.4.1.7 Annually, a water tank used to supply a water mist system shall be drained and refilled.

12.4.1.8 Annually, a water mist system with open nozzles shall be flushed.

12.4.1.9 Hangers, braces, and supports that are damaged, loose, or unattached shall be replaced or refastened

12.4.1.10 Additive Storage Cylinders having external corrosion or damage shall be replaced.

12.4.1.11 Additive Storage Cylinders liquid level shall be maintained at the minimum design level.

12.4.1.12 Cyclone separators shall be cleaned annually.

12.4.1.13 Stored water supplies shall be drained, flushed, and refilled as necessary.

12.4.1.14 Where required enclosures integrity or the interlock operability is compromised, these systems shall be repaired, replaced, or restored.

12.4.1.15 A reserve supply shall be provided where the extinguishing agent expellant gas or atomizing media cannot otherwise be replaced within 24 hours following system operation.

12.4.1.16 Signs required by NFPA 750, which are damaged or missing shall be replaced.

12.4.2 Water Mist Nozzles.

12.4.2.1* Replacement water mist nozzles shall have the proper characteristics for the application intended, including the nozzle model and temperature rating.

A.12.4.2.1 Each water mist nozzle has unique requirements for protection applications and end-use limitations.

12.4.2.2 Only new water mist nozzles shall be used to replace existing water mist nozzles.

12.4.2.3* A supply of spare water mist nozzles (never fewer than three) shall be maintained on the premises so that any water mist nozzles that have operated or been damaged in any way can be promptly replaced.

A.12.4.2.3 A minimum of two water mist nozzles of each type and temperature rating installed should be provided.

12.4.2.3.1 The water mist nozzles shall correspond to the manufacturer(s), models, and temperature ratings of the water mist nozzles in the property.

12.4.2.3.2 The automatic water mist nozzles shall be kept in a cabinet located where the temperature will at no time exceed 100°F (38°C).

12.4.2.3.3 The stock of spare thermally activated nozzles shall include all types and ratings installed and shall be as follows:

- **(1) For systems having fewer than 50 nozzles, not fewer than 3 nozzles**
- **(2) For systems having 50 to 300 nozzles, not fewer than 6 nozzles**
- **(3) For systems having 301 to 1000 nozzles, not fewer than 12 nozzles**
- **(4) For systems having over 1000 nozzles, not fewer than 24 nozzles**

12.4.2.4* Where required by the manufacturer, a special water mist nozzle wrench shall be provided and kept in the cabinet to be used for the removal and installation of nozzles.

A.12.4.2.4 Other types of wrenches could damage the water mist nozzles.

12.4.2.4.1 One water mist nozzle wrench shall be provided for each type of nozzle installed.

New 12.4.2.5 Incorrectly oriented water mist nozzles shall be corrected by repositioning the branch line, drop, or sprig, or shall be replaced.

New 12.4.2.6 Where required minimum clearances from stock, furnishings, or equipment are not maintained, obstructions shall be corrected.

New 12.4.2.7 Open nozzles, including their strainers, shall be removed and cleaned after the discharge of water from installed nozzles.

New 12.4.2.7 Spare individual nozzle strainers and filters for water mist nozzles, if replaceable, shall be provided and shall include all types and sizes installed.

New 12.4.2.7.1 Spare strainers and filters shall be provided to service the nozzles, if replaceable, for the largest single hazard or group of hazards to be protected simultaneously.

12.4.2.5 Protective Coverings.

12.4.2.5.1 Water mist nozzles protecting spray areas and mixing rooms in resin application areas installed with protective coverings shall continue to be protected against overspray residue so that they will operate in the event of fire.

12.4.2.5.2* Water mist nozzles installed as described in 12.4.2.5.1 shall be protected using cellophane bags having a thickness of 0.003 in. (0.076 mm) or less or thin paper bags.

12.4.2.5.3 Coverings shall be replaced periodically so that heavy deposits of residue do not accumulate.

12.4.2.6 Water mist nozzles shall not be altered in any respect or have any type of ornamentation, paint, or coatings applied after shipment from the manufacturer.

12.4.2.7 Automatic water mist nozzles used for protecting commercial-type cooking equipment and ventilating systems shall be replaced annually.

12.4.2.7.1 Where automatic water mist nozzles are used and annual examination shows no buildup of grease or other material on the nozzles, the nozzles shall not be required to be replaced.

12.4.3 Pneumatically Operated Standby Pumps.

Pneumatically operated standby pumps shall be rebuilt every 5 years or as specified by the manufacturer.

12.4.4 Conversion Fitting.

A minimum of one spare conversion fitting of each type shall be maintained on the premises so that any conversion fittings that have been damaged in any way can be promptly replaced.

12.4.5 Strainers.

12.4.5.1 Strainers shall be cleaned after each operation or flow test.

12.4.5.2 Strainers shall be cleaned in accordance with the manufacturer's instructions.

12.4.5.3 Spare strainers, if replaceable, shall be provided and shall include all types and sizes installed.

12.5 Training:

12.5.1 All persons who might be expected to inspect, test, maintain, or operate water mist systems shall be trained thoroughly in the functions they are expected to perform.

12.5.2 Refresher training shall be provided as recommended by the manufacturer or by the authority having jurisdiction.

New 12.5 Component Action Requirements.

New 12.5.1 Whenever a component in a sprinkler system is adjusted, repaired, reconditioned, or replaced, the actions required in Table 12.5.1 shall be performed.

New Table 12.5.1 Summary of Component Action Requirements

12.5.2 Where the original installation standard is different from the cited standard, the use of the appropriate installing standard shall be permitted.

New 12.5.3 These actions shall not require a design review, which is outside the scope of this standard.

Additional Proposed Changes

<u>File Name</u>	<u>Description</u>	<u>Approved</u>
Chapter_12.docx		

Statement of Problem and Substantiation for Public Input

A task group for NFPA 750 was formed to review NFPA 25 Chapter 12. The task group reorganized the chapter moving test and maintenance criteria from inspection to the appropriate section and added in required elements from NFPA 750 that were not previously included in Chapter 12.

Related Public Inputs for This Document

<u>Related Input</u>	<u>Relationship</u>
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Chapter 12 — Water Mist Systems

12.1 General.

12.1.1 Minimum Requirements.

12.1.1.1 This chapter shall provide the minimum requirements for the routine inspection, testing, and maintenance of water mist systems installed in accordance with NFPA 750 or other approved installation standard.

12.1.1.2 [Table 12.1.1.2](#) shall be used to determine the minimum required infrequencies for inspection, testing, and maintenance.

Table 12.1.1.2 Summary of Water Mist System Inspection, Testing, and Maintenance

12.1.2 Common Components and Valves. Where inspection, testing, and maintenance criteria for common components and valves are not specified in Chapter 12, the requirements of Chapter [13](#) shall apply.

New 12.1.3 Internal Piping Condition and Obstruction Investigations.

The procedures outlined in Chapter [14](#) shall be followed where there is a need to conduct an assessment of the internal piping condition or an obstruction investigation.

Commented [MF1]: Copied from 5.1.3

~~12.1.3~~ **12.1.4 Impairments.** The procedures outlined in Chapter [15](#) shall be followed where an impairment to protection occurs.

~~12.1.4~~ **12.1.5 Hose Connections.** Hose connections shall be inspected, tested, and maintained in accordance with Chapters [6](#) and [13](#).

12.2 Inspection.

12.2.1 Water Mist Nozzles.

12.2.1.1 Water mist nozzles shall be inspected from the floor level annually.

12.2.1.1.1 Any water mist nozzle that shows signs of any of the following shall be replaced (see [A.5.2.1.1.1](#)):

- (1) Leakage
- (2) Corrosion detrimental to nozzle performance
- (3) Physical damage
- (4) Loss of fluid in the glass bulb heat responsive element
- [\(5\)*](#) Loading detrimental to nozzle performance

- (6) Painting, other than that applied by the nozzle manufacturer, detrimental to nozzle performance

A.12.2.1.1.1(5) In lieu of replacing water mist nozzles that are loaded with a coating of dust, it is permitted to clean the nozzles with compressed air or by a vacuum provided that the equipment does not touch the nozzle.

~~12.2.1.1.2 Any water mist nozzle that has been installed in the incorrect orientation shall be corrected by repositioning the branch line, drop, or sprig, or shall be replaced.~~

Water mist nozzles shall be inspected for proper orientation.

~~12.2.1.1.3 Water mist nozzles with glass bulbs shall be replaced if the bulbs are partially or fully empty of fluid.~~

12.2.1.1.4 ~~12.2.1.1.3~~ Water mist nozzles installed in concealed spaces such as above suspended ceilings shall not require inspection.

12.2.1.1.5 ~~12.2.1.1.4~~ Water mist nozzles installed in areas that are inaccessible for safety considerations due to process operations shall be inspected during each scheduled shutdown.

~~12.2.1.1.6 Stock, furnishings, or equipment closer to the water mist nozzle than permitted by the clearance specified in the manufacturer's installation instructions shall be corrected.~~

Clearances between water mist nozzles and stock, furnishings, or equipment shall be inspected annually to verify minimum required clearances are maintained in accordance with the manufacturer's installation instructions.

~~12.2.1.1.7 Open nozzles, including their strainers, shall be removed, inspected, and cleaned after the discharge of water from installed nozzles.~~

~~12.2.1.2 The supply of spare automatic water mist nozzles shall be inspected annually for the correct number and type of water mist nozzles as required by NFPA 750.~~

The supply of spare automatic water mist nozzles shall be inspected annually for the following:

- (1) The correct number and type of automatic water mist nozzle as required by 12.4.2.3
- (2) A wrench for each type of automatic water mist nozzle as required by 12.4.2.4

12.2.1.3 The supply of spare individual nozzle strainers and filters for water mist nozzles, if replaceable, shall be inspected annually for the correct number and type as required by 12.4.2.3

12.2.13 Protective Coverings.

Coverings protecting water mist nozzles in spray areas and mixing rooms in resin application areas shall be inspected annually for heavy deposits of residue.

12.2.2 Strainers and Filters.

Commented [MF2]: This splits the inspection activity from the maintenance activity. A new section covering the maintenance activity has been added to 12.4.2.5.

Commented [MF3]: Already covered by 12.2.1.1.1(4)

Commented [MF4]: This splits inspection activity from maintenance activity. A new section covering maintenance activity has been added to 12.4.2.6

Commented [MF5]: This splits the inspection activity from the maintenance activity. A new section covering maintenance activity has been added to 12.4.2.7.

Commented [MF7]: There was no inspection trigger for the maintenance activity in 12.4.

12.2.2.1 ~~Individual water mist nozzle strainers and filters shall be inspected and cleaned after each operation or flow test.~~

12.2.2.2 All strainers and filters shall be inspected and cleaned in accordance with the manufacturer's instructions.

12.2.2.3 ~~Damaged or corroded parts or assemblies shall be replaced or repaired.~~

~~The supply of strainers, if replaceable, shall be inspected annually for the correct number and type as required by 12.4.5.3~~

Commented [MF8]: Moves maintenance activity to 12.4 and add criteria for replacing strainer if replaceable from NFPA 750.

12.2.3 System Piping, Tubing, and Fittings.

12.2.3.1 Water mist system distribution piping, tubing, and fittings shall be inspected annually from the floor level.

12.2.3.2 Piping, tubing, and fittings shall be free of mechanical damage, leakage, and corrosion.

12.2.3.3 Water mist system distribution piping shall not be subjected to external loads by materials either resting on the pipe or hung from the pipe.

12.2.3.4 Piping, tubing, and fittings installed in concealed spaces such as above suspended ceilings shall not require inspection.

12.2.3.5 Piping, tubing, and fittings installed in areas that are inaccessible for safety considerations due to process operations shall be inspected during each scheduled shutdown.

12.2.3.6 The supply of spare conversion fittings shall be inspected annually. |

12.2.4 Hangers, Braces, and Supports.

(See also [A.5.2.3](#).)

12.2.4.1 ~~Water mist system distribution pipe hangers, braces, and supports shall be inspected annually from the floor level.~~

Commented [MF10]: Aligns with 5.2.3.

12.2.4.2 Hangers, braces, and supports shall not be damaged, loose, or unattached.

12.2.4.3 ~~Hangers, braces, and supports that are damaged, loose, or unattached shall be replaced or refastened.~~

Commented [MF11]: Maintenance activity moved to 12.4

12.2.4.4* Hangers, braces, and supports installed in concealed spaces such as above suspended ceilings shall not require inspection.

12.2.4.5 Hangers, braces, and supports installed in areas that are inaccessible for safety considerations due to process operations shall be inspected during each scheduled shutdown.

12.2.5 High Pressure Storage Cylinder Assemblies (Gas and Water).

12.2.5.1 All cylinders and mounting brackets shall be fastened securely in accordance with the manufacturer's requirements.

12.2.5.1.1 Quarterly, compressed gas cylinders shall be inspected for proper securement.

12.2.5.1.2 Annually, high pressure water cylinders shall be inspected for proper securement.

12.2.5.2* Compressed gas cylinders continuously in service without discharging shall be given a complete external visual inspection every 5 years or more frequently if required.

A.12.2.5.2 These guidelines apply only to the external inspection of containers continuously in service in the water mist system and should not be confused with the DOT retest requirements for visual inspection described in 49 CFR.

Proper recordkeeping is an important part of every inspection. The inspector should be guided by the following outline to ensure that the minimum information is recorded:

- (1) Record tag. A record tag should be attached to every container being inspected for future reference. The record tag should be marked with the date of inspection (month/year), name of individual(s) and company performing the inspection, container serial number, condition of the container (paint, corrosion, dents, gouges, etc.), and disposition.
- (2) Inspection report. The inspection report should record the date of inspection (month/year), name of individual(s) and company performing the inspection, DOT specification number, container serial number, date of manufacture, date of previous inspection and/or test, type of protective coating, surface condition (corrosion, dents, gouges, fire damage, etc.), and disposition (satisfactory, repaint, repair, scrap, etc.). A sample of a suitable inspection report form can be found in Appendix A of CGA C-6, *Standard for Visual Inspection of Steel Compressed Gas Cylinders*.

12.2.5.2.1

The visual inspection shall be in accordance with Section 3 of CGA C-6, *Standard for Visual Inspection of Steel Compressed Gas Cylinders*, except that the cylinders need not be emptied or stamped while under pressure.

12.2.5.2.2 Inspections shall be made only by competent qualified personnel.

~~A.12.2.5.2.2 High pressure cylinders present serious risks of injury or death if improperly handled. Inspections should be made only by qualified personnel who have received training in high pressure cylinder handling, hazard recognition, and the specific requirements of the system being inspected. Unqualified personnel should not attempt to inspect, test, recharge, or service cylinders under any circumstances.~~

~~**12.2.5.2.3** The inspection results shall be recorded on both of the following:~~

- ~~• (1) A record tag permanently attached to each cylinder~~
- ~~• (2) A suitable inspection report~~

~~**12.2.5.2.3.1** A completed copy of the inspection report shall be furnished to the owner of the system or an authorized representative.~~

~~**12.2.5.2.3.2** These records shall be retained by the owner for the life of the system.~~

Commented [MF12]: Although 4.1.1.3 already covers qualified personnel. For high pressure cylinders, it is worth restating and the annex note adds additional clarity on the dangers.

Commented [MF13]: Records are covered in 4.3. 12.2.5.2.3.2. should be added to 4.3.

12.2.5.3 Annually, the cylinder shall be visually inspected for the proper specification, capacity, and pressure rating.

12.2.5.4 The pressure in the high-pressure storage containers shall be within the water mist manufacturer's specifications.

12.2.5.4.1 Pressure in compressed gas cylinders that are electrically supervised and monitored shall be inspected, at a minimum, semiannually, or in accordance with the manufacturer's specifications.

12.2.5.4.2 Pressure in compressed gas cylinders that are not electrically supervised and monitored shall be inspected, at a minimum, monthly, or in accordance with the manufacturer's specifications.

12.2.5.4.3 The cylinder pressure on the discharge side of a high-pressure water storage container shall be inspected annually.

12.2.5.5 The water level in the high-pressure storage containers shall be within the water mist manufacturer's specifications.

12.2.5.5.1 Unsupervised water levels in high-pressure cylinders shall be inspected quarterly.

12.2.5.5.2 Supervised water levels in high-pressure cylinders shall be inspected semiannually.

12.2.5.6 Annually, the vent plugs on high-pressure water storage containers shall be visually inspected to ensure the vent is not ruptured or open.

12.2.5.7 Annually, the filter on high-pressure water storage containers shall be visually inspected to ensure it is clean.

12.2.5.8 All manually operated indicating control valves shall be visually inspected to confirm that they are in proper position, at a minimum, semiannually, or in accordance with manufacturer's specifications.

12.2.5.9 Annually, all hoses used as a part of the system shall be visually inspected for damage.

12.2.6 Pneumatic Valves and Tubing.

Pneumatically operated valves and pneumatic tubing shall be visually inspected, at a minimum, semiannually, or in accordance with the manufacturer's specifications.

12.2.7 Additive Storage Cylinders.

12.2.7.1 Additive storage cylinders Quarterly, the storage cylinder shall be visually inspected quarterly for external corrosion or damage.

12.2.7.2 The liquid level of the additive storage cylinders Semiannually, the quantity of the additive agent shall be inspected semiannually.

Where a reserve supply is required by NFPA 750, quarterly inspect the reserve supply to verify it is fully charged, undamaged, correctly labeled, and securely stored.

Commented [MF14]: Adds actionable observations that can be made during inspection.

12.2.8 Water Recirculation Tanks.

12.2.8.1 All tank attachments and supports shall be secured and inspected in accordance with the manufacturer's requirements.

12.2.8.2 The water level in recirculation tanks shall be within the water mist manufacturer's specifications.

12.2.8.2.1 Unsupervised water levels in recirculation tanks shall be inspected monthly.

12.2.8.2.2 Supervised water levels in recirculation tanks shall be inspected quarterly.

12.2.8.3 Annually, the water quality shall be inspected and drained, flushed, and refilled as necessary.

12.2.8.4 Annually, the filters, strainers, and cyclone separator shall be visually inspected ~~and cleaned~~ as necessary.

12.2.9 Pneumatically Operated Standby Pumps.

12.2.9.1 Monthly, the moisture trap shall be visually inspected and emptied.

12.2.9.2 Monthly, the compressed gas supply and inlet air pressure shall be visually inspected in accordance with the manufacturer's specifications.

12.2.9.3 Monthly, the outlet water (standby) pressure shall be visually inspected in accordance with the manufacturer's specifications.

12.2.9.4 Monthly, the oil level on air regulator units shall be visually inspected in accordance with the manufacturer's specifications.

12.2.10 Water Supply.

12.2.10.1 Quarterly, the water supply pressure shall be visually inspected to determine that it is within the water mist manufacturer's specifications.

12.2.10.2 The water quality shall be inspected semiannually for the first year and then annually thereafter.

12.2.11 Enclosures ~~and Interlocks~~.

~~Semiannually, the integrity of the enclosure and interlocks shall be inspected.~~

12.2.11.1 Where required by NFPA 750, the integrity of the protected enclosure shall be inspected to prevent mist migration or loss of concentration.

12.2.11.2 Verify that all penetration seals, walls, ceilings, and floors are free of damage or unsealed openings.

12.2.11.3 Verify that all doors, hatches, and dampers within the enclosure boundary operate smoothly, close fully, and latch securely.

12.2.12 System Design Information Sign.

Commented [MF15]: This is maintenance and has been moved to 12.4

Commented [MF16]: This is a test and has been moved to 12.3

Commented [MF17]: Interlocks are tested annually

Commented [MF18]: Add actionable observations to the inspection requirement.

Where required by NFPA 750, the system design information sign shall be inspected annually to verify that it is provided, securely attached, and legible.

12.2.12.1 The system design information sign shall be provided with a permanently marked weatherproof metal or rigid plastic sign, secured with corrosion-resistant wire, chain, or other acceptable means.

12.2.12.2 Such signs shall be placed at the control valve or equipment skid supplying the corresponding design area.

12.2.13 Pressure Reducing Valve Sign

12.2.13.1 Where required by NFPA 750, the pressure reducing valve sign shall be inspected annually to verify that it is provided, securely attached, and legible.

12.2.13.2 Such signs shall be attached to the pressure reducing valve.

12.2.14 One- and Two-Family Dwelling Warning Sign.

12.2.14.1 Where required by NFPA 750, the one- and two-family dwelling warning sign shall be inspected annually to verify that it is provided, securely attached, and legible.

12.2.14.2 The one- and two-family dwelling warning sign shall be affixed adjacent to the main shutoff valve.

12.2.15 Shore Connection Sign.

12.2.15.1 Where required by NFPA 750, the shore connection sign shall be inspected annually to verify that it is provided, securely attached, and legible.

12.2.15.2 Such signs shall be affixed at the shore connection.

12.2.15.3 The sign shall specify the recommended pressure to be maintained by shore responders or fire-fighting vessels at the connection.

12.2.15.4 The lettering of the sign shall be a minimum of 25.4 mm (1 in.) high block letters.

Commented [MF19]: The system design information sign required in NFPA 750 has not previously been included and its inclusion is consistent with 5.2.7

Commented [MF20]: The pressure reducing valve sign required by NFPA 750 has not been previously included in NFPA 25.

Commented [MF21]: The one- and two-family dwelling warning sign required in NFPA 750 has not previously been included and its inclusion is consistent with 5.2.7. NFPA 750 does not have a allowance to omit NFPA 25 from One- and Two-Family Dwellings.

Commented [MF22]: The shore connection sign required in NFPA 750 has not previously been included and its inclusion is consistent with 5.2.7

12.3 Testing.

12.3.1 Nozzles, Automatic.

12.3.1.1* Where required by this section, sample automatic water mist nozzles shall be submitted to an approved testing laboratory acceptable to the authority having jurisdiction for functional testing.

A.12.3.1.1 Water mist nozzles should be first given a visual inspection for signs of mechanical damage, cleaning, painting, leakage in service, or severe loading or corrosion, all of which are causes for immediate replacement.

Automatic nozzles that have passed the visual inspection should be laboratory tested for sensitivity (RTI), functionality, and K-factor. Thermal sensitivity should be not less than that permitted in post-corrosion testing of new automatic water mist nozzles of the same type. Automatic water mist nozzles should be tested for functionality at their minimum operating pressure specified by the manufacturer. Automatic water mist nozzles should have a K-factor within ± 10 percent of the value published by the manufacturer.

Some example testing standards include EN 12259-1, *Fixed firefighting systems — Components for sprinkler and water spray systems — Part 1: Sprinklers*; UL 2167, *Water Mist Nozzles for Fire Protection Service*; and FM Approvals Standard 5560, *Water Mist Systems*.

Water mist nozzles that have been in service for a number of years should not be expected to have all of the performance measurements of a new water mist nozzle. However, if there is any question about their continued satisfactory performance, the water mist nozzles should be replaced.

~~12.3.1.2 Automatic water mist nozzles that have been installed for 10 years shall be replaced, or representative samples shall be tested and then retested at 5-year intervals.~~

Where automatic water mist nozzles have been installed for 10 years, one of the following shall occur:

- (1) The automatic water mist nozzles shall be replaced.
- (2) Representative samples of the automatic water mist nozzles shall be tested and then retested every 5 years.

~~12.3.1.3* Where water mist nozzles are subjected to harsh environments, including corrosive atmospheres and corrosive water supplies, they shall be either replaced or representative samples tested on a 5-year basis.~~

Where water mist nozzles exposed to harsh environments, including corrosive atmospheres, have been installed for 5 years, one of the following shall occur:

- (1) The water mist nozzles shall be replaced.
- (2) Representative samples of the water mist nozzles shall be tested and then retested every 5 years.

A.12.3.1.3 These environments include outdoor weather conditions and portions of any area where corrosive vapors prevail. Harsh water environments include water supplies that are chemically reactive. An example of a corrosive atmosphere is a marine environment. The testing requirements for these types of environments are also described in the International Maritime Organization's MSC.1/Circular 1432, *Guidelines for the Maintenance and Inspection of Fire Protection Systems and Appliances*.

12.3.1.4* A representative sample of water mist nozzles for testing per 12.3.1.2 or 12.3.1.3 shall consist of a minimum of four water mist nozzles or 1 percent of the number of water mist nozzles per individual water mist nozzle sample, whichever is greater.

Commented [MF23]: Copies format from 5.3.1.1.1

A.12.3.1.4 Within the area represented by the selected sample, water mist nozzles of the same design produced by the same manufacturer can be considered part of the same sample, but additional water mist nozzles would need to be selected if produced by a different manufacturer.

12.3.1.5* Where one water mist nozzle within a representative sample fails to meet the test requirement, all water mist nozzles within the area represented by that sample shall be replaced.

A.12.3.1.5 When acceptable to the authority having jurisdiction, in lieu of replacement of all the water mist nozzles within the area represented, additional representative samples could be tested to assess the performance of the water mist nozzles in that area.

12.3.1.6 Automatic water mist nozzles that need to be replaced shall be in accordance with the requirements of **12.4.2**.

12.3.2 Nozzles, Open.

~~**12.3.2.1** Water mist nozzles installed to protect spray areas and mixing rooms in resin application areas without protective coverings shall be capable of operating and protecting the hazard with an overspray residue in the event of a fire.~~

12.3.2.1* ~~**12.3.2.2***~~ Where water mist nozzles are subjected to environments with residues, including corrosive atmospheres and corrosive water supplies, they shall be either replaced or representative samples tested on a 1-year basis. ~~(See also **A.12.3.1.3**.)~~

~~A.12.3.2.1 A.12.3.2.2~~ Water mist nozzles installed to protect spray areas and mixing rooms in resin application areas without protective coverings should be capable of operating and protecting the hazard with an overspray residue in the event of a fire. Water mist nozzles should be first given a visual inspection for signs of mechanical damage, cleaning, painting, or severe loading or corrosion, all of which are causes for immediate replacement.

Open nozzles that have passed the visual inspection should be laboratory tested for functionality and K-factor. Open water mist nozzles with blow-off caps and/or dust plugs should be tested for functionality at their minimum operating pressure specified by the manufacturer. Open water mist nozzles should have a K-factor within ± 5 percent of the value published by the manufacturer.

Some example testing standards include EN 12259-1, *Fixed firefighting systems — Components for sprinkler and water spray systems — Part 1: Sprinklers*; UL 2167, *Water Mist Nozzles for Fire Protection Service*; and FM Approvals Standard 5560, *Water Mist Systems*.

Water mist nozzles that have been in service for a number of years should not be expected to have all of the same performance measurements of a new water mist nozzle. However, if there is any question about their continued satisfactory performance, the water mist nozzles should be replaced. *(See also **A.12.3.1.3**.)*

~~**12.3.2.2**~~ ~~**12.3.2.3**~~ Where the nature of the protected property is such that water cannot be discharged annually as indicated in **12.3.16.5** and not subject to the conditions in ~~**12.3.2.1**~~ ~~**12.3.2.2**~~, open water mist nozzles that have been in service for 10 years shall be either

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replaced or representative samples shall be tested and then retested at 5-year intervals.

(See ~~A.12.3.2.2~~.)

~~12.3.2.3~~ ~~12.3.2.4~~ A representative sample of water mist nozzles for testing per [12.2.10.2](#) shall consist of a minimum of three water mist nozzles or 1 percent of the number of water mist nozzles per individual water mist nozzle sample, whichever is greater.

~~12.3.2.4~~* ~~12.3.2.5~~* Where one water mist nozzle within a representative sample fails to meet the test requirement, all water mist nozzles within the area represented by that sample shall be replaced.

~~A.12.3.2.4~~ A.12.3.2.5 Where acceptable to the authority having jurisdiction, in lieu of replacement of all the water mist nozzles within the area represented, additional representative samples could be tested to assess the performance of the water mist nozzles in that area.

~~12.3.3 Strainers and Filters. System strainers (basket or screen) shall be flushed until clear after each operation or flow test.~~

Commented [MF25]: Moved to maintenance 12.4

12.3.4 Additives. Samples of the additive shall be submitted in accordance with the manufacturer's recommended sampling procedures for evaluation of quality to its specification.

12.3.5 Operational Test Performance with Additives.

12.3.5.1 Operational tests shall be conducted to ensure the injection rate of the additive for the water mist system responds as designed, both automatically and manually.

12.3.5.2 The test procedures shall simulate anticipated emergency events so the response of the water mist system can be evaluated.

12.3.5.3 Where a discharge from the system discharge devices would create a hazardous condition or conflict with local requirements, an approved alternate method to achieve full flow conditions shall be permitted.

12.3.5.4 It shall be permissible to test the full flow discharge from the water mist system with additive using water only in lieu of the additive.

12.3.5.5 Under test conditions, the automatic fire detection systems, when exposed to a test source, shall operate within the requirements of *NFPA 72* for the type of detector provided, and the response time shall be recorded.

12.3.5.6 The time lapse between operation of detection systems and water delivery time to the protected area shall be recorded for open discharge devices.

12.3.6 Compressed Gas Storage Cylinders.

12.3.6.1 Gas cylinders designed in accordance with US Department of Transportation (DOT), Canadian Transport Commission (CTC), or similar containers shall not be recharged without retesting if more than 5 years have elapsed since the date of last test.

12.3.6.2* The retest indicated in **12.3.6.1** shall be in accordance with the US Department of Transportation (DOT), Canadian Transport Commission (CTC), or similar design and requalification regulations.

A.12.3.6.2 Examples of requirements that can be considered for retesting include 49 CFR 180.205, "General Requirements for Requalification of Specification Cylinders," and 49 CFR 180.209, "Requirements for Requalification of Specification Cylinders."

12.3.6.3 A completed copy of the test report shall be furnished to the owner of the system or an authorized representative.

12.3.6.4 These records shall be retained by the owner for the life of the system.

12.3.7 Control Equipment.

12.3.7.1 Operational tests shall be conducted to ensure the control equipment for the water mist system responds as designed, both automatically and manually.

12.3.7.2 Annual operational testing shall be conducted in accordance with the requirements of *NFPA 72*.

12.3.7.3 Where a discharge from the system discharge devices would create a hazardous condition or conflict with local requirements, an approved alternate method to achieve full flow conditions shall be permitted.

12.3.8 Detection Systems.

12.3.8.1 Operational tests shall be conducted to ensure the control equipment for the water mist system responds as designed, both automatically and manually.

12.3.8.2 Conduct annual operational testing of the initiating devices for detection in accordance with the requirements of *NFPA 72*.

12.3.8.3 Under test conditions, the automatic fire detection systems, when exposed to a test source, shall operate within the requirements of *NFPA 72* for the type of detector provided, and the response time shall be recorded.

12.3.8.4 The time lapse between operation of detection systems and water delivery time to the protected area shall be recorded for open discharge devices.

12.3.9 Fire Pumps and Drivers.

12.3.9.1 Fire pumps shall be tested in accordance with the requirements of Section **8.3**.

12.3.9.2 Water mist systems that are powered by or operated by pressurized gas (normally air or nitrogen) cylinders or pressure vessels shall be tested quarterly or determined by an approved risk analysis in accordance with the manufacturer's specifications using pressurized gas and water from either the primary cylinders or pressure vessels and/or tanks or by using temporary/test cylinders or tanks to verify nozzle flows (no blockage, fully developed spray pattern) upon operation.

12.3.10 Hoses.

12.3.10.1 All hose shall be tested every 5 years.

12.3.10.2 All hose shall be tested at 1 1/2 times the maximum container pressure at 130°F (54.4°C).

12.3.10.3 The hose testing procedure shall be as follows:

- (1) The hose is removed from any attachment.
- (2) The hose assembly is then placed in a protective enclosure designed to permit visual observation of the test.
- (3) The hose must be completely filled with water before testing.
- (4) Pressure then is applied at a rate-of-pressure rise to reach the test pressure within 1 minute. The test pressure is then maintained for 1 full minute. Observations are then made to note any distortion or leakage.
- (5) If the test pressure has not dropped or if the couplings have not moved, the pressure is released. The hose assembly is considered to have passed the hydrostatic test if no permanent distortion has taken place.
- (6) Hose assembly passing the test must be completely dried internally. If heat is used for drying, the temperature must not exceed the manufacturer's specifications.
- (7) Hose assemblies failing a hydrostatic test must be marked and destroyed and be replaced with new assemblies.
- (8) Each hose assembly passing the hydrostatic test is marked to show the date of test.

12.3.11 Interlocks.

~~**12.3.11.1** Annual testing to confirm the operation of the interlock for ventilation shall be conducted, if required.~~

12.3.11.1 Where required by NFPA 750, a full functional sequence test of all water mist system interlocks upon system actuation shall be conducted semiannually.

A.12.3.11.1 The test should verify that the fire alarm control panel successfully transmits signals to initiate the shutdown of all enclosure HVAC systems, the full closure of motorized ventilation dampers, the release of magnetic door holders, and the electrical trip/shutdown of protected process equipment.

12.3.11.2 Annual testing to confirm the operation of the interlock for fuel or lubrication systems shall be conducted, if required.

12.3.12 Pneumatic Valves.

12.3.12.1 Operational tests shall be conducted to ensure the pneumatic valves for the water mist system respond as designed, both automatically and manually.

12.3.12.2 Semiannual testing of the following pneumatic valves shall be conducted for operation in accordance with the manufacturer's instructions:

- (1) Slave valves
- (2) Valves intended to cycle on–off

12.3.12.3 All pneumatic cylinder release valves shall be reset after testing.

12.3.13 Pneumatic Valve Solenoid Releases. All pneumatic cylinder release valves shall be reset after testing.

12.3.13.1 Operational tests shall be conducted to ensure the pneumatic valve solenoid releases for the water mist system responds as designed, both automatically and manually.

12.3.13.2 Annual testing of the following pneumatic solenoid valve releases shall be conducted for operation in accordance with the manufacturer's instructions:

- (1) Electric release
- (2) Manual release

12.3.14 Pneumatically Operated Standby Pumps.

12.3.14.1 Pumps (booster pumps, jockey pumps or transfer pumps) used in the water mist system that are not main pressure pumps shall be operated to demonstrate support of their design function for the main pressure pumps.

12.3.14.2 Standby pumps shall be operated at least annually to demonstrate their system flow support when the main pressure pumps are tested.

12.3.15 System Control Valves. Each control valve for a zone of protection by the water mist system shall be operated annually through its full range and returned to its normal position.

12.3.16 Water Mist System with Open Nozzles. Water mist systems shall be operated annually in accordance with [12.3.16.1](#) through [12.3.16.8](#) and the manufacturer's instructions.

12.3.16.1 Test Preparation. Precautions shall be taken to prevent damage to property during the test. (See also [A.10.3.2](#).)

12.3.16.2 Operational Test Performance.

12.3.16.2.1 Operational tests shall be conducted to ensure the water mist system responds as designed, both automatically and manually.

12.3.16.2.2 Where the nature of the protected property is such that water cannot be discharged into the occupancy or onto the hazard, an operational test shall be conducted from a test connection with an orifice designed to simulate the flow rate equivalent to or greater than the flow produced from the total number of nozzles within the protected space.

12.3.16.3* Response Time.

A.12.3.16.3 Test methods are as follows:

- (1) Some detection circuits can be permitted to be deliberately desensitized in order to override unusual ambient conditions. In such cases, the response required in [12.3.16.3](#) can be permitted to be exceeded.
- (2) Testing of integrating tubing systems can be permitted to be related to this test by means of a standard pressure impulse test specified by the listing laboratory.

One method of testing heat detection uses a radiant heat surface at a temperature of 300°F (149°C) and a capacity of 350 watts at a distance of 1 in. (25 mm) but not more than 2 in. (50 mm) from the nearest part of the detector. This method of testing with an electric test set should not be used in hazardous locations. Other test methods can be permitted to be employed, but the results should be obtained under these conditions.

12.3.16.3.1 Under test conditions, the detection systems shall operate with the specifications from the acceptance test and [12.3.7](#).

12.3.16.3.2 The response times shall be recorded.

12.3.16.4 Discharge Time. The time lapse between operation of detection systems and water delivery time to the protected area shall be recorded.

12.3.16.5* Discharge Patterns.

A.12.3.16.5 Water mist nozzles can be of different sizes and types. Some might be more susceptible to internal obstructions than others.

12.3.16.5.1 The water discharge patterns from all of the open water mist nozzles shall be observed to ensure that patterns are not impeded by plugged nozzles, to ensure that nozzles are correctly positioned, and to ensure that obstructions do not prevent discharge patterns from fully developing. (See also [13.4.4.2.3.1](#).)

12.3.16.5.2 Where the nature of the protected property is such that water cannot be discharged, the nozzles shall be inspected for proper orientation and the system tested with air to ensure that the nozzles are not obstructed.

12.3.16.5.3 Where obstructions occur, the piping and nozzles shall be cleaned and the system retested.

12.3.16.6 Pressure Readings.

12.3.16.6.1 Pressure readings shall be recorded at the hydraulically most remote nozzle or test connection to ensure the water flow has not been impeded by partially closed valves or by plugged strainers or piping.

12.3.16.6.2 For water mist systems with a deluge valve, a second pressure reading shall be recorded at the deluge valve to ensure the water supply is adequate.

12.3.16.6.3 Readings shall be compared to the hydraulic design pressures to ensure the original system design requirements are met and the water supply is adequate to meet the design requirements.

12.3.16.6.3.1 Where the hydraulically most remote nozzle is inaccessible, nozzles shall be permitted to be checked visually without taking a pressure reading on the most remote nozzle.

12.3.16.6.3.2 Where the reading taken at the riser indicates that the water supply has deteriorated, a gauge shall be placed on the hydraulically most remote nozzle and the results compared with the required design pressure.

12.3.16.7 Multiple Systems.

The maximum number of systems expected to operate in case of fire shall be tested simultaneously to inspect the adequacy of the water supply.

12.3.16.8 Return to Service.

After the full flow test, the water mist system shall be returned to service in accordance with the manufacturer's instructions.

12.3.17 Water Recirculation Tanks.

12.3.17.1 Operational tests shall be conducted to ensure water recirculation tanks for the water mist system responds as designed, both automatically and manually.

12.3.17.2 Annual testing shall be conducted for operation in accordance with the manufacturer's instructions:

- (1) Float-operated valves
- (2) Backflow prevention device, when present

12.3.17.3 Pressure reading shall be recorded at the outlet of the recirculation tank during the operational discharge test of the water mist system.

12.3.18 Water Storage Cylinders (High Pressure).

12.3.18.1* Water cylinders used with high pressure for power to deliver the water mist, or those that become pressurized at activation or water delivery or as the water source for a water mist system shall be tested in accordance with applicable current pressure vessel standard or code.

A.12.3.18.1 A source for test requirements is the most current FSSA *Cylinder Service Guide*. There are the same requirements that are applicable to cylinders, pressure tanks or pressure vessels used for pressurized gas agents.

12.3.18.2 Water cylinders designed in accordance with US Department of Transportation (DOT), Canadian Transport Commission (CTC), or similar containers shall not be recharged without retesting if more than 5 years have elapsed since the date of last test.

12.3.18.3 A completed copy of the test report shall be furnished to the owner of the system or an authorized representative.

12.3.18.4 The records shall be retained by the owner for the life of the system.

12.3.19 Water Storage Tanks. Water storage tanks or cylinders shall be tested in accordance with the requirements of Section [9.3](#).

12.3.20 Water Supply. Annual testing shall be conducted in accordance with Section [7.3](#) to verify the source:

- (1) Pressure
- (2) Flow
- (3) Quantity
- (4) Duration

12.3.21 Stored Water Quality.

12.3.21.1 Stored water quality shall be tested semiannually for the first year and then annually thereafter.

12.3.21.2 A sample of the stored water supply shall be submitted to an approved testing laboratory acceptable to the authority having jurisdiction for testing.

A.12.3.21.2 Table A.12.3.21.2 provides examples of water quality parameters, commonly referenced limits, and the authoritative sources from which those limits are derived. These values are intended to assist in evaluating test results and selecting appropriate corrective actions.

Parameter	Common Limit / Threshold	Source Title
Turbidity	Preferably <1 NTU; should not exceed 5 NTU	World Health Organization, <i>Guidelines for Drinking-water Quality</i> , 4th Ed. incorporating 1st Addendum
Turbidity	≤1 NTU maximum; 95% of samples ≤0.3 NTU	U.S. Environmental Protection Agency, <i>Surface Water Treatment Rule</i>
<i>E. coli</i>	Must not be detectable in any 100 mL sample	World Health Organization, <i>Guidelines for Drinking-water Quality</i>
<i>E. coli</i>	0 organisms per 100 mL	U.S. Environmental Protection Agency, <i>Revised Total Coliform Rule (RTCR)</i>

Commented [MF26]: Stored water was required to be tested, but no pass fail criteria was ever included.

Cyanobacteria (harmful algae)	Low risk: <20,000 cells/mL	World Health Organization, <i>Guidelines for Safe Recreational Water Environments, Volume 1: Coastal and Fresh Waters</i>
Microcystin-LR (cyanotoxin)	1 µg/L	World Health Organization, <i>Guidelines for Drinking-water Quality</i>
<i>Legionella</i>	No universally accepted numeric potable-water limit	World Health Organization, <i>Legionella and the Prevention of Legionellosis</i>
<i>Legionella</i>	Water management program required	ASHRAE, <i>ASHRAE Standard 188 – Legionellosis: Risk Management for Building Water Systems</i>

Table A.12.3.21.2

12.4 Maintenance.

12.4.1 General.

12.4.1.1 Maintenance shall be performed to keep the system equipment operable or to make repairs.

12.4.1.1.1 Where required by the manufacturer, maintenance shall be performed on devices not described in this standard.

12.4.1.2 As-built system installation drawings, original acceptance test records, and device manufacturer's maintenance bulletins shall be retained to assist in the proper care of the system and its components.

12.4.1.3 Replacement components shall be in accordance with the manufacturer's specifications and the original system design.

12.4.1.4 Spare components shall be accessible and shall be stored in a manner to prevent damage or contamination.

12.4.1.5* After each system operation, a representative sample of operated water mist nozzles in the activated zone shall be inspected.

A.12.4.1.5 The representative sample should include 10 percent of the water mist nozzles in the activated zone. If contamination of filters or strainers is found on inspection, it is recommended that all nozzles within the activated zone be inspected.

12.4.1.6 After each system operation due to fire, the system filters and strainers shall be cleaned or replaced.

12.4.1.7 Annually, a water tank used to supply a water mist system shall be drained and refilled.

12.4.1.8 Annually, a water mist system with open nozzles shall be flushed.

12.4.1.9 Hangers, braces, and supports that are damaged, loose, or unattached shall be replaced or refastened.

Commented [MF27]: Maintenance activity moved from 12.2

12.4.1.10 Additive Storage Cylinders having external corrosion or damage shall be replaced.

12.4.1.11 Additive Storage Cylinders liquid level shall be maintained at the minimum design level.

12.4.1.12 Cyclone separators shall be cleaned annually.

12.4.1.13 Stored water supplies shall be drained, flushed, and refilled as necessary.

Commented [MF28]: This is maintenance and has been moved to 12.4

12.4.1.14 Where required enclosures integrity or the interlock operability is compromised, these systems shall be repaired, replaced, or restored.

Commented [MF29]: Adds a maintenance requirement for enclosures and interlocks.

12.4.1.15 A reserve supply shall be provided where the extinguishing agent expellant gas or atomizing media cannot otherwise be replaced within 24 hours following system operation.

Commented [MF30]: Add a maintenance requirement for the reserve supply required by NFPA 750.

12.4.1.16 Signs required by NFPA 750, which are damaged or missing shall be replaced.

Commented [MF31]: Adds a maintenance requirement for signs.

12.4.2 Water Mist Nozzles.

12.4.2.1* Replacement water mist nozzles shall have the proper characteristics for the application intended, including the nozzle model and temperature rating.

A.12.4.2.1 Each water mist nozzle has unique requirements for protection applications and end-use limitations.

12.4.2.2 Only new water mist nozzles shall be used to replace existing water mist nozzles.

12.4.2.3* A supply of spare water mist nozzles (never fewer than three) shall be maintained on the premises so that any water mist nozzles that have operated or been damaged in any way can be promptly replaced.

A.12.4.2.3 A minimum of two water mist nozzles of each type and temperature rating installed should be provided.

12.4.2.3.1 The water mist nozzles shall correspond to the manufacturer(s), models, and temperature ratings of the water mist nozzles in the property.

12.4.2.3.2 The automatic water mist nozzles shall be kept in a cabinet located where the temperature will at no time exceed 100°F (38°C).

12.4.2.3.3 The stock of spare thermally activated nozzles shall include all types and ratings installed and shall be as follows:

- (1) For systems having fewer than 50 nozzles, not fewer than 3 nozzles
- (2) For systems having 50 to 300 nozzles, not fewer than 6 nozzles
- (3) For systems having 301 to 1000 nozzles, not fewer than 12 nozzles
- (4) For systems having over 1000 nozzles, not fewer than 24 nozzles

12.4.2.4* Where required by the manufacturer, a special water mist nozzle wrench shall be provided and kept in the cabinet to be used for the removal and installation of nozzles.

A.12.4.2.4 Other types of wrenches could damage the water mist nozzles.

12.4.2.4.1 One water mist nozzle wrench shall be provided for each type of nozzle installed.

New 12.4.2.5 Incorrectly oriented water mist nozzles shall be corrected by repositioning the branch line, drop, or sprig, or shall be replaced.

New 12.4.2.6 Where required minimum clearances from stock, furnishings, or equipment are not maintained, obstructions shall be corrected.

New 12.4.2.7 Open nozzles, including their strainers, shall be removed and cleaned after the discharge of water from installed nozzles.

New 12.4.2.7 Spare individual nozzle strainers and filters for water mist nozzles, if replaceable, shall be provided and shall include all types and sizes installed.

New 12.4.2.7.1 Spare strainers and filters shall be provided to service the nozzles, if replaceable, for the largest single hazard or group of hazards to be protected simultaneously.

12.4.2.5 Protective Coverings.

12.4.2.5.1 Water mist nozzles protecting spray areas and mixing rooms in resin application areas installed with protective coverings shall continue to be protected against overspray residue so that they will operate in the event of fire.

12.4.2.5.2* Water mist nozzles installed as described in **12.4.2.5.1** shall be protected using cellophane bags having a thickness of 0.003 in. (0.076 mm) or less or thin paper bags.

12.4.2.5.3 Coverings shall be replaced periodically so that heavy deposits of residue do not accumulate.

12.4.2.6 Water mist nozzles shall not be altered in any respect or have any type of ornamentation, paint, or coatings applied after shipment from the manufacturer.

12.4.2.7 Automatic water mist nozzles used for protecting commercial-type cooking equipment and ventilating systems shall be replaced annually.

12.4.2.7.1 Where automatic water mist nozzles are used and annual examination shows no buildup of grease or other material on the nozzles, the nozzles shall not be required to be replaced.

Commented [MF32]: This splits the maintenance activity from 12.2.1.1.6.

Commented [MF33]: This splits the maintenance activity from 12.2.1.1.6.

Commented [MF34]: This splits the maintenance activity from 12.2.1.1.7

Commented [MF35]: Spare nozzle strainers permitted by NFPA 750 have not been included in NFPA 25.

12.4.3 Pneumatically Operated Standby Pumps.

Pneumatically operated standby pumps shall be rebuilt every 5 years or as specified by the manufacturer.

12.4.4 Conversion Fitting.

A minimum of one spare conversion fitting of each type shall be maintained on the premises so that any conversion fittings that have been damaged in any way can be promptly replaced.

Commented [MF36]: The stock of spare conversion fittings required by NFPA 750 have not been included in 25.

12.4.5 Strainers.

12.4.5.1 Strainers shall be cleaned after each operation or flow test.

12.4.5.2 Strainers shall be cleaned in accordance with the manufacturer's instructions.

12.4.5.3 Spare strainers, if replaceable, shall be provided and shall include all types and sizes installed.

Commented [MF37]: Adds maintenance requirements for pipeline strainers that were previously located in the inspection section.

12.5 Training.

~~12.5.1 All persons who might be expected to inspect, test, maintain, or operate water mist systems shall be trained thoroughly in the functions they are expected to perform.~~

~~12.5.2 Refresher training shall be provided as recommended by the manufacturer or by the authority having jurisdiction.~~

Commented [MF38]: Covered by 4.1.1.3

New 12.5 Component Action Requirements.

New 12.5.1 Whenever a component in a sprinkler system is adjusted, repaired, reconditioned, or replaced, the actions required in **Table 12.5.1** shall be performed.

New **Table 12.5.1** Summary of Component Action Requirements

12.5.2 Where the original installation standard is different from the cited standard, the use of the appropriate installing standard shall be permitted.

New 12.5.3 These actions shall not require a design review, which is outside the scope of this standard.

Other changes in NFPA 25

4.3.5.1 Records for high pressure storage cylinder assemblies used in accordance with Chapter 12, shall be retained by the owner for the life of the system.



Public Input No. 219-NFPA 25-2026 [Section No. 13.1]

13.1* General.

13.1.1 Minimum Requirements.

13.1.1.1

This chapter shall provide the minimum requirements for the routine inspection, testing, and maintenance of common components and valves.

Table 13.1.1.2 shall be used to determine the minimum required frequencies for inspection, testing, and maintenance.

Table 13.1.1.2 Summary of Valves, Valve Components, and Trim Inspection, Testing, and Maintenance

13. 13.

<u>Item</u>	<u>Frequency</u>	<u>Reference</u>
Inspection		
Alarm valves	-	-
Exterior	Quarterly	13.4.1.1
Interior	5 years	13.4.1.2
Strainers, filters, orifices	5 years	13.4.1.2
Backflow prevention assemblies	-	-
Reduced pressure	Weekly	13.7.1
Reduced-pressure detectors	Weekly	13.7.1
Interior	5 years	13.7.1.3
Check valves — interior	5 years	13.4.2.1
Control valves	-	-
All valves except locked or supervised	Weekly	13.3.2.1
Locked or supervised	Monthly	13.3.2.1.1
Electrically supervised	Quarterly	13.3.2.1.2
Dry pipe valves/		
quick-opening devices	-	-
Enclosure (during cold weather)	—	Chapter 4
Exterior	Monthly	13.4.5.1.2
Interior	Annually	13.4.5.1.3
Strainers, filters, orifices	5 years	13.4.5.1.4
Low-temperature alarm	Annually	Chapter 4
Deluge valves	-	-
Enclosure (during cold weather)	Daily/weekly	Chapter 4
Exterior	Monthly	13.4.4.1.1
Interior	Annually	13.4.4.1.2

<u>Item</u>	<u>Frequency</u>	<u>Reference</u>
Strainers, filters, orifices	5 years	13.4.4.1.3
Fire department connections	Quarterly	13.8.1
Gauges	Monthly/quarterly	13.2.4
Hose valves and hose connections	Quarterly	13.6.1
Preaction valves	-	-
Enclosure (during cold weather)	—	Chapter 4
Exterior	Monthly	13.4.3.1.1
Interior	Annually	13.4.3.1.2
Strainers, filters, orifices	5 years	13.4.3.1.3
Pressure-regulating devices and relief valves	-	-
Master pressure-reducing valve	Weekly	13.5.4.1
Pressure-reducing valve	Quarterly	13.5.1.1
Pressure-reducing hose connection	Annually	13.5.2.1
Pressure-reducing hose valve with hose rack assembly	Annually	13.5.3.1
Valve supervisory signal initiating device	Quarterly	13.3.2.1.3
Supervisory signal devices (except valve supervisory switches)	Quarterly	13.2.5.1
Air compressors or nitrogen generators	Monthly	13.10.2
Corrosion inhibitor systems	Per manufacturer	<p><u>13.1.1.1 Corrosion-inhibiting equipment shall be tested in accordance with the manufacturer's instructions retained per 4.3. Manufacturer's instructions shall specify, at minimum:</u></p> <p><u>(1) A field-verifiable test method by which the inspector can confirm the corrosion-inhibiting</u></p>

<u>Item</u>	<u>Frequency</u>	<u>Reference</u>
		function is being delivered across the entire dry-pipe or pre-action piping network at the time of inspection.
		(2) A pass/fail criterion expressed as a measurable parameter (e.g., nitrogen purity percentage, chemical-agent concentration, or equivalent).
		(3) The expected service life of any consumable component, expressed in months or operating cycles.
		13.1.1.2 Where corrosion-inhibiting equipment introduces a chemical agent into the sprinkler piping, the property owner shall be provided with: (a) the SDS for that chemical agent, and (b) recommended cleanup and first-responder safety procedures applicable to discharge water following a sprinkler activation event.
		13.1.1.3 Corrosion-inhibiting equipment shall be maintained in accordance with the manufacturer's instructions retained per 4.3
Waterflow alarms	Quarterly	13.2.3
Testing		
Backflow prevention assemblies	Annually	13.7.2
Control valves	-	-
Operation and position	Annually	13.3.3.1
Valve status test	After control valve is closed and reopened	13.3.3.4
Valve supervisory signal initiating device	Semiannually	13.3.3.5.1
Deluge valves	-	-
Solenoid supervisory	Quarterly	13.4.4.2.14
Trip test	Annually/3 years	13.4.4.2.3
Dry pipe valves/		
quick-opening devices	-	-
Air leakage	3 years	13.4.5.2.9
Priming water	Quarterly	13.4.5.2.1
Low and high air pressure alarm	Annually	13.4.5.2.6
Quick-opening devices	Quarterly	13.4.5.2.4
Trip test	Annually	13.4.5.2.2

<u>Item</u>	<u>Frequency</u>	<u>Reference</u>
Full-flow trip test	3 years	13.4.5.2.2.2
Gauges	5 years	13.2.4.2
Main drains	Annually/quarterly	13.2.2
Preaction valves	-	-
Priming water	Quarterly	13.4.3.2.1
Low and high air pressure alarms	Quarterly	13.4.3.2.11
Solenoid supervisory	Quarterly	13.4.4.2.14
Trip test	Annually/3 years	13.4.3.2.2 and 13.4.3.2.3
Air leakage	3 years	13.4.3.2.6
Low-temperature alarm	Annually	13.4.3.2.12
Pressure-regulating devices and relief valves	-	-
Master pressure-reducing valve	Quarterly/annually	13.5.4.2 and 13.5.4.3
Pressure-reducing valve	Annually/5 years	13.5.1.3 and 13.5.1.2
Pressure-reducing hose valve	Annually/5 years	13.5.2.3 and 13.5.2.2
Pressure-reducing hose valve with rack assembly	Annually/5 years	13.5.3.3 and 13.5.3.2
Air compressors or nitrogen generators	Annually	13.10.3
Hose valves	Annually/3 years	13.6.2
Waterflow alarms	Quarterly/Semiannually	13.2.3
Supervisory signal devices (except valve supervisory switches)	Annually	13.2.5.2
Maintenance		
Alarm valves	Per manufacturer	13.4.1.3
Backflow prevention assemblies	Per manufacturer	13.7.3
Check valves	Per manufacturer	13.4.2.2

<u>Item</u>	<u>Frequency</u>	<u>Reference</u>
Control valves (outside screw and yoke)	Annually	13.3.4
Deluge valves	Annually	13.4.4.3
Dry pipe valves/ quick-opening devices	Annually	13.4.5.3
Hose valves	As needed	13.6.3
Preaction valves	Annually	13.4.3.3
Air compressors or nitrogen generators	Per manufacturer	13.10.4
Corrosion- inhibiting systems	Per manufacturer	<p><u>13.1.1.1 Corrosion-inhibiting equipment shall be tested in accordance with the manufacturer's instructions retained per 4.3. Manufacturer's instructions shall specify, at minimum:</u></p> <p><u>(1) A field-verifiable test method by which the inspector can confirm the corrosion-inhibiting function is being delivered across the entire dry-pipe or pre-action piping network at the time of inspection.</u></p> <p><u>(2) A pass/fail criterion expressed as a measurable parameter (e.g., nitrogen purity percentage, chemical-agent concentration, or equivalent).</u></p> <p><u>(3) The expected service life of any consumable component, expressed in months or operating cycles.</u></p> <p><u>13.1.1.2 Where corrosion-inhibiting equipment introduces a chemical agent into the sprinkler piping, the property owner shall be provided with: (a) the SDS for that chemical agent, and (b) recommended cleanup and first-responder safety procedures applicable to discharge water following a sprinkler activation event.</u></p> <p><u>13.1.1.3 Corrosion-inhibiting equipment shall be maintained in accordance with the manufacturer's instructions retained per 4.3</u></p>

13. 11

Statement of Problem and Substantiation for Public Input

The current §13.1.1 language provides no minimum performance threshold or testable parameter. Nitrogen-supervised systems are field-verifiable to 98% purity using a portable analyzer; the field-verification methodology is well established and consistently applied. Vapor Corrosion Inhibitor (VCI) systems, by contrast, currently have no field-verifiable method published in the recognized product literature. A contractor performing a NFPA 25 inspection of a VCI-treated system has no way to confirm that the protective barrier exists, that it has reached the far ends of the piping network, or that it persists at the intended concentration.

The proposed revision does not specify a single test method (which would inappropriately favor any

particular technology). It places the burden on the manufacturer to provide a field-verifiable method, a measurable pass/fail criterion, and a defined consumable service life. This is consistent with the manufacturer-instructions framework already in §13.1.1; it simply requires that those instructions actually contain the elements an inspector needs in order to perform the inspection.

Section 13.1.1.2 closes a gap that has emerged with the recognition of chemical-bearing corrosion-mitigation systems in NFPA 13. A sprinkler activation event involving a VCI-treated system will discharge chemically-laden water into the protected space and onto first responders. The property owner is currently not required to receive or retain any information about the chemistry of that discharge, nor are first responders provided with any disclosure or response guidance. This proposal corrects that omission.

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Public Input No. 103-NFPA 25-2026 [Section No. 13.1.1.1]

13.1.1.1

This chapter shall provide the minimum requirements for the routine inspection, testing, and maintenance of common components and valves.

13.1.1.1.1 Inspection, testing, and maintenance requirements occurring at intervals greater than annual that are not completed within the prescribed frequency shall be deemed a deficiency.

Statement of Problem and Substantiation for Public Input

The proposed language is intended to clarify the significance associated with test and testing activities that occur at frequencies greater than one year and are not completed within the prescribed interval. Currently, NFPA 25 identifies deficiencies based largely on observed physical conditions or operational impairments; however, the standard does not consistently address overdue inspection activities. This PI improves consistency within NFPA 25 by recognizing overdue test requirements as deficiencies rather than merely incomplete documentation items. The proposed language aligns with the overall intent of NFPA 25 to maintain fire protection systems in an operational state of readiness and provides clear enforceable criteria for owners, contractors, and authorities having jurisdiction. The proposal does not create new requirements or shorten existing inspection frequencies. Instead, it clarifies that once the prescribed interval has been exceeded, the affected component or system is no longer considered compliant with the test and testing requirements of the standard and shall be identified as a deficiency until the required inspection is completed.

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Committee: INM-AAA



Public Input No. 19-NFPA 25-2026 [New Section after 13.3.3.2.1]

13.3.3.2.2

The post indicator valve shall be verified to be displaying the appropriate position following the test.

Statement of Problem and Substantiation for Public Input

The indicator with the indication window can slip or bind up, resulting in improper operation or display, and is a frequent finding in the field. This addition helps to ensure a reasonable degree of protection by verifying that the display accurately reflects the valve's true status.

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Committee: INM-AAA



Public Input No. 49-NFPA 25-2026 [Section No. 13.3.3.4]

13.3.3.4

A valve status test shall be conducted any time ~~the control~~ a control valve is closed and reopened ~~at system riser~~.

Statement of Problem and Substantiation for Public Input

Control valves within a system are subject to an annual control valve test, whether at the system riser or not. The only way to be certain that the valve is in the condition as indicated by the flag or stem, or is broken, is to flow water past it, whether it is an isolation valve or at the system riser.

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Committee: INM-AAA



Public Input No. 15-NFPA 25-2026 [New Section after 13.4.3.2.10]

13.4.3.2.11

Records of double interlock and non-interlock preaction valve water transit delivery time to the inspector's test connection shall be maintained for full flow trip tests.

Statement of Problem and Substantiation for Public Input

Double interlock and non-interlock preaction systems are subject to a water delivery time that is required to be tested upon acceptance and needs to be observed over the lifetime of the system. The suggested text mimics what is already required for dry systems in 13.4.5.2.5.2.

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Committee: INM-AAA



Public Input No. 16-NFPA 25-2026 [Section No. 13.4.3.2.11]

13.4.3.2.11

Low and high air pressure alarms, if provided, shall be tested ~~quarterly~~ annually in accordance with the manufacturer's instructions.

Statement of Problem and Substantiation for Public Input

There is no alignment for the testing frequency of air pressure switches between dry and preaction systems. This would align the frequency with that stated in 13.4.5.2.6 for dry pipe valves. The monitoring of air pressure is less critical in a preaction system than a dry pipe system and does not need to be tested more frequently.

Related Public Inputs for This Document

<u>Related Input</u>	<u>Relationship</u>
<u>Public Input No. 17-NFPA 25-2026 [Section No. 13.4.5.2.6]</u>	

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Committee: INM-AAA



Public Input No. 218-NFPA 25-2026 [Section No. 13.4.3.2.15]

13.4.3.2.15 * –

~~In preaction systems where nitrogen is used to allow for an increased C-value in accordance with NFPA 13, the nitrogen supply shall be tested semiannually to verify the nitrogen concentration is at 98 percent or greater.~~

13.4.3.2.15.1 –

~~Where the nitrogen concentration is monitored at a constantly attended location, the concentration shall be verified annually.~~

13.4.3.2.15.2 –

~~If nitrogen concentration is found to be below 98 percent, the cause of the low concentration shall be identified and corrected.~~

Statement of Problem and Substantiation for Public Input

This is a requirement that places an [almost] impossible burden on the inspector and owner. How are they to know if the system was calculated using a C-Value of 120? It is a fact that the original hydraulics are very rarely available to the owner or the inspector. The NFPA 13 TC should have never permitted the higher C-Value.

Related Public Inputs for This Document

<u>Related Input</u>	<u>Relationship</u>
Public Input No. 197-NFPA 25-2026 [Sections 4.1.5.2, 4.1.5.3]	
Public Input No. 197-NFPA 25-2026 [Sections 4.1.5.2, 4.1.5.3]	

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Public Input No. 61-NFPA 25-2026 [Section No. 13.4.4.2.3 [Excluding any Sub-Sections]]

Except as provided by 13.4.4.2.3.1 and 13.4.4.2.3.2, each deluge valve shall be trip tested annually, in accordance with the manufacturer's instructions, and at full flow in warm weather ~~and in accordance with the manufacturer's instructions , when freezing temperatures are not anticipated for thirty days based upon nationally recognized weather records .~~

Statement of Problem and Substantiation for Public Input

Trip testing in the spring needs to be moved from the Annex into the body of the standard. Technicians perform full trip tests of deluge systems in 'warm weather' in October, November, December, and January because it is 'warm' that day, or for a few days. That is not the intent. Deluge systems cannot dry out in areas where freezing temperatures are experienced in September through March as they can if the system is full trip tested in April through June. Full trip testing in September through February promotes corrosion and freeze failures.

Related Public Inputs for This Document

<u>Related Input</u>	<u>Relationship</u>
<u>Public Input No. 62-NFPA 25-2026 [Section No. 13.4.5.2.2 [Excluding any Sub-Sections]]</u>	further defined 'warm weather'.
<u>Public Input No. 62-NFPA 25-2026 [Section No. 13.4.5.2.2 [Excluding any Sub-Sections]]</u>	

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Committee: INM-AAA



Public Input No. 62-NFPA 25-2026 [Section No. 13.4.5.2.2 [Excluding any Sub-Sections]]

Each dry pipe valve shall be trip tested annually during warm weather, when freezing temperatures are not anticipated for thirty days based upon nationally recognized weather records .

Statement of Problem and Substantiation for Public Input

Trip testing in the spring needs to be moved from the Annex into the body of the standard. Technicians perform full trip tests of dry systems in 'warm weather' in October, November, December, and January because it is 'warm' that day, or for a few days. That is not the intent. Dry systems do not and cannot dry out in areas where freezing temperatures are experienced in September through March as they can if the system is full trip tested in April through June. Full trip testing in September through February promotes corrosion and freeze failures.

Related Public Inputs for This Document

Related Input

Public Input No. 61-NFPA 25-2026 [Section No. 13.4.4.2.3 [Excluding any Sub-Sections]]

Public Input No. 61-NFPA 25-2026 [Section No. 13.4.4.2.3 [Excluding any Sub-Sections]]

Relationship

full trip testing with 'warm weather' further defined.

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Committee: INM-AAA



Public Input No. 38-NFPA 25-2026 [Section No. 13.4.5.2.2.2]

13.4.5.2.2.2*

~~Every~~ Except for dry pipe valves covered by 13.4.5.2.2.1, every 3 years and whenever the system is altered, the dry pipe valve shall be trip tested with the control valve fully open and the quick-opening device, if provided, in service.

Statement of Problem and Substantiation for Public Input

The standard is inconsistent and should be the same as the paragraphs for preaction systems covering freezers i.e. 13.4.3.2.2. With many jurisdictions using third party reporting systems any dry system not flooded every third year this is coming up as a deficiency and should not. Deluge systems can be different as they are not normally found protecting conditioned spaces. The annex may also need an additional clarification to ensure that a full flood test should be scheduled with any shut down when temperatures exceed 40 degrees for a long enough time to allow for proper drainage.

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Committee: INM-AAA



Public Input No. 39-NFPA 25-2026 [Section No. 13.4.5.2.5.2]

13.4.5.2.5.2*

Records of dry pipe valve tripping time and water transit delivery time to the inspector's test connection shall be maintained for comparison to previous full flow trip tests and maximum water delivery times as listed in NFPA 13.

Statement of Problem and Substantiation for Public Input

There is no requirement or guidance of any kind to provide inspectors, or AHJ's with the information that would allow for comparison to original performance requirements. Or, to determine if the degradation of system pipe or components is preventing or affecting the original water delivery time for NFPA 13 or NFPA 13R installation requirements from 15 to 60 seconds. By wording the requirement in this way it also allows the AHJ to apply judgement as to if the difference in delivery time requires any action. If the committee decides additional guidance is required it can specify that in the annex.

Related Public Inputs for This Document

<u>Related Input</u>	<u>Relationship</u>
<u>Public Input No. 40-NFPA 25-2026 [New Section after A.13.4.5.2.4]</u>	

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Committee: INM-AAA



Public Input No. 17-NFPA 25-2026 [Section No. 13.4.5.2.6]

13.4.5.2.6

Low and high air pressure alarms, if provided, shall be tested ~~annually~~ quarterly in accordance with the manufacturer's instructions.

Statement of Problem and Substantiation for Public Input

There is no alignment for the testing frequency of pressure switches between dry and preaction systems. This would align the frequency with that stated in 13.4.3.2.11 for preaction valves. The monitoring of air pressure is more critical in a dry pipe system than a preaction system and needs to be tested more frequently.

Related Public Inputs for This Document

<u>Related Input</u>	<u>Relationship</u>
<u>Public Input No. 16-NFPA 25-2026 [Section No. 13.4.3.2.11]</u>	Correlation between requirements

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Committee: INM-AAA



Public Input No. 23-NFPA 25-2026 [Section No. 13.5.1.4 [Excluding any Sub-Sections]]

A full flow test shall be conducted on each valve at 5-year intervals- ~~and shall be compared to previous test results .~~

Statement of Problem and Substantiation for Public Input

Comparison of results is addressed by section 4.6.4 and needs to compare the test results with the original acceptance test AND the most recent test.

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Committee: INM-AAA



Public Input No. 134-NFPA 25-2026 [Section No. 13.6.1.1]

13.6.1.1

Hose valves shall be inspected quarterly to verify the following conditions:

- (1) Hose connection thread protection is in place.
- (2)* Hose connection caps not rated for pressures have an opening of at least ~~1/8~~ 1/4 in. in diameter.
- (3) Hose threads are not damaged.
- (4) Valve handles are present and not damaged.
- (5) Gaskets are not damaged or showing signs of deterioration.
- (6) No leaks are present.
- (7) Valves are not obstructed or otherwise not capable of normal operation.

Statement of Problem and Substantiation for Public Input

NFPA 14 has changed this requirement to 1/4" in Section 7.8.3.1 in the 2027 edition so this should be changed here to correlate.

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Submittal Date: Mon Jun 01 16:27:18 EDT 2026

Committee: INM-AAA



Public Input No. 149-NFPA 25-2026 [New Section after 13.7.1.2]

TITLE OF NEW CONTENT

A.13.7.1.2 Where an internal inspection of a water-based fire protection system backflow prevention assembly is conducted in accordance with this standard, the inspection should be performed by certified personnel in accordance with the requirements of the applicable state, local, or authority having jurisdiction (AHJ) regulations.

Statement of Problem and Substantiation for Public Input

Requiring internal inspections to be conducted by personnel certified in accordance with applicable state or local requirements provides clear criteria for determining who is permitted to perform these inspections and promotes consistency with jurisdictional regulatory requirements governing backflow prevention assemblies.

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Submittal Date: Tue Jun 02 14:15:17 EDT 2026

Committee: INM-AAA



Public Input No. 109-NFPA 25-2026 [Section No. 13.7.1.3]

13.7.1.3*

Backflow prevention assemblies shall be inspected internally every 5 years to verify that all components operate correctly, move freely, and are in good condition.

13.7.1.3.1 An internal inspection of the backflow prevention assembly shall be permitted as an acceptable alternative means to the forward flow test required by 13.7.2.1.

Statement of Problem and Substantiation for Public Input

The purpose of the forward flow test required by NFPA 25 is to verify that the backflow prevention assembly and associated piping are capable of delivering the required system demand and that no obstructions or impairments exist that could restrict water flow to the fire protection system. An internal inspection of the backflow prevention assembly can provide direct visual verification of the internal condition of the device components, including clappers, checks, springs, seats, and waterways, and can identify corrosion, debris, biological growth and other conditions such as mechanical damage that may not be readily identified during a forward flow test alone.

In many cases, a forward flow test verifies only that water can pass through the assembly at the time of testing but does not confirm the internal mechanical condition of the device or identify developing conditions that could impair future performance. Allowing an internal inspection as an alternative method would provide flexibility where conducting a full forward flow test is impractical while still confirming the operational condition of the assembly through direct examination.

This approach would also align with existing NFPA 25 inspection concepts that recognize internal examinations as an effective means of identifying hidden impairments and evaluating the condition of fire protection system components.

Additionally, verification of the original system demand can be difficult in existing systems since the 2017 edition of NFPA 25 revised the requirement to require flowing of all mains, not just when they fed fire hydrants. As a result, many existing systems may not have a practical means to verify full system demand through forward flow testing.

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Submittal Date: Fri May 29 14:18:41 EDT 2026

Committee: INM-AAA



Public Input No. 137-NFPA 25-2026 [Section No. 13.7.2.1.1]

13.7.2.1.1

—

~~Where water rationing is enforced during shortages lasting more than 1 year, an~~

An internal inspection of the backflow preventer to ensure the check valves will fully open shall be permitted in lieu of conducting the annual forward flow test.

Statement of Problem and Substantiation for Public Input

In certain areas it is not allowed to flow water into rainwater drainage system without treating it (dechlorination) and building sanitary drainage system cannot handle higher sprinkler/standpipe system demands, so this test becomes the most challenging part of the sprinkler inspection. The testing of water-based fire protection systems uses large amount of water which does not help our industry from the environmental standpoint, so inspecting the backflow preventer internally instead of performing the backflow preventer forward flow annually would present the welcome change from this aspect.

The internal inspections shall be done by qualified and certified backflow preventer tester to ensure that backflow preventer check valves are not stack and will open during operation.

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Committee: INM-AAA



Public Input No. 132-NFPA 25-2026 [New Section after 13.8.5]

TITLE OF NEW CONTENT

Type your content here ...

13.8.5.3*

Where remote fire department connections contain check valves or automatic drain valves that are located underground and not accessible to perform the test required in 13.8.5, a performance-based test conducted from the fire department connection through the associated piping shall be permitted.

A.13.8.5.3

A performance-based test of a remote fire department connection is intended to provide a functional means of verifying the integrity of piping where check valves or automatic drain valves are not accessible for direct inspection and testing. The intent of this section is to validate that the fire department connection piping is intact and free of obstructions that would impair the delivery of water to the system.

This could include a hydrostatic test, a forward-flow test, or other means approved by the authority having jurisdiction.

Statement of Problem and Substantiation for Public Input

Section 13.8.5 currently requires hydrostatic testing of fire department connection piping, including associated check valves and automatic drain valves. However, there are numerous existing installations where remote FDCs were installed prior to requirements in NFPA 13 mandating that check valves be located in accessible locations in this arrangement. In these legacy systems, the check valve and means of draining residual pressure were often installed underground and are not accessible without excavation.

In such cases, compliance with the 5-year hydrostatic testing requirements of Section 13.8.5 is impractical without significant cost and disruption to the building owner, including excavation and the installation of a vault to access these components. As a result, these tests are frequently not performed at all, leading to inconsistent enforcement and reduced overall system verification.

While it is important to verify the integrity of FDC piping, the current hydrostatic test requirement may not be the most appropriate method in these situations. The intent of the requirement is to ensure that the FDC piping is capable of delivering water to the system during fire department operations. However, verifying the ability of the piping to sustain hydrostatic pressure with minimal leakage over a prescribed duration does not necessarily provide the most relevant indication of operational performance for buried and inaccessible configurations.

Other NFPA standards recognize similar limitations. For example, NFPA 24 permits a defined leakage rate and the use of makeup water during hydrostatic acceptance testing of underground piping, acknowledging that some leakage may occur without compromising system functionality.

This proposal introduces an alternative by permitting a performance-based test conducted from the FDC in cases where check valves or automatic drain valves are not accessible. This approach aligns with existing performance-based verification methods within NFPA 25.

The intent of this alternative is to validate that the FDC piping is intact. A performance based test such

as a forward-flow test provides a reliable means of identifying conditions such as obstructions, impaired check valves, or compromised underground piping that could prevent water from reaching the system during fire department use.

The proposed annex language further clarifies the conditions under which this exception is intended to apply and describes the purpose of the alternative testing approach. This proposal does not eliminate inspection or testing requirements where components are accessible, but instead provides a reasonable alternative where access is not feasible.

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13.10 Air Compressors and Nitrogen Generators.

13.10.1 General. *

A.13.10.1

When applying nitrogen generator systems to existing sprinkler system installations with known corrosion issues, the root cause of the corrosion must first be identified. In some dry and pre-action sprinkler systems, microbiologically influenced corrosion (MIC) and other forms of corrosion can be present, resulting from bacteria, poor water quality, and material selection, combined with the presence of oxygen. This environment promotes biofilm formation. Over time, anaerobic bacteria such as sulfate-reducing bacteria (SRB) may develop, actively accelerating metal deterioration. If these corrosion processes are already active, introducing nitrogen without first cleaning and disinfecting the system may unintentionally promote anaerobic corrosion conditions. Preventive corrosion mitigation measures should therefore only be implemented after the system has been properly cleaned and the underlying cause of corrosion has been addressed.

13.10.1.1

Air compressors and nitrogen generators dedicated to water-based fire protection systems shall be inspected, tested, and maintained in accordance with 13.10.2, 13.10.3, and 13.10.4.

13.10.1.2

Air compressors not dedicated to water-based fire protection systems shall be inspected, tested, and maintained in accordance with the manufacturer's instructions.

13.10.2 Inspection.

Air compressors and nitrogen generators dedicated to water-based fire protection systems shall be inspected monthly to verify the following:

- (1) Air compressor or nitrogen generator is free of physical damage.
- (2) Power wiring to the air compressor is intact and free of physical damage.
- (3) Piping from the air compressor or nitrogen generator to the fire protection system is intact and free of physical damage.
- (4) The means of anchoring the air compressor or nitrogen generator to the structure or to the system piping is secure, tight, and free of physical damage.
- (5) Air compressors requiring oil have the required amount of oil in the oil reservoir.
- (6) Corrosion-inhibiting equipment is intact and free of physical damage.
- (7) Record nitrogen concentration levels both at the nitrogen generator and at the most remote points of the sprinkler system

13.10.2.1 Annual Nitrogen Generator Inspections

Nitrogen generators shall be inspected annually to verify the following:

- (1) * Nitrogen generator operating hours
- (2) Record nitrogen concentration level at the generator

- (3) * Record the total number of remotely installed purge valves and document nitrogen concentration measurements for each valve
- (4) Record equipment type, model numbers, serial numbers, and all maintenance activities performed.

A. 13.10.2.1 (1)

Significant changes in annual runtime may indicate increased leakage rates or abnormal system conditions.

A. 13.10.2.1 (3)

Field observations continue to show that purge valves are frequently installed or configured incorrectly, despite manufacturer guidelines. Although manufacturers provide installation requirements, responsibility for proper installation ultimately rests with the installation contractor. In practice, insufficient field experience often results in improper installation or commissioning. Correct installation and professional commissioning are therefore essential. A complete commissioning report, including both visual and written documentation, shall be maintained to verify that the system operated correctly from the initial startup date. This documentation also establishes a critical baseline for future troubleshooting and performance evaluation.

13.10.3 Testing.

Air compressors or nitrogen generator dedicated to water-based fire protection systems shall be tested annually to verify the following:

- (1) Air compressor or nitrogen generator operates as intended on the proper drop of air pressure in the fire protection system.
- (2) * Air compressor or nitrogen generator restores normal supervisory pressure in the fire protection system in the required time frame.
- (3) Air compressor does not overheat while running.

(1)

(a)

i.

i. Nitrogen Generator Testing

- (2) Perform testing to verify transmission of alarm and supervisory signals to the fire alarm control panel, including functional testing, while the system is placed in test mode.
- (3) * Perform tests to verify and record generator runtimes between cut-in and cut-out pressures.

A.13.10.3.1(2)

Deviations from baseline runtimes may indicate leakage conditions or declining generator performance.

If abnormal runtimes are identified, systematic troubleshooting shall be performed to determine whether the issue originates within the sprinkler system or within the nitrogen generator itself. Service providers should maintain an inventory of common spare parts to facilitate preventive maintenance and repairs on-site.

(1)

(a)

i. Maintenance.

A.13.10.4

All maintenance activities, measured values, and identified deficiencies including blocked purge valves or abnormal nitrogen concentrations, should be documented in a formal written report with both visual and written evidence. The servicing contractor shall also provide recommendations for corrective actions and long-term prevention measures.

13.10.4.1*

Air compressors or nitrogen generators dedicated to water-based fire protection systems shall be maintained in accordance with the manufacturer's instructions and the requirements of 13.10.4.2 for air compressors, or 13.10.4.3 and 13.10.4.4 for nitrogen generators.

A.13.10.4.1

Annual nitrogen generator maintenance should not be performed simultaneously with annual sprinkler trip testing as pressure loss during trip testing produces unreliable nitrogen concentration measurements.

Manufacturers should also provide recommended maintenance intervals for air compressors and other wear sensitive components. Compressor performance naturally degrades over time depending on operating hours and loading conditions. Larger nitrogen generators utilizing external compressors should likewise be incorporated into a structured annual service and maintenance program.

13.10.4.2

Compressors requiring oil shall have the oil replaced on an annual basis unless the manufacturer's instructions require more frequent replacement.

13.10.4.3 * For nitrogen generators, replace or service pre-filters annually, or a more frequent basis if specified by the manufacturer

A.13.10.4.3

In addition to the internal filter bed used for nitrogen production, all nitrogen generators are equipped with multiple pre-filters. These pre-filters should be replaced annually or after the manufacturer's specified operating hours have been reached. Proper maintenance of these filters is critical, as they directly determine the air quality supplied to the nitrogen-producing filter bed. Saturated or contaminated filters may negatively affect the efficiency, reliability, and purity of nitrogen production.

13.10.4.4*

For nitrogen generators, drain water from pipes supplying purge valves

A.13.10.4.4

During annual maintenance, it is frequently observed that inspectors/technicians fail to close the isolation valves to the purge valves during system trip testing procedures. As a result, water may be forced into the purge valves, often to the extent that the unit cannot adequately drain itself. This causes partial or complete blockage of the purge valves, preventing proper purging and reducing nitrogen concentration levels within the affected section. Field measurements have repeatedly shown situations where all other purge locations-maintained nitrogen concentrations above 98%, while the water-blocked purge locations displayed significantly lower nitrogen levels. This directly confirms the impact of obstructed purge valves and diffusion on overall system conditions.

Statement of Problem and Substantiation for Public Input

Maintenance requirements for nitrogen generators are limited to manufacturer's instructions only. However, these changes provide requirements that are considered necessary for all nitrogen generator installations, especially those installed with a c-value of 120. The annex sections provide clarity regarding the rationale for the addition of the requirements. This is an effort to change both NFPA 13 and NFPA 25 requirements to improve the overall performance of these systems from a corrosion mitigation perspective.

Related Public Inputs for This Document

<u>Related Input</u>	<u>Relationship</u>
Public Input No. 121-NFPA 25-2026	[Section No. 13.10]
Public Input No. 121-NFPA 25-2026	[Section No. 13.10]
Public Input No. 123-NFPA 25-2026	[Section No. 13.10.1]
Public Input No. 124-NFPA 25-2026	[Section No. 13.10.2]
Public Input No. 126-NFPA 25-2026	[New Section after 13.10.2]
Public Input No. 127-NFPA 25-2026	[New Section after 13.10.3]
Public Input No. 128-NFPA 25-2026	[Section No. 13.10.4]
Public Input No. 129-NFPA 25-2026	[Section No. 13.10.4.1]
Public Input No. 130-NFPA 25-2026	[New Section after 13.10.4.2]
Public Input No. 131-NFPA 25-2026	[New Section after 13.10.4.2]

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Committee: INM-AAA



Public Input No. 121-NFPA 25-2026 [Section No. 13.10]

~~13.10 – Air Compressors and Nitrogen Generators:~~

~~13.10.1 – General:~~

~~13.10.1.1 –~~

~~Air compressors and nitrogen generators dedicated to water-based fire protection systems shall be inspected, tested, and maintained in accordance with 13.10.2, 13.10.3, and 13.10.4:~~

~~13.10.1.2 –~~

~~Air compressors not dedicated to water-based fire protection systems shall be inspected, tested, and maintained in accordance with the manufacturer's instructions.~~

~~13.10.2 – Inspection:~~

~~Air compressors and nitrogen generators dedicated to water-based fire protection systems shall be inspected monthly to verify the following:~~

- ~~(1) Air compressor or nitrogen generator is free of physical damage.~~
- ~~(2) Power wiring to the air compressor is intact and free of physical damage.~~
- ~~(3) Piping from the air compressor or nitrogen generator to the fire protection system is intact and free of physical damage.~~
- ~~(4) The means of anchoring the air compressor or nitrogen generator to the structure or to the system piping is secure, tight, and free of physical damage.~~
- ~~(5) Air compressors requiring oil have the required amount of oil in the oil reservoir.~~
- ~~(6) Corrosion-inhibiting equipment is intact and free of physical damage.~~

~~13.10.3 – Testing:~~

~~Air compressors or nitrogen generator dedicated to water-based fire protection systems shall be tested annually to verify the following:~~

- ~~(1) Air compressor or nitrogen generator operates as intended on the proper drop of air pressure in the fire protection system.~~
- ~~(2)* Air compressor or nitrogen generator restores normal supervisory pressure in the fire protection system in the required time frame.~~
- ~~(3) Air compressor does not overheat while running.~~

~~13.10.4 – Maintenance:~~

~~13.10.4.1 –~~

~~Air compressors or nitrogen generators dedicated to water-based fire protection systems shall be maintained in accordance with the manufacturer's instructions.~~

~~13.10.4.2 –~~

~~Compressors requiring oil shall have the oil replaced on an annual basis unless the manufacturer's instructions require more frequent replacement.~~

Delete section and replace with revised text included as part of another PI.

Related Public Inputs for This Document

Related Input	Relationship
Public Input No. 122-NFPA 25-2026 [New Section after 13.10]	
Public Input No. 122-NFPA 25-2026 [New Section after 13.10]	
Public Input No. 124-NFPA 25-2026 [Section No. 13.10.2]	
Public Input No. 126-NFPA 25-2026 [New Section after 13.10.2]	
Public Input No. 127-NFPA 25-2026 [New Section after 13.10.3]	
Public Input No. 128-NFPA 25-2026 [Section No. 13.10.4]	
Public Input No. 129-NFPA 25-2026 [Section No. 13.10.4.1]	
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Public Input No. 205-NFPA 25-2026 [Section No. 13.10]

13.10 Air Compressors- ~~and~~ , Nitrogen Generators, and Plant Air .

13.10.1 General.

13.10.1.1

Air compressors and nitrogen generators dedicated to water-based fire protection systems shall be inspected, tested, and maintained in accordance with 13.10.2, 13.10.3, and 13.10.4.

13.10.1.2

Air compressors not dedicated to water-based fire protection systems shall be inspected, tested, and maintained in accordance with the manufacturer's instructions.

13.10.2 Inspection.

Air compressors and nitrogen generators dedicated to water-based fire protection systems shall be inspected monthly to verify the following:

- (1) Air compressor or nitrogen generator is free of physical damage.
- (2) Power wiring to the air compressor is intact and free of physical damage.
- (3) Piping from the air compressor or nitrogen generator to the fire protection system is intact and free of physical damage.
- (4) The means of anchoring the air compressor or nitrogen generator to the structure or to the system piping is secure, tight, and free of physical damage.
- (5) Air compressors requiring oil have the required amount of oil in the oil reservoir.
- (6) Corrosion-inhibiting equipment is intact and free of physical damage.

13.10.3 Testing.

Air compressors or nitrogen generator dedicated to water-based fire protection systems shall be tested annually to verify the following:

- (1) Air compressor or nitrogen generator operates as intended on the proper drop of air pressure in the fire protection system.
- (2) * Air compressor or nitrogen generator restores normal supervisory pressure in the fire protection system in the required time frame.
- (3) Air compressor does not overheat while running.

13.10.4 Maintenance.

13.10.4.1

Air compressors or nitrogen generators dedicated to water-based fire protection systems shall be maintained in accordance with the manufacturer's instructions.

13.10.4.2

Compressors requiring oil shall have the oil replaced on an annual basis unless the manufacturer's instructions require more frequent replacement.

Statement of Problem and Substantiation for Public Input

The section title has been revised to include Plant Air and correlate with NFPA 13.

Related Public Inputs for This Document

<u>Related Input</u>	<u>Relationship</u>
Public Input No. 200-NFPA 25-2026 [New Section after 3.3.31]	
Public Input No. 206-NFPA 25-2026 [Section No. 13.10.1.1]	
Public Input No. 208-NFPA 25-2026 [New Section after 13.10.2]	
Public Input No. 210-NFPA 25-2026 [New Section after 13.10.3]	
Public Input No. 212-NFPA 25-2026 [Section No. 13.10.4.1]	

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Public Input No. 123-NFPA 25-2026 [Section No. 13.10.1]

13.10.1* General.

13.10.1.1

Air compressors and nitrogen generators dedicated to water-based fire protection systems shall be inspected, tested, and maintained in accordance with 13.10.2, 13.10.3, and 13.10.4.

13.10.1.2

Air compressors not dedicated to water-based fire protection systems shall be inspected, tested, and maintained in accordance with the manufacturer's instructions.

A.13.10.1

When applying nitrogen generator systems to existing sprinkler system installations with known corrosion issues, the root cause of the corrosion must first be identified. In some dry and pre-action sprinkler systems, microbiologically influenced corrosion (MIC) and other forms of corrosion can be present, resulting from bacteria, poor water quality, and material selection, combined with the presence of oxygen. This environment promotes biofilm formation. Over time, anaerobic bacteria such as sulfate-reducing bacteria (SRB) may develop, actively accelerating metal deterioration. If these corrosion processes are already active, introducing nitrogen without first cleaning and disinfecting the system may unintentionally promote anaerobic corrosion conditions. Preventive corrosion mitigation measures should therefore only be implemented after the system has been properly cleaned and the underlying cause of corrosion has been addressed.

Statement of Problem and Substantiation for Public Input

Provides guidance for installation of nitrogen generators on existing sprinkler systems.

Related Public Inputs for This Document

<u>Related Input</u>	<u>Relationship</u>
<u>Public Input No. 122-NFPA 25-2026 [New Section after 13.10]</u>	
<u>Public Input No. 124-NFPA 25-2026 [Section No. 13.10.2]</u>	
<u>Public Input No. 126-NFPA 25-2026 [New Section after 13.10.2]</u>	
<u>Public Input No. 127-NFPA 25-2026 [New Section after 13.10.3]</u>	
<u>Public Input No. 128-NFPA 25-2026 [Section No. 13.10.4]</u>	
<u>Public Input No. 129-NFPA 25-2026 [Section No. 13.10.4.1]</u>	
<u>Public Input No. 130-NFPA 25-2026 [New Section after 13.10.4.2]</u>	
<u>Public Input No. 131-NFPA 25-2026 [New Section after 13.10.4.2]</u>	

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Public Input No. 206-NFPA 25-2026 [Section No. 13.10.1.1]

13.10.1.1

Air compressors- ~~and~~ , nitrogen generators, ~~and plant air~~ dedicated to water-based fire protection systems shall be inspected, tested, and maintained in accordance with 13.10.2, 13.10.3, and 13.10.4.

Statement of Problem and Substantiation for Public Input

The section title has been revised to include Plant Air and correlate with NFPA 13.

Related Public Inputs for This Document

<u>Related Input</u>	<u>Relationship</u>
<u>Public Input No. 200-NFPA 25-2026 [New Section after 3.3.31]</u>	
<u>Public Input No. 205-NFPA 25-2026 [Section No. 13.10]</u>	
<u>Public Input No. 208-NFPA 25-2026 [New Section after 13.10.2]</u>	
<u>Public Input No. 210-NFPA 25-2026 [New Section after 13.10.3]</u>	
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Public Input No. 203-NFPA 25-2026 [New Section after 13.10.1.2]

13.10.1.3

The disconnecting means for an automatic air compressor and nitrogen generator shall not be a general use switch or a cord-and-plug connection. Where an air compressor is the dedicated air supply or where a nitrogen generator is the dedicated nitrogen supply, it shall be installed in accordance with NFPA 70 , Article 430.

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Statement of Problem and Substantiation for Public Input

The proposed additional text correlates with NFPA 13 §8.2.7.5 and §8.2.7.6.

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Public Input No. 126-NFPA 25-2026 [New Section after 13.10.2]

13.10.2.1 Annual Nitrogen Generator Inspections

Nitrogen generators shall be inspected annually to verify the following:

- (1) * Nitrogen generator operating hours
- (2) Record nitrogen concentration level at the generator
- (3) * Record the total number of remotely installed purge valves and document nitrogen concentration measurements for each valve
- (4) Record equipment type, model numbers, serial numbers, and all maintenance activities performed.

A. 13.10.2.1 (1)

Significant changes in annual runtime may indicate increased leakage rates or abnormal system conditions.

A. 13.10.2.1 (3)

Field observations continue to show that purge valves are frequently installed or configured incorrectly, despite manufacturer guidelines. Although manufacturers provide installation requirements, responsibility for proper installation ultimately rests with the installation contractor. In practice, insufficient field experience often results in improper installation or commissioning. Correct installation and professional commissioning are therefore essential. A complete commissioning report, including both visual and written documentation, shall be maintained to verify that the system operated correctly from the initial startup date. This documentation also establishes a critical baseline for future troubleshooting and performance evaluation.

Statement of Problem and Substantiation for Public Input

Adds annual inspection requirements for nitrogen generators.

Maintenance requirements for nitrogen generators are limited to manufacturer's instructions only. However, these changes provide requirements that are considered necessary for all nitrogen generator installations, especially those installed with a c-value of 120. The annex sections provide clarity regarding the rationale for the addition of the requirements. This is an effort to change both NFPA 13 and NFPA 25 requirements to improve the overall performance of these systems from a corrosion mitigation perspective.

Related Public Inputs for This Document

<u>Related Input</u>	<u>Relationship</u>
<u>Public Input No. 121-NFPA 25-2026 [Section No. 13.10]</u>	
<u>Public Input No. 122-NFPA 25-2026 [New Section after 13.10]</u>	
<u>Public Input No. 123-NFPA 25-2026 [Section No. 13.10.1]</u>	
<u>Public Input No. 124-NFPA 25-2026 [Section No. 13.10.2]</u>	
<u>Public Input No. 127-NFPA 25-2026 [New Section after 13.10.3]</u>	
<u>Public Input No. 128-NFPA 25-2026 [Section No. 13.10.4]</u>	
<u>Public Input No. 129-NFPA 25-2026 [Section No. 13.10.4.1]</u>	
<u>Public Input No. 130-NFPA 25-2026 [New Section after 13.10.4.2]</u>	

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Public Input No. 208-NFPA 25-2026 [New Section after 13.10.2]

13.10.2.1

Plant air dedicated to water-based fire protection systems shall be inspected monthly to verify the following:

- (1) Plant air is free of physical damage.
- (2) Power wiring to the plant air is intact and free of physical damage.
- (3) The disconnecting means for plant air shall not be a general use switch or a cord-and-plug connection.
- (4) Piping from the plant air to the fire protection system is intact and free of physical damage.
- (5) The means of anchoring the plant air to the structure or to the system piping is secure, tight, and free of physical damage.
- (6) Plant air requiring oil have the required amount of oil in the oil reservoir.
- (7) Corrosion-inhibiting equipment is intact and free of physical damage.

Statement of Problem and Substantiation for Public Input

The section title has been revised to include Plant Air and correlate with NFPA 13.

Related Public Inputs for This Document

<u>Related Input</u>	<u>Relationship</u>
<u>Public Input No. 200-NFPA 25-2026 [New Section after 3.3.31]</u>	
<u>Public Input No. 205-NFPA 25-2026 [Section No. 13.10]</u>	
<u>Public Input No. 206-NFPA 25-2026 [Section No. 13.10.1.1]</u>	
<u>Public Input No. 210-NFPA 25-2026 [New Section after 13.10.3]</u>	
<u>Public Input No. 212-NFPA 25-2026 [Section No. 13.10.4.1]</u>	

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Public Input No. 124-NFPA 25-2026 [Section No. 13.10.2]

13.10.2 Inspection.

Air compressors and nitrogen generators dedicated to water-based fire protection systems shall be inspected monthly to verify the following:

- (1) Air compressor or nitrogen generator is free of physical damage.
- (2) Power wiring to the air compressor is intact and free of physical damage.
- (3) Piping from the air compressor or nitrogen generator to the fire protection system is intact and free of physical damage.
- (4) The means of anchoring the air compressor or nitrogen generator to the structure or to the system piping is secure, tight, and free of physical damage.
- (5) Air compressors requiring oil have the required amount of oil in the oil reservoir.
- (6) Corrosion-inhibiting equipment is intact and free of physical damage.
- (7) Record nitrogen concentration levels both at the nitrogen generator and at the most remote points of the sprinkler system

Statement of Problem and Substantiation for Public Input

Provides guidance for recording nitrogen concentrations.

Maintenance requirements for nitrogen generators are limited to manufacturer's instructions only. However, these changes provide requirements that are considered necessary for all nitrogen generator installations, especially those installed with a c-value of 120. The annex sections provide clarity regarding the rationale for the addition of the requirements. This is an effort to change both NFPA 13 and NFPA 25 requirements to improve the overall performance of these systems from a corrosion mitigation perspective.

Related Public Inputs for This Document

<u>Related Input</u>	<u>Relationship</u>
Public Input No. 121-NFPA 25-2026 [Section No. 13.10]	
Public Input No. 122-NFPA 25-2026 [New Section after 13.10]	
Public Input No. 123-NFPA 25-2026 [Section No. 13.10.1]	
Public Input No. 126-NFPA 25-2026 [New Section after 13.10.2]	
Public Input No. 127-NFPA 25-2026 [New Section after 13.10.3]	
Public Input No. 128-NFPA 25-2026 [Section No. 13.10.4]	
Public Input No. 129-NFPA 25-2026 [Section No. 13.10.4.1]	
Public Input No. 130-NFPA 25-2026 [New Section after 13.10.4.2]	
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Public Input No. 127-NFPA 25-2026 [New Section after 13.10.3]

13.10.3.1

Nitrogen Generator Testing

(1) Perform testing to verify transmission of alarm and supervisory signals to the fire alarm control panel, including functional testing, while the system is placed in test mode

(2) * Perform tests to verify and record generator runtimes between cut-in and cut-out pressures.

A.13.10.3.1(2)

Deviations from baseline runtimes may indicate leakage conditions or declining generator performance.

If abnormal runtimes are identified, systematic troubleshooting shall be performed to determine whether the issue originates within the sprinkler system or within the nitrogen generator itself. Service providers should maintain an inventory of common spare parts to facilitate preventive maintenance and repairs on-site.

Statement of Problem and Substantiation for Public Input

Adds annual testing requirements for nitrogen generators.

Maintenance requirements for nitrogen generators are limited to manufacturer's instructions only. However, these changes provide requirements that are considered necessary for all nitrogen generator installations, especially those installed with a c-value of 120. The annex sections provide clarity regarding the rationale for the addition of the requirements. This is an effort to change both NFPA 13 and NFPA 25 requirements to improve the overall performance of these systems from a corrosion mitigation perspective.

Related Public Inputs for This Document

<u>Related Input</u>	<u>Relationship</u>
<u>Public Input No. 121-NFPA 25-2026 [Section No. 13.10]</u>	
<u>Public Input No. 122-NFPA 25-2026 [New Section after 13.10]</u>	
<u>Public Input No. 123-NFPA 25-2026 [Section No. 13.10.1]</u>	
<u>Public Input No. 124-NFPA 25-2026 [Section No. 13.10.2]</u>	
<u>Public Input No. 126-NFPA 25-2026 [New Section after 13.10.2]</u>	
<u>Public Input No. 128-NFPA 25-2026 [Section No. 13.10.4]</u>	
<u>Public Input No. 129-NFPA 25-2026 [Section No. 13.10.4.1]</u>	
<u>Public Input No. 130-NFPA 25-2026 [New Section after 13.10.4.2]</u>	
<u>Public Input No. 131-NFPA 25-2026 [New Section after 13.10.4.2]</u>	

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Committee: INM-AAA



Public Input No. 210-NFPA 25-2026 [New Section after 13.10.3]

13.10.3.1

Plant air dedicated to water-based fire protection systems shall be tested annually to verify the following:

- (1) Plant air operates as intended on the proper drop of air pressure in the fire protection system.
- (2) Plant air restores normal supervisory pressure in the fire protection system in the required time frame.
- (3) Plant air does not overheat while running.

Statement of Problem and Substantiation for Public Input

The section title has been revised to include Plant Air and correlate with NFPA 13.

Related Public Inputs for This Document

<u>Related Input</u>	<u>Relationship</u>
<u>Public Input No. 200-NFPA 25-2026 [New Section after 3.3.31]</u>	
<u>Public Input No. 205-NFPA 25-2026 [Section No. 13.10]</u>	
<u>Public Input No. 206-NFPA 25-2026 [Section No. 13.10.1.1]</u>	
<u>Public Input No. 208-NFPA 25-2026 [New Section after 13.10.2]</u>	
<u>Public Input No. 212-NFPA 25-2026 [Section No. 13.10.4.1]</u>	

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Public Input No. 128-NFPA 25-2026 [Section No. 13.10.4]

13.10.4* Maintenance.

13.10.4.1

Air compressors or nitrogen generators dedicated to water-based fire protection systems shall be maintained in accordance with the manufacturer's instructions.

13.10.4.2

Compressors requiring oil shall have the oil replaced on an annual basis unless the manufacturer's instructions require more frequent replacement.

A.13.10.4

All maintenance activities, measured values, and identified deficiencies including blocked purge valves or abnormal nitrogen concentrations, should be documented in a formal written report with both visual and written evidence. The servicing contractor shall also provide recommendations for corrective actions and long-term prevention measures.

Statement of Problem and Substantiation for Public Input

Adds guidance regarding maintenance of nitrogen generators.

Maintenance requirements for nitrogen generators are limited to manufacturer's instructions only. However, these changes provide requirements that are considered necessary for all nitrogen generator installations, especially those installed with a c-value of 120. The annex sections provide clarity regarding the rationale for the addition of the requirements. This is an effort to change both NFPA 13 and NFPA 25 requirements to improve the overall performance of these systems from a corrosion mitigation perspective.

Related Public Inputs for This Document

<u>Related Input</u>	<u>Relationship</u>
<u>Public Input No. 121-NFPA 25-2026 [Section No. 13.10]</u>	
<u>Public Input No. 122-NFPA 25-2026 [New Section after 13.10]</u>	
<u>Public Input No. 123-NFPA 25-2026 [Section No. 13.10.1]</u>	
<u>Public Input No. 124-NFPA 25-2026 [Section No. 13.10.2]</u>	
<u>Public Input No. 126-NFPA 25-2026 [New Section after 13.10.2]</u>	
<u>Public Input No. 127-NFPA 25-2026 [New Section after 13.10.3]</u>	
<u>Public Input No. 129-NFPA 25-2026 [Section No. 13.10.4.1]</u>	
<u>Public Input No. 130-NFPA 25-2026 [New Section after 13.10.4.2]</u>	
<u>Public Input No. 131-NFPA 25-2026 [New Section after 13.10.4.2]</u>	

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Public Input No. 129-NFPA 25-2026 [Section No. 13.10.4.1]

13.10.4.1

Air compressors or nitrogen generators dedicated to water-based fire protection systems shall be maintained in accordance with the manufacturer's instructions and the requirements of 13.10.4.2 for air compressors, or 13.10.4.3 and 13.10.4.4 for nitrogen generators.

A.13.10.4.1

Annual nitrogen generator maintenance should not be performed simultaneously with annual sprinkler trip testing as pressure loss during trip testing produces unreliable nitrogen concentration measurements.

Manufacturers should also provide recommended maintenance intervals for air compressors and other wear sensitive components. Compressor performance naturally degrades over time depending on operating hours and loading conditions. Larger nitrogen generators utilizing external compressors should likewise be incorporated into a structured annual service and maintenance program.

Statement of Problem and Substantiation for Public Input

Modifies the section to include added requirements and adds guidance to the annex.

Maintenance requirements for nitrogen generators are limited to manufacturer's instructions only. However, these changes provide requirements that are considered necessary for all nitrogen generator installations, especially those installed with a c-value of 120. The annex sections provide clarity regarding the rationale for the addition of the requirements. This is an effort to change both NFPA 13 and NFPA 25 requirements to improve the overall performance of these systems from a corrosion mitigation perspective.

Related Public Inputs for This Document

<u>Related Input</u>	<u>Relationship</u>
<u>Public Input No. 121-NFPA 25-2026 [Section No. 13.10]</u>	
<u>Public Input No. 122-NFPA 25-2026 [New Section after 13.10]</u>	
<u>Public Input No. 123-NFPA 25-2026 [Section No. 13.10.1]</u>	
<u>Public Input No. 124-NFPA 25-2026 [Section No. 13.10.2]</u>	
<u>Public Input No. 126-NFPA 25-2026 [New Section after 13.10.2]</u>	
<u>Public Input No. 127-NFPA 25-2026 [New Section after 13.10.3]</u>	
<u>Public Input No. 128-NFPA 25-2026 [Section No. 13.10.4]</u>	
<u>Public Input No. 130-NFPA 25-2026 [New Section after 13.10.4.2]</u>	
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Public Input No. 212-NFPA 25-2026 [Section No. 13.10.4.1]

13.10.4.1

Air compressors ~~or~~ , nitrogen generators, or plant air dedicated to water-based fire protection systems shall be maintained in accordance with the manufacturer's instructions.

Statement of Problem and Substantiation for Public Input

The section has been revised to include Plant Air and correlate with NFPA 13.

Related Public Inputs for This Document

<u>Related Input</u>	<u>Relationship</u>
<u>Public Input No. 200-NFPA 25-2026 [New Section after 3.3.31]</u>	
<u>Public Input No. 205-NFPA 25-2026 [Section No. 13.10]</u>	
<u>Public Input No. 206-NFPA 25-2026 [Section No. 13.10.1.1]</u>	
<u>Public Input No. 208-NFPA 25-2026 [New Section after 13.10.2]</u>	
<u>Public Input No. 210-NFPA 25-2026 [New Section after 13.10.3]</u>	

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Committee: INM-AAA



Public Input No. 130-NFPA 25-2026 [New Section after 13.10.4.2]

13.10.4.3 *

For nitrogen generators, replace or service pre-filters annually, or a more frequent basis if specified by the manufacturer

A.13.10.4.3

In addition to the internal filter bed used for nitrogen production, all nitrogen generators are equipped with multiple pre-filters. These pre-filters should be replaced annually or after the manufacturer's specified operating hours have been reached. Proper maintenance of these filters is critical, as they directly determine the air quality supplied to the nitrogen-producing filter bed. Saturated or contaminated filters may negatively affect the efficiency, reliability, and purity of nitrogen production.

Statement of Problem and Substantiation for Public Input

Maintenance requirements for nitrogen generators are limited to manufacturer's instructions only. However, these changes provide requirements that are considered necessary for all nitrogen generator installations, especially those installed with a c-value of 120. The annex sections provide clarity regarding the rationale for the addition of the requirements. This is an effort to change both NFPA 13 and NFPA 25 requirements to improve the overall performance of these systems from a corrosion mitigation perspective.

Related Public Inputs for This Document

<u>Related Input</u>	<u>Relationship</u>
Public Input No. 121-NFPA 25-2026 [Section No. 13.10]	
Public Input No. 122-NFPA 25-2026 [New Section after 13.10]	
Public Input No. 123-NFPA 25-2026 [Section No. 13.10.1]	
Public Input No. 124-NFPA 25-2026 [Section No. 13.10.2]	
Public Input No. 126-NFPA 25-2026 [New Section after 13.10.2]	
Public Input No. 127-NFPA 25-2026 [New Section after 13.10.3]	
Public Input No. 128-NFPA 25-2026 [Section No. 13.10.4]	
Public Input No. 129-NFPA 25-2026 [Section No. 13.10.4.1]	
Public Input No. 131-NFPA 25-2026 [New Section after 13.10.4.2]	

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Public Input No. 131-NFPA 25-2026 [New Section after 13.10.4.2]

13.10.4.4*

For nitrogen generators, drain water from pipes supplying purge valves

A.13.10.4.4

During annual maintenance, it is frequently observed that inspectors/technicians fail to close the isolation valves to the purge valves during system trip testing procedures. As a result, water may be forced into the purge valves, often to the extent that the unit cannot adequately drain itself. This causes partial or complete blockage of the purge valves, preventing proper purging and reducing nitrogen concentration levels within the affected section. Field measurements have repeatedly shown situations where all other purge locations-maintained nitrogen concentrations above 98%, while the water-blocked purge locations displayed significantly lower nitrogen levels. This directly confirms the impact of obstructed purge valves and diffusion on overall system conditions.

Statement of Problem and Substantiation for Public Input

Maintenance requirements for nitrogen generators are limited to manufacturer's instructions only. However, these changes provide requirements that are considered necessary for all nitrogen generator installations, especially those installed with a c-value of 120. The annex sections provide clarity regarding the rationale for the addition of the requirements. This is an effort to change both NFPA 13 and NFPA 25 requirements to improve the overall performance of these systems from a corrosion mitigation perspective.

Related Public Inputs for This Document

<u>Related Input</u>	<u>Relationship</u>
<u>Public Input No. 121-NFPA 25-2026 [Section No. 13.10]</u>	
<u>Public Input No. 122-NFPA 25-2026 [New Section after 13.10]</u>	
<u>Public Input No. 123-NFPA 25-2026 [Section No. 13.10.1]</u>	
<u>Public Input No. 124-NFPA 25-2026 [Section No. 13.10.2]</u>	
<u>Public Input No. 126-NFPA 25-2026 [New Section after 13.10.2]</u>	
<u>Public Input No. 127-NFPA 25-2026 [New Section after 13.10.3]</u>	
<u>Public Input No. 128-NFPA 25-2026 [Section No. 13.10.4]</u>	
<u>Public Input No. 129-NFPA 25-2026 [Section No. 13.10.4.1]</u>	
<u>Public Input No. 130-NFPA 25-2026 [New Section after 13.10.4.2]</u>	

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Public Input No. 204-NFPA 25-2026 [New Section after 13.10.4.2]

13.10.4.3

Where non-listed fire protection system components were permissible based on the installation requirements in effect at the time of installation but are now required to be listed and are to be replaced, the new component shall be listed for fire protection.

Statement of Problem and Substantiation for Public Input

The requirement is specific to the replacement of non-listed air compressors that utilize a general use switch or a cord-and-plug connection. The proposed additional text correlates with NFPA 13 §8.2.7.5 and §8.2.7.6.

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Committee: INM-AAA



Public Input No. 147-NFPA 25-2026 [Section No. 13.13]

13.13 Component ~~Testing~~ Action Requirements:

Whenever a valve, valve component, and/or valve trim is adjusted, repaired, reconditioned, or replaced, the action required in Table 13.13.1 shall be performed.

Table 13.13.1 Summary of Component Action Requirements

--- Identification signs

<u>Component</u>	<u>Adjust</u>	<u>Repair/Recondition</u>	<u>Replace</u>	<u>Inspection, Test, and Maintenance Procedures</u>
Water delivery components	-	-	-	-
Post indicator and wall indicator valves	X	X	X	(1) Inspect for leaks at system pressure - - - - -
Control valves other than post indicator and wall indicator valves	X	X	X	(1) Inspect for leaks at system pressure - - -

<u>Component</u>	<u>Adjust</u>	<u>Repair/Recondition</u>	<u>Replace</u>	<u>Inspection, Test, and Maintenance Procedures</u>		
				-	-	-
Alarm check valve	X	X	X	(1) Inspect for leaks at system pressure per 13.4.1	-	-
				-	-	-
				-	-	-
Dry pipe valve	X	X	X	(1) Inspect for leaks at system pressure	-	-
				-	-	-
				-	-	-
				-	-	-
				-	-	-
Deluge/preaction valve	X	X	X	(1) Inspect for leaks at system pressure per 13.4.4/13.4.3	-	-
				-	-	-
				-	-	-
				-	-	-
				-	-	-
Quick-opening device	X	X	X	(1) Inspect for leaks at system pressure per 13.4.5.2.9		

<u>Component</u>	<u>Adjust</u>	<u>Repair/Recondition</u>	<u>Replace</u>	<u>Inspection, Test, and Maintenance Procedures</u>		
				-	-	-
				-	(3) Valve status test	-
Pressure-regulating device — hose valves	X	X	X	(1) Inspect for leaks at system pressure per 13.5.2	-	-
				-	-	-
Pressure-regulating devices — other than hose valves	X	X	X	(1) Inspect for leaks at system pressure per Section 13.5	-	-
				-	-	-
Hose valve	X	X	X	(1) Inspect for leaks at system pressure per Section 13.6	-	-
Backflow prevention device	X	X	X	(1) Inspect for leaks at system pressure per Section 13.7	-	-
				-	-	-
Check valves	X	X	X	(1) Inspect for leaks at system	-	-

<u>Component</u>	<u>Adjust</u>	<u>Repair/Recondition</u>	<u>Replace</u>	<u>Inspection, Test, and Maintenance Procedures</u>		
				pressure per 13.4.2	-	-
				-	-	-
Fire department connection	X	X	-		(1) Inspect for leaks at system pressure per Section 13.8	-
Fire department connection — sprinkler system(s)	-	-			X	(1) Iso and hydros test for 2 hour 150 psi (10 bar)
Fire department connection — other than sprinkler system(s)	-	-			X	(1) Iso and hydros test for 2 hour 50 psi (bar) at the no working pressure [200 p (14 bar) minimum
Strainers	X	X	X	Inspect and clean in accordance with manufacturer's instructions		
Main drain valves	X	X	X	Main drain test per 13.2.2		
Gauges	-	-			X	Calibrate per 13
Alarm and supervisory components	-	-	-			

<u>Component</u>	<u>Adjust</u>	<u>Repair/Recondition</u>	<u>Replace</u>	<u>Inspection, Test, and Maintenance Procedures</u>		
Alarm device	X	X	X	Test for conformance with NFPA 13 and/or NFPA 72		
Supervisory device	X	X	X	Test for conformance with NFPA 13 and/or NFPA 72		
System protection components						
Pressure relief valve — fire pump installation	X	X	X	See 8.3.3.11 and 13.5.6		
Pressure relief valve — other than fire pump installation	-	-			X	Verify relief valve is listed and approved for the application and see the compressor
Informational components						
<u>Identification signs</u>	<u>air compressors</u>	<u>generator</u>	<u>X</u>	<u>X</u> <u>X</u>	<u>X</u> <u>X</u> <u>x</u>	<u>X</u> <u>X</u> <u>X</u>

13.13.2

Where the original installation standard is different from the cited standard, the use of the appropriate installing standard shall be permitted.

13.13.3*

These actions shall not require a design review.

Statement of Problem and Substantiation for Public Input

The component action tables throughout NFPA 25 should be comprehensively reviewed and revised to ensure technical accuracy, consistency, and alignment with current inspection, testing, and maintenance practices. Many of the component action tables have remained largely unchanged through multiple revision cycles. As a result, several tables contain inconsistencies, outdated terminology, incomplete action guidance.

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Committee: INM-AAA



Public Input No. 104-NFPA 25-2026 [Section No. 14.1]

14.1* General.

This chapter shall provide the minimum requirements for conducting investigations of fire protection system piping for possible sources of materials that could cause pipe blockage or internal corrosion of system components.

14.1.1. Inspection, testing, and maintenance requirements occurring at intervals greater than annual that are not completed within the prescribed frequency shall be deemed a deficiency.

Statement of Problem and Substantiation for Public Input

The proposed language is intended to clarify the significance associated with test and testing activities that occur at frequencies greater than one year and are not completed within the prescribed interval. Currently, NFPA 25 identifies deficiencies based largely on observed physical conditions or operational impairments; however, the standard does not consistently address overdue inspection activities. This PI improves consistency within NFPA 25 by recognizing overdue test requirements as deficiencies rather than merely incomplete documentation items. The proposed language aligns with the overall intent of NFPA 25 to maintain fire protection systems in an operational state of readiness and provides clear enforceable criteria for owners, contractors, and authorities having jurisdiction. The proposal does not create new requirements or shorten existing inspection frequencies. Instead, it clarifies that once the prescribed interval has been exceeded, the affected component or system is no longer considered compliant with the test and testing requirements of the standard and shall be identified as a deficiency until the required inspection is completed.

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Public Input No. 114-NFPA 25-2026 [New Section after 14.2.1.1]

14.2.1.1.1 Dry pipe and preaction systems without a corrosion mitigation system shall have the assessment of the internal condition of piping conducted at a minimum of every 3 years.

Statement of Problem and Substantiation for Public Input

History has proven that scale and other corrosion products build up in dry pipe systems at an accelerated rate when compared to a wet pipe system. These corrosion products can quickly clog pipes and sprinklers. The three-year frequency corresponds to the three-year full flow test and air leakage test. When a corrosion mitigation system is installed and maintained the assessment can be performed every five years like a wet pipe system.

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Public Input No. 25-NFPA 25-2026 [Section No. 14.2.2]

14.2.2*

In buildings having multiple wet pipe sprinkler systems, every other ~~system~~ wet pipe sprinkler systems shall have an assessment of the internal condition of piping as described in 14.2.1.

14.2.2.1

During the next inspection frequency required by 14.2.1.1 or 14.2.1.2, the ~~alternate~~ wet pipe sprinkler systems not assessed during the previous assessment shall be assessed as described in 14.2.1.

14.2.2.2

If foreign organic and/or inorganic material is found in any system in a building, all systems shall be assessed.

14.2.2.3

All other system types shall have an assessment of the internal condition of piping as described in 14.2.1

Statement of Problem and Substantiation for Public Input

The requirement to inspect "every other" system is ambiguous and unenforceable. This section needs to be revised for clarity to ensure the requirements are only applied to wet pipe sprinkler systems and that at least half of the systems are inspected at the initial test interval.

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Committee: INM-AAA



Public Input No. 63-NFPA 25-2026 [Section No. 14.3.1]

14.3.1*

An obstruction investigation shall be conducted for system or yard main piping wherever any of the following conditions exist:

- (1) Defective intake for fire pumps taking suction from open bodies of water
- (2) Discharge of obstructive material during routine water tests
- (3) Foreign materials in fire pumps, dry pipe valves, or check valves
- (4) Foreign material in water during drain tests or plugging of inspector's test connection(s)
- (5) Unknown materials heard in the system piping during draining, refilling, or otherwise flowing water through the system
- (6) Plugged sprinklers
- (7) Foreign organic or inorganic material with the potential to obstruct pipe or sprinklers found in the pipe
- (8) Failure to flush yard piping or surrounding public mains following new installations or repairs
- (9) Record of broken public mains in the vicinity
- (10) Abnormally frequent false tripping of a dry pipe valve(s)
- (11) System returned to service after an extended shutdown (i.e., greater than 1 year)
- (12) Reason to believe that the sprinkler system contains sodium silicate or highly corrosive fluxes in copper systems
- (13) System supplied with raw water via the fire department connection
- (14) Pinhole leaks or leakage caused by internal corrosion
- (15) A 25 percent increase or a 5-second increase for portions of systems protecting dwelling units in the total water delivery time for dry pipe systems and double interlock preaction systems, with normal air pressure on the system and starting at the time of fully opened inspection test connection, when compared to the original system acceptance test
- (16) Failure to maintain a nitrogen supply, except in instances of preplanned impairments, installed in accordance with NFPA 13 when a Hazen-Williams C value of 120 is used for dry and preaction systems.
- (17) Observation of the deterioration of the end of steel piping at grooved couplings or in threaded fittings.

Statement of Problem and Substantiation for Public Input

Corrosion is a significant issue and the observation of the corrosion of the ends of steel piping when removed from grooved couplings or threaded fittings is indicative of the corrosion related failures that lead to excessive air compressor operation in dry systems and additional related leaks in dry pipe systems. The observable corrosion of the ends of the piping means that rust, scale and sediment is also within the piping system and requires additional investigation. This rust, scale, and sediment leads to fire and non-fire related system failures.

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Public Input No. 156-NFPA 25-2026 [New Section after 14.3.3]

TITLE OF NEW CONTENT

14.3.3.1* Where such conditions are identified, evaluation of the water quality, where applicable, shall be performed by a qualified personnel to perform such evaluations.

A.14.3.3.1 The intent of this section is to emphasize that evaluation of internal system conditions, including water quality where applicable, should be performed by individuals with appropriate knowledge and training.

Fire protection systems can contain stagnant or intermittently flowing water that may contribute to corrosion, scale, biofilm formation, and microbiologically influenced corrosion (MIC). These conditions can affect system performance and reliability.

In addition, such environments may support the growth of waterborne pathogens, including Legionella. Activities such as system opening, draining, flushing, or internal inspection can disturb these conditions and potentially create exposure risks if not properly evaluated and managed. The potential consequences of such exposure may be of increased concern in certain occupancies, such as healthcare facilities and long-term care facilities, where occupants may include individuals with compromised immune systems or underlying health conditions.

Appropriate evaluation of these conditions may include sampling, analysis, and interpretation of water quality and system characteristics.

One method of demonstrating qualification includes certification in accordance with ASSE International Standard 12063, Water Quality Program Professional Qualification Standard for Sprinkler Fitters, which addresses risk management practices associated with building water systems and potential pathogen exposure. Other training, experience, or qualifications may also be appropriate depending on the specific conditions encountered.

Statement of Problem and Substantiation for Public Input

Water quality is a contributing factor to corrosion, obstruction, and microbiologically influenced corrosion (MIC) within fire protection systems. In addition, fire protection systems can contain stagnant or low-flow water conditions that may support the growth of waterborne pathogens, including Legionella.

Inspection, testing, and maintenance activities such as internal investigations, draining, and flushing can disturb these conditions and create potential exposure pathways if not properly evaluated and managed.

Clarifying that evaluation of internal conditions, including water quality where applicable, should be performed by qualified personnel supports more consistent and reliable assessment of system conditions while also recognizing the need to minimize potential exposure risks during these activities.

This revision does not introduce new inspection or testing requirements but reinforces competency expectations when conditions requiring evaluation are already identified, consistent with the performance-based approach of NFPA 25.

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Committee: INM-AAA



Chapter 16 Special Requirements from Other ~~NFPA Documents~~ Codes

16.1 General.

16.1.1 Application.

16.1.1.1*

This chapter shall include the inspection, testing, and maintenance requirements for water-based fire protection systems found in other ~~NFPA standards~~ codes and standards that are different from those included in this standard.

16.1.1.2*

The requirements of this chapter shall be extracted from the other referenced standards.

16.1.1.3

Where the requirements of the referenced standard differ from the requirements of this standard, the referenced standard shall take precedence.

16.1.2 Definitions.

For terms not defined in Chapter 3, the definitions of the reference standard shall apply.

16.2 Small Residential Board and Care Occupancies.

16.2.1

The requirements in this section shall only apply to residential board and care facilities with sprinkler systems installed in accordance with NFPA 13D- ~~as described in NFPA 101~~ ..

Systems installed in accordance with NFPA 13D shall be inspected, tested, and maintained in accordance with NFPA 104: with 16.2.1.1.1 through 16.2.1.1.15. The frequency of the inspection, test, or maintenance shall be in accordance with NFPA 13D, whereas the purpose and procedure shall be from NFPA 25.

16.2.1.1.1

Control valves shall be inspected monthly in accordance with 13.3.2 of NFPA 25. [**101** : 33.2.3.5.8.1]

16.2.1.1.2

Gauges shall be inspected monthly in accordance with 13.2.7.1.1 of NFPA 25. [**101** : 33.2.3.5.8.2]

16.2.1.1.3

Alarm devices shall be inspected quarterly in accordance with 5.2.4 of NFPA 25. [**101** : 33.2.3.5.8.3]

16.2.1.1.4

Alarm devices shall be tested semiannually in accordance with 5.3.2 of NFPA 25. [**101** : 33.2.3.5.8.4]

16.2.1.1.5

Valve supervisory switches shall be tested semiannually in accordance with 13.3.3.5 of NFPA 25. [**101** : 33.2.3.5.8.5]

16.2.1.1.6

Visible sprinklers shall be inspected annually in accordance with 5.2.1 of NFPA 25. [**101** : 33.2.3.5.8.6]

16.2.1.1.7

Visible pipe shall be inspected annually in accordance with 5.2.2 of NFPA 25. [**101** : 33.2.3.5.8.7]

16.2.1.1.8

Visible pipe hangers shall be inspected annually in accordance with 5.2.3 of NFPA 25. [**101** : 33.2.3.5.8.8]

16.2.1.1.9

Buildings shall be inspected annually prior to the onset of freezing weather to ensure that there is adequate heat wherever water-filled piping is run in accordance with 4.1.2 of NFPA 25. [**101** : 33.2.3.5.8.9]

16.2.1.1.10

A representative sample of fast-response sprinklers shall be tested once the sprinklers in the system are 25 years old in accordance with 5.3.1.1.1.3 of NFPA 25. [**101** : 33.2.3.5.8.10]

(A)

If the sample fails the test, all of the sprinklers represented by that sample shall be replaced. [**101** : 33.2.3.5.8.10]

(B)

If the sprinklers pass the test, the test shall be repeated every 10 years thereafter. [**101** : 33.2.3.5.8.10]

16.2.1.1.11

A representative sample of dry-pendent sprinklers shall be tested once the sprinklers in the system are 10 years old in accordance with 5.3.1.1.1.6 of NFPA 25. [**101** : 33.2.3.5.8.11]

(A)

If the sample fails the test, all of the sprinklers represented by that sample shall be replaced. [**101** : 33.2.3.5.8.11]

(B)

If the sprinklers pass the test, the test shall be repeated every 10 years thereafter. [**101** : 33.2.3.5.8.11]

16.2.1.1.12

Antifreeze solutions shall be tested annually in accordance with 5.3.3 of NFPA 25. [**101** : 33.2.3.5.8.12]

16.2.1.1.13

Control valves shall be operated through their full range and returned to normal annually in accordance with 13.3.3.1 of NFPA 25. [101 : 33.2.3.5.8.13]

16.2.1.1.14

Operating stems of OS&Y valves shall be lubricated annually in accordance with 13.3.4 of NFPA 25. [101 : 33.2.3.5.8.14]

16.2.1.1.15

Dry-pipe systems that extend into the unheated portions of the building shall be inspected, tested, and maintained in accordance with 13.4.5 of NFPA 25. [101 : 33.2.3.5.8.15]

Statement of Problem and Substantiation for Public Input

Similar language was removed during development of the 2017 edition of NFPA 25. While that action may have been appropriate at the time, the occupancy landscape has changed significantly over the past decade.

Residential board and care facilities are increasingly being established in one- and two-family dwellings protected by NFPA 13D sprinkler systems. Many of these facilities are operated by corporate entities or multi-facility organizations and function as commercial care occupancies despite being located within residential structures. As a result, the building's construction type and sprinkler system standard may no longer accurately reflect the risk associated with the occupancy being protected.

Unlike traditional single-family residences, residential board and care occupancies house multiple unrelated residents, often including elderly individuals, persons with disabilities, or others requiring varying levels of assistance during an emergency. These occupants may have reduced ability to self-evacuate and are often dependent upon staff intervention and properly functioning fire protection systems.

The purpose of NFPA 13D is to provide a reasonable degree of protection from fire in residential occupancies. However, when a building is used as a residential board and care facility, the life-safety expectations and occupant characteristics more closely resemble those found in commercial care occupancies than in a typical single-family dwelling.

Since the 2017 edition, both the number and prevalence of residential board and care facilities operating within one- and two-family dwellings have increased substantially. In many jurisdictions, assisted living, group homes, memory care residences, recovery homes, and similar facilities are being established in buildings protected by NFPA 13D systems. These facilities may remain in service for decades while housing vulnerable occupants.

This proposal recognizes the evolution of these occupancies and ensures that sprinkler systems protecting residential board and care facilities receive appropriate inspection, testing, and maintenance. The proposal focuses on the occupancy being protected rather than the building type, helping to ensure continued reliability of life-safety systems serving some of the most vulnerable populations.

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Public Input No. 79-NFPA 25-2026 [Section No. A.1.1.3.1]

A.1.1.3.1

The requirement to evaluate the adequacy or accuracy of the design or installation of the system or the capability of the fire protection system to protect the building or its contents is not a part of the periodic inspection, testing, and maintenance requirements of this standard. - While this standard does not require an inspector to evaluate the adequacy or accuracy of a system, it does not prohibit the inspector or inspection organization from making recommendations or observations to the owner of a system related to the need for evaluations or modifications in the interest of fire and life safety. Recommendations and observations should not be a part of the inspection report. Examples of items not covered by this standard include the evaluation of unsprinklered areas and the spacing of sprinklers. However, such evaluation is the responsibility of the property owner or designated representative as indicated in 4.1.7 and 4.1.8. An example of a hazard evaluation form can be found in Annex E : _

Statement of Problem and Substantiation for Public Input

The deleted language in this PI is proposed for relocation to other sections of Annex A. See PI 74 and 78 respectively

Related Public Inputs for This Document

<u>Related Input</u>	<u>Relationship</u>
<u>Public Input No. 74-NFPA 25-2026 [New Section after 3.3.30]</u>	
<u>Public Input No. 78-NFPA 25-2026 [New Section after 4.1.7]</u>	
<u>Public Input No. 74-NFPA 25-2026 [New Section after 3.3.30]</u>	
<u>Public Input No. 78-NFPA 25-2026 [New Section after 4.1.7]</u>	

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Public Input No. 65-NFPA 25-2026 [New Section after A.1.4]

TITLE OF NEW CONTENT

A.1.5

Subsequent editions of NFPA standards are not always adopted as soon as they are published and could lag several code cycles before the new edition is referenced. Where a newer edition of this standard is published, that standard should be permitted to be used in its entirety.

Statement of Problem and Substantiation for Public Input

The 2025 edition of NFPA 13 introduced new Annex language supporting the application of equivalency concepts, including use in jurisdictions that may not yet have adopted the latest edition. This reinforces the importance of maintaining flexibility to accommodate innovation. Inclusion of an equivalency clause in NFPA 25 would provide consistent philosophy across installation (NFPA 13) and maintenance (NFPA 25) standards and the Annex should be included to support this.

Related Public Inputs for This Document

<u>Related Input</u>	<u>Relationship</u>
<u>Public Input No. 64-NFPA 25-2026 [New Section after 1.4]</u>	Annex to adding Equivalency

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Public Input No. 135-NFPA 25-2026 [New Section after A.3.3.8]

A.3.3.8.2

Where a lack of evidence of required inspections or tests are identified, those conditions would meet the definition of a non-critical deficiency.

Statement of Problem and Substantiation for Public Input

This topic is confusing and needs clarification. Is the failure to perform an inspection or test considered a deficiency or not? This PI attempts to clarify that, in fact, that condition meets the definition of a non-critical deficiency as something whose "correction is needed to meet the requirements of this standard" as stated in 3.3.8.1.

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Public Input No. 24-NFPA 25-2026 [New Section after A.3.3.8]

Addition to table A.3.3.8

Add to table if 13.3.2.2 (5) "the valve inspection shall verify that the valves are in the following condition: (5) Free from external leaks" If valve is leaking either from packing or valve body is a non-critical or critical. In some cases valve is leaking from packing, but packing gland bolts and nuts are so corroded they are not adjustable. In this case would it elevate?

Statement of Problem and Substantiation for Public Input

This would resolve a grey area of a control valve leaking and what level of deficiency it is. This would add clarity to the inspector and owner/AHJ

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Public Input No. 18-NFPA 25-2026 [Section No. A.3.3.8]

A.3.3.8 Deficiency. 

This standard classifies abnormal conditions as either noncritical or critical deficiencies and impairments. The use of the phrase *fire protection system or unit* is a broad reference to those terms used in the titles of Chapter 5 through 12. In installation standards, some fire protection features are referred to as systems (e.g., sprinkler, standpipe, water-spray, foam-water, water mist), some are referred to as units (e.g., fire pumps), and others use neither term (e.g., private fire service mains, water tanks). For the purpose of this standard, the term *unit* refers to a fire pump and its connections required by NFPA 20, a water storage tank and its connections required by NFPA 22, or a private fire service fire main and its connections required by NFPA 24. The use of the term *unit* in the definitions of impairment, deficiency, critical deficiency, and noncritical deficiency is not referring to an individual component such as a sprinkler, valve, fitting, switch, or piece of pipe.

While conducting inspections and tests, various abnormal conditions might be encountered. Abnormalities or conditions requiring correction are classified as impairments, critical deficiencies, or noncritical deficiencies. The classification is intended to provide guidance in responding to these conditions.

For example, an impairment should be addressed promptly by either immediately correcting the condition or implementing the impairment procedures found in Chapter 15. Critical and noncritical deficiencies should be corrected as soon as practical after considering the nature and severity of the risk. It should be noted that many jurisdictions have requirements for the timely correction of impairments and/or deficiencies.

Table A.3.3.8 provides examples for classifying conditions needing repair or correction that are identified during inspections and tests of water-based suppression systems or units (e.g., fire pump, water storage tank, private fire service main). It is not the intent of Table A.3.3.8 to specify a required classification. Table A.3.3.8 does not consider every variation of conditions needing repair or correction. The nature of the hazard or the life safety exposure of the occupancy should be considered when using Table A.3.3.8 to assign a classification. For example, several painted sprinklers in a large warehouse might be classified as noncritical, whereas a single painted sprinkler in a hospital patient sleeping room might be classified as critical.

Some conditions are more easily classified. A shut water control valve supplying a system, a portion of a system, or a unit is considered an impairment, whereas a missing water control valve sign is noncritical in nature. However, most classifications require a careful level of judgment, and in some cases further investigation might be needed. For example, where a main drain test on a sprinkler system shows a drop of more than 10 percent in full flow pressure, the classification is dependent on such issues as the full flow pressure in relation to the system demand. The classification could be noncritical, critical, or an impairment, depending on the impact to the performance or operation of the system.

Where Table A.3.3.8 shows more than one classification, the intent is to demonstrate that the proper classification should consider the context in which the condition exists. It is important to note that many conditions will require the system to be impaired for it to be corrected and for the impairment procedures found in Chapter 15 to apply.

Table A.3.3.8 should be used with careful judgment and the understanding that assigning a classification might require input from the authority having jurisdiction.

Table A.3.3.8 Water-Based Fire Protection System Inspection and Testing Findings

<u>Item</u>	<u>Finding</u>	<u>Reference</u>	<u>Impairment</u>	<u>Critical Deficiency</u>	<u>Noncritical Deficiency</u>
Chapter 5: Sprinkler Systems — Inspection					
All sprinklers	Leaking — spraying or running water	5.2.1.1.1	-	-	-
All sprinklers	Leaking — slowly dripping water	5.2.1.1.1	-	-	X
All sprinklers	Foreign material attached or suspended from sprinkler	5.2.1.1.1	-	X	X

<u>Item</u>	<u>Finding</u>	<u>Reference</u>	<u>Impairment</u>	<u>Critical Deficiency</u>	<u>Noncritical Deficiency</u>
All sprinklers	Heavily loaded, corroded, or painted; improper orientation; glass bulb has lost fluid; damaged	5.2.1.1.1	-	X	-
All sprinklers	Lightly or moderately loaded, corroded, or painted	5.2.1.1.1	-	-	X
Escutcheons and coverplates	Adhered or attached to the ceiling or wall	5.2.1.1.5.1	X	-	-
Escutcheons and coverplates	Missing recessed or flush escutcheons; concealed coverplate with deflector and operating element in correct position	5.2.1.1.5	-	-	X
Escutcheons and coverplates	Missing recessed or flush escutcheons; concealed coverplate with deflector and operating element not in correct position	5.2.1.1.5	-	X	-
All sprinklers	Minimum clearance to storage not maintained	5.2.1.2	-	X	-
Spare sprinkler cabinet	Cabinet missing; temperature above maximum permitted; improper number and type; missing wrench for each type	5.2.1.4	-	-	X
Pipe and fittings	Leaking — slowly dripping and/or moisture on surface	5.2.2.1	-	-	X
Pipe and fittings	Leaking — spraying or running water	5.2.2.1	-	X	-
Pipe and fittings	Mechanical damage	5.2.2.1	-	X	X
Hangers and seismic braces	Loose	5.2.3.2	-	-	X
Hangers and seismic braces	Damaged or unattached	5.2.3.2	-	X	X
Hydraulic design information sign	Not attached properly; illegible; missing	5.2.5	-	-	X
Heat tracing	Not in accordance with manufacturer's instructions	5.2.6	-	X	-
Information sign	Not attached; illegible; missing	5.2.7	-	-	X

<u>Item</u>	<u>Finding</u>	<u>Reference</u>	<u>Impairment</u>	<u>Critical Deficiency</u>	<u>Noncritical Deficiency</u>
General information sign	Not attached; illegible; missing	5.2.7	-	-	X
Antifreeze information sign	Not attached; illegible; missing	5.2.8	-	-	X
Chapter 5: Sprinkler Systems — Testing		-	-	-	-
Antifreeze systems	Solution does not meet requirements of 5.3.4	5.3.4	-		X -
Antifreeze systems	Solution is inadequate to prevent freezing	5.3.4.2.1	X	-	-
Sprinkler	Sprinkler(s) fails laboratory testing	5.3.1	X	X	-
Chapter 6: Standpipe and Hose Systems — Inspection		-	-	-	-
Hydraulic design information sign	Missing	6.2.2	-	-	X
Pipe and fittings	Leaking — slowly dripping and/or moisture on surface	6.2.4	-	-	X
Pipe and fittings	Leaking — spraying or running water	6.2.4	-		X -
Pipe and fittings	Mechanical damage	6.2.4	-		X X
Hangers and supports	Damaged; missing	6.2.4	-		X X
Hose	Cuts; couplings not of compatible threads	6.2.6 and NFPA 1930	X	X	-
Hose	Deterioration; no gasket or damaged gaskets	6.2.6 and NFPA 1930	-		X -
Hose	Mildew present; corrosion present; hose not connected	6.2.6 and NFPA 1930	-		X X
Hose nozzle	Missing; broken parts; thread gasket damaged	6.2.7 and NFPA 1930	X	X	-
Hose storage	Hose improperly racked or rolled; nozzle clip missing; nozzle not contained; damaged; obstructed; failure to rotate	6.2.8 and NFPA 1930	X	X	-
Cabinet	Corroded or damaged parts; not easy to open; not identified; door glazing in poor	6.2.9 and NFPA 1930	-		X -

<u>Item</u>	<u>Finding</u>	<u>Reference</u>	<u>Impairment</u>	<u>Critical Deficiency</u>	<u>Noncritical Deficiency</u>
	condition; lock not functioning in break glass type; physically obstructed; valve, hose nozzle, fire extinguisher, and so on not readily accessible				
Chapter 6: Standpipe and Hose Systems — Testing		-	-	-	-
Hose storage device	Rack will not swing out of cabinet at least 90 degrees	6.2.8 and NFPA 1930	-	-	X
Standpipe system	Test results did not provide design pressure at required flow	6.3.1	X	X	-
Hydrostatic test of manual and semiautomatic dry standpipe systems	Leakage in piping	6.3.2.1	-	-	X
Chapter 7: Private Fire Service Mains — Inspection		-	-	-	-
Exposed piping	Leaking — slowly dripping and/or moisture on surface	7.2.2.1.2	-	-	X
Exposed piping	Leaking — spraying or running water	7.2.2.1.2	-		X -
Exposed piping	Mechanical damage; corroded; improperly restrained	7.2.2.1.2	-		X X
Mainline strainers	Plugged or fouled	7.2.2.3.2	X	-	-
Mainline strainers	Corroded	7.2.2.3.2	-		X -
Dry barrel, wet barrel, and wall hydrant	Inaccessible; barrel contains ice; cracks in barrel	7.2.2.4 and 7.2.2.5	X	-	-
	-	Leaks at outlets or top of hydrant Wet barrel hydrant	7.2.2.4 and 7.2.2.5	-	X -
Dry barrel, wet barrel, and wall hydrant	Unusable outlets, nozzle threads, or operating nut	7.2.2.4 and 7.2.2.5	X	-	-
Dry barrel, wet barrel, and wall hydrant	Worn but usable outlets, nozzle threads, or operating nut; missing wrench	7.2.2.4 and 7.2.2.5	-	-	X
Dry barrel and wall hydrant	Barrel contains water; improper drainage	7.2.2.4	-		X -

<u>Item</u>	<u>Finding</u>	<u>Reference</u>	<u>Impairment</u>	<u>Critical Deficiency</u>	<u>Noncritical Deficiency</u>
	from barrel leaks at outlets or top of hydrant				
Wet barrel hydrant	Leaks at outlets or top of hydrant	7.2.2.5	-		X
Monitor nozzles	Missing; damaged	7.2.2.7	X	-	-
Monitor nozzles	Corroded; leaking	7.2.2.7	-		X
Hose/hydrant houses	Inaccessible	7.2.2.8	X	-	-
Hose/hydrant houses	Damaged	7.2.2.8	-		X
Hose/hydrant houses	Not fully equipped	7.2.2.8	-	-	X
Chapter 7: Private Fire Service Mains — Testing		-	-	-	-
Underground and exposed piping	Test results show deterioration in water supply when compared to previous results	7.3.1.1	X	X	X
Dry barrel and wall hydrant	Hydrant did not flow clear or did not drain within 60 minutes	7.3.2.1 and 7.3.2.4	-	-	X
Monitor nozzles	Did not flow acceptable amount of water	7.3.3	X	-	-
Monitor nozzles	Nozzle patterns not adequate/adjustable	7.3.3	-	-	X
Monitor nozzles	Failure of oscillating mechanism	7.3.3.2	X	-	-
Monitor nozzles	Did not operate throughout their full range	7.3.3.2	-		X
Chapter 8: Fire Pumps — Inspection		-	-	-	-
Pump house/room	Ventilating louvers not free to operate	8.2.2(1)(c)	-		X
Pump house/room	Heat inadequate, temperature less than 40°F (4°C)	8.2.2(1)(a)	X	X	-
Pump house/room	Heat inadequate, temperature less than 70°F (21°C) for diesel pumps without engine heaters	8.2.2(1)(b)	X	X	-
Pump house/room	Excessive water on floor	8.2.2(1)(d)	-		X
Pump house/room	Coupling guard not in place	8.2.2(1)(e)	-		X

<u>Item</u>	<u>Finding</u>	<u>Reference</u>	<u>Impairment</u>	<u>Critical Deficiency</u>	<u>Noncritical Deficiency</u>
Pump system	Suction or discharge not fully open	8.2.2(2)(a)	X	-	-
Pump system	Bypass valves not fully open	8.2.2(2)(a)	-		X
Pump system	Pipe leaking	8.2.2(2)(b)	-		X
Pump system	Suction line and system line pressure abnormal	8.2.2(2)(c) and 8.2.2(2)(d)	X	X	X
Pump system suction	Reservoir empty	8.2.2(2)(e)	X	-	-
Pump system	Suction reservoir does not have required water level; wet pit suction screens missing	8.2.2(2)(e) and 8.2.2(2)(f)	-		X
Pump system	Wet pit suction screens obstructed	8.2.2(2)(f)	X	-	-
Pump system	Waterflow test valves open; hose connection valve open; test line contains water	8.2.2(2)(g)	-		X
Electrical power to pump system	No electrical power provided — controller pilot light not illuminated; transfer switch pilot light not illuminated; isolating switch not closed; reverse phase alarm pilot light on; normal phase light is off	8.2.2(3)	X	-	-
Electrical power to pump system	Electrical power provided — controller pilot light not illuminated; transfer switch pilot light not illuminated; normal phase light is not illuminated	8.2.2(3)	-	-	X
Electric pump system	Oil level in vertical motor sight glass abnormal	8.2.2(3)(e)	-		X
Pressure maintenance (jockey) pump	No power	8.2.2(3)(f)	-	-	X
Diesel engine system	Fuel tank less than two-thirds full	8.2.2(4)(a)	-		X
Diesel engine system	Fuel tank empty	8.2.2(4)(a)	X	-	-
Diesel engine system	Controller selector switch not in auto position	8.2.2(4)(b)	X	-	-

<u>Item</u>	<u>Finding</u>	<u>Reference</u>	<u>Impairment</u>	<u>Critical Deficiency</u>	<u>Noncritical Deficiency</u>
Diesel engine system	Battery voltage readings abnormal	8.2.2(4)(c)	X	X	-
Diesel engine system	Battery charging current abnormal	8.2.2(4)(d)	-		X -
Diesel engine system	Battery failure pilot lights on	8.2.2(4)(e)	X	-	-
Diesel engine system	Battery pilot lights off	8.2.2(4)(e)	-		X -
Diesel engine system	Alarm pilot lights are on	8.2.2(4)(f)	-		X -
Diesel engine system	Engine running time meter not reading	8.2.2(4)(g)	-	-	X
Diesel engine system	Oil level in right angle gear drive abnormal (i.e., not at level mark, but visible in sight glass)	8.2.2(4)(h)	-	-	X
Diesel engine system	Oil level in right angle gear drive below low level (i.e., not visible in sight glass or below one finger knuckle from inspection hole)	8.2.2(4)(h)	-		X -
Diesel engine system	Crankcase oil level abnormal	8.2.2(4)(i)	-	-	X
Diesel engine system	Crankcase oil level below low level	8.2.2(4)(i)	X	-	-
Diesel engine system	Cooling water level abnormal	8.2.2(4)(j)	-	-	X
Diesel engine system	Cooling water level not visible	8.2.2(4)(j)	-		X -
Diesel engine system	Electrolyte level in batteries below top of battery plates	8.2.2(4)(k)	-		X -
Diesel engine system	Battery terminals corroded	8.2.2(4)(l)	-		X -
Diesel engine system	Water-jacket heater not operating	8.2.2(4)(m)	-		X -
Steam system	Steam pressure gauge reading abnormal	8.2.2(5)	-		X -
Chapter 8: Fire Pumps — Testing		-	-	-	-
Fire pump test	Pump did not start automatically	8.3.2.2	X	-	-
Fire pump test	Pump failed to run for 10 minutes	8.3.2.3	X	-	-
Fire pump test	Pump failed to run for 30 minutes	8.3.2.4	X	-	-
Fire pump test — pump system	System suction and discharge gauge reading, or pump	8.3.2.9(1)	-		X -

<u>Item</u>	<u>Finding</u>	<u>Reference</u>	<u>Impairment</u>	<u>Critical Deficiency</u>	<u>Noncritical Deficiency</u>
	starting pressure, outside the acceptable range				
Fire pump test — pump system	Pump packing gland discharge unacceptable; unusual noise or vibration; packing boxes, bearings, or pump casing overheating	8.3.2.9(1)	-	X	-
Fire pump test — electrical-motor-driven system	Time for motor to accelerate to full speed, time controller is on first step, or time pump runs after starting unacceptable	8.3.2.9(2)	X	-	-
Fire pump test — diesel-engine-driven system	Time for engine to crank and time for engine to reach running speed unacceptable (engine is required to reach rated speed within 20 seconds in accordance with 11.2.4.1.4 of NFPA 20)	8.3.2.9(3)	-	X	-
Fire pump test — diesel-engine-driven system	Low rpm and does not meet system demand	8.3.2.9(3)	X	-	-
Fire pump test — diesel-engine-driven system	Low rpm and meets system demand	8.3.2.9(3)	-	-	X
Fire pump test — diesel-engine-driven system	Low oil pressure; high temperature; high cooling water pressure	8.3.2.9(3)	-	X	-
Fire pump test — steam system	Gauge reading and time for turbine to reach running speed unacceptable	8.3.2.9(4)	-	X	-
Fire pump annual test	Circulation relief valve and/or pressure relief valve did not work properly at churn condition	8.3.3.10(1)	X	X	-
Fire pump annual test	Pressure relief valve did not work properly at each flow condition	8.3.3.12	X	X	-

<u>Item</u>	<u>Finding</u>	<u>Reference</u>	<u>Impairment</u>	<u>Critical Deficiency</u>	<u>Noncritical Deficiency</u>
Fire pump annual test (with transfer switch)	Overcurrent protective devices opened when simulating a power failure condition at peak load; power not transferred to alternate source; pump did not continue to perform at peak load; pump did not reconnect to normal power after removing power failure condition	8.3.3.13	X	-	-
Fire pump annual test	Alarms did not properly operate	8.3.3.14	-		X
Fire pump annual test	Parallel or angular alignment incorrect	8.3.6.4	-		X
Fire pump annual test	Flow test does not meet most demanding system flow and pressure requirements	8.3.7.2.3(1)	X	X	-
Fire pump annual test	Flow test results not within 5 percent of acceptance test or nameplate	8.3.7.2.3(3)	-	-	X
Fire pump annual test	Voltage readings at motor not within 5 percent below or 10 percent above rated (nameplate)	8.3.7.2.9	-		X
Diesel fuel annual test	Diesel fuel tested for degradation and failed	8.3.4	X	-	-
Chapter 9: Water Storage Tanks — Inspection		-	-	-	-
Water level	Water level and/or condition incorrect	9.2.1	-		X
Water level	Tank is below the designed water level	9.2.1	X	-	-
Water temperature	Heating system not operational, water temperature below 40°F (4°C)	9.2.3	-		X
Water temperature	Water temperature at or below 32°F (0°C)	9.2.3	X	-	-
Exterior	Tank exterior, supporting structure, vents, foundation, catwalks, or ladders (where provided) damaged	9.2.4.1	-	-	X

<u>Item</u>	<u>Finding</u>	<u>Reference</u>	<u>Impairment</u>	<u>Critical Deficiency</u>	<u>Noncritical Deficiency</u>
Exterior	Area around tank has fire exposure hazard in form of combustible storage, trash, debris, brush, or material	9.2.4.2	-	-	X
Exterior	Accumulation of material on or near parts that could result in accelerated corrosion or rot	9.2.4.2	-	-	X
Exterior	Ice buildup on tank and support	9.2.4.2	-	X	-
Exterior	Erosion exists on exterior sides or top of embankments supporting coated fabric tanks	9.2.4.2	-	X	X
Exterior	Expansion joints leaking or cracking	9.2.4.3	-	X	-
Exterior	Hoops and grilles of wooden tanks in poor condition	9.2.4.4	-	-	X
Exterior	Exterior painted, coated, or insulated surfaces of tanks or supporting structure degraded	9.2.4.5	-	-	X
Interior	Pitting, corrosion, spalling, rot, or other forms of deterioration; waste materials exist; aquatic growth; local or general failure of interior coating	9.2.5.3	-	-	X
Interior	Voids beneath floor, with sand in middle of tanks on ring-type foundations	9.2.5.5	-	-	X
Interior	Heating system components or piping in poor condition but working	9.2.5.6	-	-	X
Interior	Heating system components or piping in poor condition and not working	9.2.5.6	X	X	-
Interior	Blockage of antivortex plate	9.2.5.7	X	-	-
Interior	Deterioration of antivortex plate	9.2.5.7	-	X	-
Chapter 9: Water Storage Tanks — Testing		-	-	-	-

<u>Item</u>	<u>Finding</u>	<u>Reference</u>	<u>Impairment</u>	<u>Critical Deficiency</u>	<u>Noncritical Deficiency</u>	
Interior testing	Tank coating did not pass adhesion, coating thickness, or wet sponge test	9.2.6	-	-		X
Interior testing	Tank walls and bottoms did not pass ultrasonic test	9.2.6	-	-		X
Interior testing	Tank bottom seams did not pass vacuum-box test	9.2.6	-	-		X
Level indicator	Lacked freedom of movement, or not accurate	9.3.1	-		X	X
Heating system	Not in working order	9.3.2	X	X	-	
Low-temperature alarm	Low-water-temperature alarm did not pass test	9.3.3	-		X	-
High-temperature alarm	High-water-temperature limit switch did not pass test	9.3.4	-	-		X
Water level alarms	High- and low-water-level alarms did not pass test	9.3.5	-		X	-
Chapter 10: Water Spray Fixed Systems — Inspection		-	-	-	-	
Pipe and fittings	Mechanical damage; missing or damaged paint or coating; rusted or corroded; improperly aligned or trapped sections; low-point drains not functioning; improper location of rubber-gasketed fittings	10.2.3.1	-		X	X
Hangers and seismic braces	Damaged or missing; not securely attached to structural or piping; missing or damaged paint or coating; rusted or corroded	10.2.3.2	-		X	X
Water spray nozzles	Discharge devices missing	10.2.4.1	X	-	-	
Water spray nozzles	Discharge devices improperly positioned or pointed in design direction; loaded or corroded	10.2.4.1	-		X	-
Water spray nozzles	Caps or plugs (if required) not free to operate as intended	10.2.4.1.1	X	-	-	

<u>Item</u>	<u>Finding</u>	<u>Reference</u>	<u>Impairment</u>	<u>Critical Deficiency</u>	<u>Noncritical Deficiency</u>
Water spray nozzles	Missing caps or plugs (if required)	10.2.4.1.1	-		X -
Strainers	Plugged or fouled	10.2.6	X	-	-
Strainers	Damaged or corroded	10.2.6	-		X -
Drainage	Trap sumps and drainage trenches blocked; retention embankments or dikes in disrepair	10.2.7	-	-	
Ultra-high-speed	Detectors have physical damage or deposits on lenses of optical detectors	10.4.2	-		X -
Ultra-high-speed	Controllers found to have faults	10.4.3	-		X -
Chapter 10: Water Spray Fixed Systems — Testing		-	-	-	-
Operational test	Heat detection system did not operate within 40 seconds; flammable gas detection system did not operate within 20 seconds	10.3.3.1	X	-	-
Operational test	Nozzles plugged	10.3.3.3.1	X	-	-
Operational test	Nozzles incorrectly positioned	10.3.3.3.1	-		X -
Operational test	Pressure readings not comparable to original design requirements	10.3.3.4	-		X -
Operational test	Manual actuation devices did not work properly	10.3.5	X	-	-
Ultra-high-speed operational test	Response time was more than 100 milliseconds	10.4.5.2	X	-	-
Chapter 11: Foam-Water Sprinkler Systems — Inspection		-	-	-	-
Foam-water discharge devices	Missing	11.2.4.11	X	-	-
Foam-water discharge devices	Improperly positioned or pointed in design direction; loaded or corroded	11.2.4.1.1	-		X -
Foam-water discharge devices	Caps or plugs (if required) not free to operate as intended	11.2.4.1.2	X	-	-

<u>Item</u>	<u>Finding</u>	<u>Reference</u>	<u>Impairment</u>	<u>Critical Deficiency</u>	<u>Noncritical Deficiency</u>
Foam-water discharge devices	Missing caps or plugs (if required)	11.2.4.1.2	-		X
Foam-water discharge devices	Incorrect foam concentrate for application and devices	11.2.4.1.4	-		X
Fixed foam discharge outlet	Corrosion	11.2.4.2.2	-	-	
Fixed foam discharge outlet	Damaged; painted; orifice plate or jet orifice missing; clogged	11.2.4.2.2	X	-	-
Fixed foam discharge outlet	Vapor seal not present	11.2.4.2.4	-		X
Pressure foam maker	Orifice clogged	11.2.4.2.5	X	-	-
Pressure foam maker	Check valve not operating freely	11.2.4.2.5.1	X	-	-
Pressure foam maker	Rupture disc burst	11.2.4.2.5.5	-		X
Pressure foam maker	Liquid level below injection line	11.2.4.2.5.7	-		X
Pressure foam maker	Damaged or corroded	11.2.4.2.5.8	-	-	
Pressure foam maker	Air intake damaged, clogged, or missing	11.2.4.2.5.9	X	-	-
Foam concentrate strainers	Blowdown valve open or not plugged	11.2.6.4	-		X
Drainage	Trap sumps and drainage trenches blocked; retention embankments or dikes in disrepair	11.2.7	-	-	
Proportioning systems (all)	Valves not in correct open/closed position in accordance with specified operating conditions	11.2.8.3	X	-	-
Standard pressure proportioner	Automatic drains (ball drip valves) not free or open, external	11.2.8.5.2	-	-	
Bladder tank proportioner	Water control valve to foam concentrate in "closed" position	11.2.8.6.2	X	-	-
Line proportioner	Strainer damaged or corroded; pressure vacuum vent not operating freely	11.2.8.6.3	-		X

<u>Item</u>	<u>Finding</u>	<u>Reference</u>	<u>Impairment</u>	<u>Critical Deficiency</u>	<u>Noncritical Deficiency</u>
Line proportioner	Strainer plugged or fouled	11.2.8.6.3	X	-	-
Standard balanced pressure proportioner	Sensing line valves not open; no power to foam liquid pump	11.2.8.6.4	X	-	-
Standard balanced pressure proportioner	Strainer plugged or fouled	11.2.8.6.4	X	-	-
Standard balanced pressure proportioner	Strainer damaged or corroded; pressure vacuum vent not operating freely; gauges damaged or not showing proper pressures	11.2.8.6.4	-		X -
In-line balanced pressure proportioner	Sensing line valves at pump unit or individual proportioner stations not open; no power to foam liquid pump	11.2.8.6.5	X	-	-
In-line balanced pressure proportioner	Strainer damaged or corroded; pressure vacuum vent not operating freely; gauges damaged or not showing proper pressures	11.2.8.6.5	-		X -
In-line balanced pressure proportioner	Strainer plugged or fouled	11.2.8.6.5	X	-	-
Orifice plate proportioner	No power to foam liquid pump	11.2.8.6.6	X	-	-
Orifice plate proportioner	Strainer damaged or corroded; pressure vacuum vent not operating freely; gauges damaged or not showing proper pressures	11.2.8.6.6	-		X -
Orifice plate proportioner	Strainer plugged or fouled	11.2.8.6.6	X	-	-
Wide-range proportioner	Reference marks not aligned	11.2.8.6.7	-		X -
Wide-range proportioner	Proportioner installed backwards	11.2.8.6.7	X	-	-
Proportioning systems (all)	Foam concentrate in tank below the design requirements	11.2.9.1	X	-	-
Proportioning systems (all)	Corrosion on foam concentrate tanks	11.2.9.2	-	-	X

<u>Item</u>	<u>Finding</u>	<u>Reference</u>	<u>Impairment</u>	<u>Critical Deficiency</u>	<u>Noncritical Deficiency</u>
Bladder tank proportioner	Foam in water surrounding bladder	11.2.9.8	X	-	-
Pipe and fittings	Mechanical damage; rusted or corroded; improperly aligned or trapped sections; low-point drains not functioning; improper location or poor condition of rubber-gasketed fittings	11.2.11.2, 11.2.11.4, 11.2.11.5, and 11.2.11.6	-		X
Hangers and seismic braces	Damaged or missing; not securely attached to structure or piping; missing or damaged paint or coating; rusted or corroded	11.2.12	-	X	X
Foam contamination	Foam types mixed or water intrusion	11.2.13.1.2	-	X	-
Foam dam	Damaged or clogged drains within dam	11.2.15	X	-	-
Chapter 11: Foam-Water Sprinkler Systems — Testing		-	-	-	-
Foam concentrate	Fails quality testing	11.3.1.3	-	X	-
Operational test	Foam sample failed concentration test	11.3.2.2	X	-	-
Hydro test	Tank fails test	11.3.5.1	X	-	-
Operational test	Fire detection system did not operate within requirements of <i>NFPA 72</i>	11.3.10.2.5	-	X	-
Operational test	Nozzles plugged	11.3.10.2.7.1	X	-	-
Operational test	Nozzles incorrectly positioned	11.3.10.2.7.1	-	X	-
Operational test	Pressure readings not comparable to original design requirements	11.3.10.2.8	-	X	-
Operational test	Manual actuation devices not working properly	11.3.10.4	X	-	-
Fixed foam discharge outlet	Orifice plugged	11.3.11.1	X	-	-
Foam dam	Failed to retain water	11.3.11.5.1	X	-	-
Pressure foam maker	Plugged	11.3.11.6.2	X	-	-
Chapter 13: Common Components and Valves — Inspection					
Alarm devices	Physical damage	13.2.3.1 and 13.2.3.2	-	X	X

<u>Item</u>	<u>Finding</u>	<u>Reference</u>	<u>Impairment</u>	<u>Critical Deficiency</u>	<u>Noncritical Deficiency</u>	
Gauges	Not operating or damaged	13.2.4.1.1	-	-		X
Gauges	Not showing normal water/air pressure	13.2.4.1.2 and 13.2.4.1.3	X	X	X	
Gauges	Freezer — system pressure lower than compressor	13.2.4.1.4	X	-	-	
Control valve	Improper closed position	13.3.2.2	X	-	-	
Control valve	Improper open position	13.3.2.2	-		X	-
Control valve	Inaccessible; no appropriate wrench (if required); no identification	13.3.2.2	-	-		X
Control valve	Not sealed, locked, or supervised	13.3.2.2	-		X	-
Alarm valve	External physical damage; trim valves not in appropriate open or closed position; retard chamber or alarm drain leaking	13.4.1.1	-		X	-
Valve enclosure	Upon visual observation, enclosure not maintaining minimum 40°F (4°C) temperature	4.1.2.5	X	X	-	
Valve enclosure	Low-temperature alarms (if installed) are physically damaged	4.1.2.5.1 and 4.1.2.5.2	-		X	-
Preaction valve and deluge valve	External physical damage; trim valves not in appropriate open or closed position; valve seat leaking	13.4.3.1.1 and 13.4.4.1.1	-		X	-
Preaction valve and deluge valve	Electrical components not in service	13.4.3.1.1 and 13.4.4.1.1	X	-	-	
Dry pipe valve/quick-opening device	External physical damage; trim valves not in appropriate open or closed position; intermediate chamber leaking	13.4.5.1.2	-		X	-
Sprinkler pressure-reducing control valves	Not in open position	13.5.1.1	X	-	-	

<u>Item</u>	<u>Finding</u>	<u>Reference</u>	<u>Impairment</u>	<u>Critical Deficiency</u>	<u>Noncritical Deficiency</u>
Sprinkler pressure-reducing control valves	Not maintaining downstream pressures in accordance with design criteria	13.5.1.1	X	X	X
Sprinkler pressure-reducing control valves	Leaking; damaged; hand wheel missing or broken	13.5.1.1	-		X -
Hose connection pressure-reducing valves	Hand wheel missing; hose threads damaged and unusable; reducer missing	13.5.2.1	X	-	-
Hose connection pressure-reducing valves	Hand wheel broken; hose threads damaged but usable; leaking	13.5.2.1	-		X -
Hose connection pressure-reducing valves	Cap missing	13.5.2.1	-	-	X
Hose rack assembly pressure-reducing valve	Hand wheel broken or missing; leaking	13.5.3.1	-		X -
Hose valves	Leaking; visible obstructions; caps, hose threads, valve handle, or cap gasket damaged or in poor condition; no restricting device	13.6.1	-		X -
Backflow prevention assemblies	Reduced-pressure assemblies; differential-sensing valve relief port continuously discharging	13.7.1.1	-		X -
Fire department connection	Inaccessible; damaged couplings and unusable	13.8.1	X	-	-
Fire department connection	Damaged couplings but usable; clapper operating improperly or missing	13.8.1	-		X -
Fire department connection	Check valve leaking; automatic drain operating improperly or missing	13.8.1	-	-	X
Fire department connection	Missing identification sign	13.8.1	-	-	X

<u>Item</u>	<u>Finding</u>	<u>Reference</u>	<u>Impairment</u>	<u>Critical Deficiency</u>	<u>Noncritical Deficiency</u>
Chapter 13: Common Components and Valves — Testing		-	-	-	-
Main drain	More than 10 percent drop in full flow pressure	13.2.2.3	X	X	X
Alarm devices	Water motor and gong not functioning without an additional electrically supervised waterflow device	13.2.3.1.2	-		X
Alarm devices	Water motor and gong not functioning with an additional electrically supervised waterflow device	13.2.3.1.2	-	-	X
Alarm devices	Pressure switch or vane-type switch not functioning; no alarm	13.2.3.2.2	-		X
Gauges	Not replaced or calibrated in 5 years; not accurate within 3 percent of scale	13.2.4.2 and 13.2.4.3	-	-	X
Control valve	Valve not operating through its full range	13.3.3.1	X	-	-
Control valve	No spring or torsion felt in rod when opening post indicator valve	13.3.3.2	X	-	-
<u>Control valve</u>	<u>Improper indication status shown in view window on a post indicator valve after operation through its full range of motion.</u>	<u>13.3.3.1</u>			<u>X</u>
Supervisory switches	No signal from two revolutions of hand-wheel from normal position or when stem has moved one-fifth of distance from normal position	13.3.3.5.2	-	-	X
Supervisory switches	Signal restored in position other than normal	13.3.3.5.3	-		X
Preaction valve	Priming water level incorrect	13.4.3.2.1	-		X
Preaction valve	Three-year air leakage test failed	13.4.3.2.6	-		X
Preaction valve	Low and high air pressure switch did not send signal; no alarm	13.4.3.2.11	-		X

<u>Item</u>	<u>Finding</u>	<u>Reference</u>	<u>Impairment</u>	<u>Critical Deficiency</u>	<u>Noncritical Deficiency</u>
Preaction and deluge valve	Low-temperature switch did not send signal; no alarm	13.4.3.2.12 and 13.4.4.2.15	-		X
Preaction valve	Automatic air maintenance device did not pass test	13.4.3.2.13	-	-	X
Deluge valve	Annual full flow trip test revealed plugged nozzles; manual actuation devices did not operate properly	13.4.4.2.4	X	-	-
Deluge valve	Pressure reading at hydraulically most remote nozzle and/or at valve incompatible with original design values	13.4.4.2.7	-	X	-
Dry pipe valve	Priming water level incorrect	13.4.5.2.1	-	X	-
Dry pipe valve	Does not trip during test	13.4.5.2.2	X	-	-
Quick-opening device	Quick-opening device did not pass test	13.4.5.2.4	-	X	-
Dry pipe valve	Low and high air pressure alarms did not send signal; no alarm	13.4.5.2.6	-	X	-
Dry pipe valve	Low-temperature switch did not send signal; no alarm	13.4.5.2.7	-	X	-
Dry pipe valve	Automatic air maintenance device did not pass test	13.4.5.2.8	-	X	-
Dry pipe system	Three-year leakage test failed	13.4.5.2.9	-	X	X
Sprinkler pressure-reducing control valves	Test results not comparable to previous results	13.5.1.4	X	X	X
Hose connection pressure-regulating valves	Test results not comparable to previous results	13.5.2.3 and 13.5.2.3.1	X	X	X
Hose rack assembly pressure-regulating valve	Test results not comparable to previous results	13.5.3.1.2	X	X	X
Hose valves (Class I and Class III standpipe systems)	Annual test revealed valve leaking or difficult to operate	13.6.2.1.1	-	X	-

<u>Item</u>	<u>Finding</u>	<u>Reference</u>	<u>Impairment</u>	<u>Critical Deficiency</u>	<u>Noncritical Deficiency</u>
Hose valves (Class II standpipe systems)	Test revealed valve leaking or difficult to operate	13.6.2.2.1	-		X
Backflow prevention assemblies	Did not pass minimum flow requirement for forward flow test	13.7.2.1	X	X	-
Air compressors and nitrogen generators	Unit does not start at required air pressure; unit does not restore normal supervisory air pressure in required time frame; unit overheats while operating	13.10.3	-		X
Chapter 14: Internal Piping Condition and Obstruction Investigation — Testing					
Assessment of internal condition	Assessment revealed presence of MIC, zebra mussels, rust, or scale	14.2.1	-		X

Statement of Problem and Substantiation for Public Input

The indicator with the indication window operating/displaying improperly does not have a material effect on the system to function as intended, and is a frequent finding. This provides guidance to the proper recommended classification of the finding.

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Committee: INM-AAA



Public Input No. 133-NFPA 25-2026 [Section No. A.3.3.34]

A.3.3.34 Qualified Personnel. [🔗](#)

See [4.1.1.3](#) for more information on qualified personnel.

Statement of Problem and Substantiation for Public Input

This was missing the reference to the appropriate section to send the user to.

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Public Input No. 69-NFPA 25-2026 [New Section after A.4.1.6.2]

A.4.1.6.4 The property owner or their designated representative is required to comply with this entire standard (4.1.1). When portions of the inspection, testing, and maintenance requirements are contracted out to an inspection, testing, and maintenance service company, some of the less frequent tests such as those with frequencies of 3 year, 5 years, and more may not be included in the contract or agreement. Identifying and reporting when a required test hasn't been performed complies with the definition of a non-critical deficiency.

Statement of Problem and Substantiation for Public Input

The annex text for this requirement is needed to ensure that all tests required by this standard are performed within the required frequency. The definition of a non-critical deficiency includes the phrase "... correction is needed to meet the requirements of this standard ...". If a test hasn't been performed, then correction is needed and the owner or their designated representative must be notified through the inspection record to take action to have the test(s) performed. Many inspection forms include questions about the performance of less frequent test and do report it when a test isn't done as a failed test.

Related Public Inputs for This Document

<u>Related Input</u>	<u>Relationship</u>
<u>Public Input No. 68-NFPA 25-2026 [New Section after 4.1.6.2]</u>	Annex to PI 68.

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Public Input No. 76-NFPA 25-2026 [New Section after A.4.1.6.2]

A.4.1.6.4 Corrections and repairs should not be made using off-the-shelf items that lessen the integrity of the system or component. Temporary non-listed patches and replacement part have a high frequency of failure when subjected to the normal system pressures required for water-based fire protection systems. These failures can result in water damage and other consequences that impact the performance of the system or component. ..

Statement of Problem and Substantiation for Public Input

This annex text explains why the added requirement is needed to ensure that corrections and repairs that are made do not adversely affect the integrity and/or performance of the system or component. Temporary “fixes” that utilize materials that aren’t listed for fire protection systems often fail causing systems to false trip or otherwise activate causing water damage, false alarms, and other costly consequences.

Related Public Inputs for This Document

<u>Related Input</u>	<u>Relationship</u>
<u>Public Input No. 75-NFPA 25-2026 [New Section after 4.1.6.2]</u>	Annex text for PI 75.

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Public Input No. 196-NFPA 25-2026 [Section No. A.4.1.10]

A.4.1.10



Systems installed in accordance with the 2007 and subsequent editions of NFPA 13 should have a general information sign. It is not the intent of the committee for a system to have both the information sign required by NFPA 25 and the general information sign required by NFPA 13. The information sign required by this standard is intended to be provided for systems installed prior to the 2007 edition of NFPA 13 . ~~Systems installed under the 2007 and subsequent editions of NFPA 13 should have a general information sign and those systems missing a General Information Sign .~~

Statement of Problem and Substantiation for Public Input

To replace a General Information Sign that was never provided in the first place, or has been lost, is a very onerous and costly task. Documents must be researched, if they're available, or the system must be surveyed, redrawn, and hydraulically calculated to determine the potential protection criteria. Most of the (21) items required by NFPA 13 to be on the General Information Sign can't be accurately determined without the original installation documents, or recreated except through testing, including items 2 through 13, 16 through 18, 20, 21. While all of the data on the General Information Sign is helpful when performing a system evaluation, not all of it is needed to properly inspect, test, and maintain the system. Instead of trying to recreate the General Information Sign, this change explains that providing an Information Sign instead meets the intent of NFPA 25.

Related Public Inputs for This Document

<u>Related Input</u>	<u>Relationship</u>
Public Input No. 125-NFPA 25-2026 [Section No. 4.1.10]	Annex to coordinate with proposed cahnges to the requirement.

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Public Input No. 67-NFPA 25-2026 [New Section after A.4.1.11]

A.4.1.13.1 Components that must be removed include but are not limited to sprinklers, nozzles, hose valves and hoses, alarm devices, fire department connections, drain valves, auxiliary drains, test connections, pumps, gauges, and all other miscellaneous components.

Statement of Problem and Substantiation for Public Input

The current allowance is extracted from NFPA 13 and could be misunderstood to apply only to sprinkler systems. These changes expand the intent of this section to include all water-based fire protection systems covered by NFPA 25.

Related Public Inputs for This Document

<u>Related Input</u>	<u>Relationship</u>
<u>Public Input No. 66-NFPA 25-2026 [Section No. 4.1.13]</u>	Annex to related input.

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Committee: INM-AAA



Public Input No. 34-NFPA 25-2026 [Section No. A.4.9]

A.4.9

Section 4.9 provides the option to adopt a performance-based test and inspection method as an alternative means of compliance with 4.6.2. The prescriptive test and requirements contained in this standard are essentially qualitative. In addition, this standard is applied equally to systems where a system failure might be acceptable and to systems where preventing system failure is an extremely high priority. It is appropriate to adjust reliability requirements in performance-based ITM accordingly. One suggested means to complete a performance-based program can be found in the SFPE *Engineering Guide to Performance-Based Fire Protection, 2nd edition, 2007*.

Statement of Problem and Substantiation for Public Input

Updating the reference to the most current guide.

Related Public Inputs for This Document

<u>Related Input</u>	<u>Relationship</u>
<u>Public Input No. 35-NFPA 25-2026 [Section No. A.4.9.1]</u>	
<u>Public Input No. 36-NFPA 25-2026 [Section No. I.1.2.10]</u>	

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Public Input No. 35-NFPA 25-2026 [Section No. A.4.9.1]

A.4.9.1 

As noted in A.4.9, this standard is applied equally to systems where a system failure might be acceptable and to systems where preventing system failure is an extremely high priority. Goals should be adjusted accordingly.

Sprinkler systems can be used as an example for establishing a baseline. The overall performance of sprinkler systems is documented and can be used as a starting point to establish a baseline for reliability. However, the performance level of sprinkler systems maintained in accordance with this standard is not currently well documented, and the reliability baseline should be adjusted upward using an adjustment factor agreeable to the approving authority.

Once a baseline for reliability is established, it should be adjusted upward or downward based on, as a minimum, the following issues:

- (1) Building criticality
- (2) System/component preventive maintenance programs
- (3) Consequences of system maloperation such as the following:
 - (4) Immediate loss of and/or damage to facilities, equipment, and contents
 - (5) Business interruption
 - (6) Increased hazard to firefighters
 - (7) Impact on adjacent facilities
 - (8) Economic impact on community
- (9) System/component repair history
- (10) Building/service conditions

Once a baseline acceptable to the approving authority has been determined, equivalent or superior levels of performance can be demonstrated through qualitative and/or quantitative performance-based analyses. This section provides a basis for implementing and monitoring a quantitative performance-based program acceptable under this option (providing approval is obtained from the authority having jurisdiction).

The concept of a quantitative performance-based testing and inspection program is to establish the requirements and frequencies at which inspection and testing must be performed to achieve an acceptable level of operational reliability. The goal is to balance the inspection/test frequency with the reliability of the system or component. Ideally, a quantitative performance-based inspection program will adjust test/inspection frequencies commensurate with historical documented equipment performance and desired reliability. Frequencies of test/inspection under a quantitative performance-based program can be extended or reduced from the prescriptive test requirements contained in this standard when continued testing has been documented indicating a higher or lower degree of reliability compared to the authority having jurisdiction's expectations of performance. Additional program attributes that should be considered when adjusting test/inspection frequencies include the following:

- (1) System/component preventive maintenance programs
- (2) Consequences of system maloperation
- (3) System/component repair history
- (4) Building/service conditions

Fundamental to implementing a quantitative performance-based program is that adjusted test and inspection frequencies must be technically defensible to the authority having jurisdiction and supported by evidence of higher or lower reliability. Data collection and retention must be established so that the data utilized to alter frequencies are representative, statistically valid, and evaluated against firm criteria. Frequencies should not be arbitrarily extended or reduced without a suitable basis and rationale. It must be noted that transitioning to a quantitative performance-based program might require additional expenditures of resources in order to collect and analyze failure data, coordinate review efforts, replace program documents, and seek approval from the authority having jurisdiction. Information on how to estimate the

reliability of fire protection systems can be found in ~~Chapter 74~~ Chapter 86, "Reliability, Availability, Maintainability, and ~~Maintainability~~ Inspectability," of the *SFPE Handbook of Fire Protection Engineering*, 6th edition, 2026.

Failure Rate Calculation. A quantitative performance-based program requires that a maximum allowable failure rate be established and approved by the authority having jurisdiction in advance of implementation. The use of historical system/component fire system inspection records can be utilized to determine failure rates. One method of calculating the failure rate of a fire system is based on the following equation:

$$FSFR(t) = \frac{NF}{(NC)(t)} \quad [A.4.9.1a]$$

where:

$FSFR$ = fire system failure rate (failures per year)

t = time interval of review (years)

NF = number of failures

NC = total number of fire systems inspected or tested

Example. Data are collected for 50 fire pump weekly tests over a 5-year period. The testing is conducted, as described in 8.3.1. A review of the data has identified five failures:

Total components: 280

Data collection period: 5 years

Total failures: 5

$$FSFR = \frac{5}{280 \times 5} = 0.003/\text{year} \quad [A.4.9.1b]$$

A fundamental requirement of a quantitative performance-based program is the continual monitoring of fire system/component failure rates and determining whether they exceed the maximum allowable failure rates as agreed upon with the authority having jurisdiction. The process used to complete this review should be documented and repeatable.

Coupled with this ongoing review is a requirement for a formalized method of increasing or decreasing the frequency of testing/inspection when systems exhibit either a higher than expected failure rate or an increase in reliability as a result of a decrease in failures, or both. A formal process for reviewing the failure rates and increasing or decreasing the frequency of testing must be well documented.

Concurrence of the authority having jurisdiction on the process used to determine test frequencies should be obtained in advance of any alterations to the test program. The frequency required for future tests might be reduced to the next inspection frequency and maintained there for a period equaling the initial data review or until the ongoing review indicates that the failure rate is no longer being exceeded — for example, going from annual to semiannual testing when the failure rate exceeds the authority having jurisdiction's expectations or from annual to every 18 months when the failure trend indicates an increase in reliability.

References.

Budnick, E. K., P.E., "Automatic Sprinkler System Reliability," *Fire Protection Engineering*, Society of Fire Protection Engineers, 2001.

Fire Protection Equipment Surveillance Optimization and Maintenance Guide, Electric Power Research Institute, July 2003.

Dungan, K. W., P.E., "Performance-Based Inspection, Testing, and Maintenance," *Fire Protection Engineering*, Society of Fire Protection Engineers, 2016.

Koffel, W. E., P.E., *Reliability of Automatic Sprinkler Systems*, Alliance for Fire Safety, 2005.

NFPA's Future in Performance Based Codes and Standards, July 1995.

NFPA Performance Based Codes and Standards Primer, December 1999.

Statement of Problem and Substantiation for Public Input

Updating the reference for the SFPE Handbook of Fire Protection Engineering to current chapter and current edition.

Related Public Inputs for This Document

<u>Related Input</u>	<u>Relationship</u>
Public Input No. 34-NFPA 25-2026 [Section No. A.4.9]	Updating SFPE references
Public Input No. 36-NFPA 25-2026 [Section No. I.1.2.10]	

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Committee: INM-AAA



Public Input No. 71-NFPA 25-2026 [Section No. A.4.11.7.3]

A.4.11.7.3



Although some specific tasks might be delayed, it is not the intent that all activities under the scope of this standard be deferred. A reasonable attempt should be made to verify that the system is operational. Inspection and testing of ~~equipment~~ components and ~~components~~ systems in other areas where personnel safety is not compromised should still be performed.

Statement of Problem and Substantiation for Public Input

This change goes with the consolidation of the two sections titled “Accessibility” into one section. While inaccessibility for safety concerns is related to the overall safety of personnel performing ITM activities, having these requirements and allowances in one section and closer to the beginning of chapter 4 makes them more The terms that have been added or changed in sections 4.1.3.1 and 4.1.3.2 clarify the intent of each section and add consistency in the use of these terms.

Related Public Inputs for This Document

<u>Related Input</u>	<u>Relationship</u>
<u>Public Input No. 70-NFPA 25-2026 [Section No. 4.11.7]</u>	Annex to PI 70.

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Committee: INM-AAA



A.5.2.1.1.1

The conditions described in this section can have a detrimental effect on the performance of sprinklers by adversely impacting water distribution patterns, insulating thermal elements and delaying operation, or otherwise rendering the sprinkler inoperable or ineffectual. With particular regard to corrosion, loading or paint, the expectation is that qualified personnel conducting these inspections will apply their judgment in determining to what extent, if any, those conditions constitute a detriment to performance.

Severely corroded or loaded sprinklers should be reported as a deficiency or impairment as part of the visual inspection and designated to be replaced. Such sprinklers could be affected in their distribution or other performance characteristics not addressed by routine sample testing.

Corrosion, loading, or paint found on the seat of the sprinkler could impact the release of the plug and discharge stream. Corrosion, loading, or paint built up on the deflector could affect the spray pattern. Corrosion, loading, or paint on the operating elements could affect thermal response and release of the operating elements. All of these conditions can have a detrimental effect on the performance of the sprinkler and could warrant replacement or testing in accordance with 5.3.1. Sprinklers having limited corrosion, loading, or paint in locations on the sprinkler that are not expected to impact the operation or water distribution characteristics can continue to be used. If information on the thermal response or operating characteristics of sprinklers is necessary to make a determination, a sample of sprinklers with corrosion, loading, or paint can be tested by an approved testing laboratory in accordance with 5.3.1. Surface discoloration that does not impact the performance of the sprinkler should not warrant replacement or testing.

Multiple sprinkler operations within a facility without a fire present might be a sign of exposure to excessive temperatures, exposure to excessive pressure, sprinkler damage, or excessive corrosion of the sprinklers. Consideration should be given to replacing sprinklers that are considered representative of the operated sprinklers.

Glass bulbs in sprinklers exposed to sunlight or installed in cold environments such as walk-in coolers and freezers might lose or change their temperature classification color due to the environment. This loss of color should not be confused with loss of fluid in the glass bulb. Tests have shown that this loss or change of color in the bulb does not affect the operation or any other performance characteristics of the sprinkler, and such sprinklers can be allowed to remain in service. The tests also showed that when sprinklers installed in cold environments were subjected to temperatures above 60°F (15.5°C), the fluid color returned.

In lieu of replacing sprinklers that are loaded with a coating of dust, cleaning sprinklers with compressed air or a vacuum is permitted, provided that the equipment does not touch the sprinkler.

Statement of Problem and Substantiation for Public Input

This section of Chapter 5 has often received criticism ever since the subjective phrase "detrimental to sprinkler performance" was introduced. This annex language is proposed to clarify what the expectation of the committee was when introducing such subjective language; also underscoring the importance of the definition of "Qualified Personnel" as it is their subjectivity that must come into play here.

Related Public Inputs for This Document

<u>Related Input</u>	<u>Relationship</u>
Public Input No. 11-NFPA 25-2026 [Section No. 5.2.1.1.5]	

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Committee: INM-AAA



Public Input No. 73-NFPA 25-2026 [Section No. A.5.2.1.1.3]

A.5.2.1.1.3

Examples include spaces above ceilings, whether the ceilings are lay-in tile or gypsum board, areas under theater stages, pipe chases, attics, and other inaccessible areas, even if access panels or hatches are provided into the areas.

Even though some attics include some flooring for maintenance purposes there typically isn't adequate lighting or access to all the sprinklers for inspection. Unless the entire attic is provided with a permanent code - compliant floor, inspection of the sprinklers isn't required.

Where temporary listed membrane ceilings are installed, NFPA 13 allows sprinkler protection to be omitted below the "drop out" membrane ceiling. These areas should be inspected during periods when the membrane ceiling is not present.

Where finished ceiling areas around installed pendent sprinklers show signs of water damage, further investigation should be conducted and the building owner or representative should be notified.

Statement of Problem and Substantiation for Public Input

This change clarifies that attics are to be considered a concealed space and unless the attic has a complete code-compliant floor throughout the inspector is not required to inspect the sprinklers in the attic.

Related Public Inputs for This Document

<u>Related Input</u>	<u>Relationship</u>
Public Input No. 72-NFPA 25-2026 [Section No. 5.2.1.1.3]	Revised annex to PI 72.
Public Input No. 115-NFPA 25-2026 [Section No. 5.2.2.3]	
Public Input No. 116-NFPA 25-2026 [Section No. 5.2.3.3]	

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Committee: INM-AAA



Public Input No. 154-NFPA 25-2026 [New Section after A.5.2.1.3]

Sprinkler Recall Status Inspection

A.5.2.1.6.1 See Annex J for examples of sprinklers applicable to this section.

Statement of Problem and Substantiation for Public Input

This Public Input (PI) addresses a continuing and imminent life-safety hazard associated with the widespread presence of recalled fire sprinklers that remain installed in existing buildings decades after multiple manufacturer and Consumer Product Safety Commission (CPSC) recall actions.

Certain wet and dry sprinklers utilizing dynamic O-ring water seal constructions were subject to major recalls affecting Central Sprinkler Company, Omega, Star, and Gemini brands. Based on industry testing and subsequent standards action, Underwriters Laboratories (UL) identified that degradation, sticking, and material transfer of O-ring seals could inhibit sprinkler operation under fire conditions. As a result of these findings, UL sprinkler standards were revised to prohibit the use of O-ring water seal constructions, with an effective manufacturing cutoff date of January 9, 2003.

Despite the age of these recalled sprinklers, large quantities remain installed in existing buildings. CPSC data indicate that major O-ring recalls affected tens of millions of sprinklers nationally (e.g., approximately 35 million under Central's 2001 program alone, plus earlier Omega and limited Gem/Star models), with only partial replacements documented. Consequently, recalled sprinklers are expected to remain in service across thousands of buildings, including occupancies serving vulnerable populations.

Field sprinkler testing data from UL Solutions, along with recent field-service testing results from Dyne Fire Protection Labs, demonstrate a pronounced disparity in operating performance between sprinklers incorporating O-ring water seals and those without such seals. UL's long-running field-testing program shows normal operation in approximately 63–71 percent of tested wet sprinklers with O-ring seals and approximately 44–49 percent of tested dry sprinklers with O-ring seals, compared to normal operation rates consistently exceeding 95 percent for sprinklers without O-ring water seals across multiple sprinkler types and service ages. Complementing this, Dyne's 2024–2025 field-service testing aggregates indicate that sprinklers utilizing O-ring water seal designs (still present in approximately 4–5% of submissions) continue to exhibit failure rates exceeding 50 percent when evaluated against applicable operational performance criteria. These findings demonstrate that the defect mechanism associated with O-ring water seals presents a materially elevated risk of failure that is not present in non-O-ring sprinkler designs.

NFPA 25 currently relies on visual inspection and age-based representative sample testing to assess sprinkler condition and performance. However, the defects associated with recalled O-ring sprinklers are internal and are not detectable through visual inspection from floor level. While NFPA 25 includes testing requirements for certain quick-response sprinklers at 20 or 25 years in service, these provisions do not require verification of recall status and are dependent upon complete records, correct sprinkler classification, and consistent implementation. As demonstrated by recent fatal and near-fatal fire incidents, these conditions are frequently absent in older systems, allowing recalled sprinklers to remain in service and appear compliant under existing inspection and testing frameworks.

In July 2025, a fatal fire occurred at the Gabriel House assisted living facility in Fall River, Massachusetts, resulting in the deaths of ten residents. The incident represents the deadliest fire in the Commonwealth of Massachusetts in more than four decades and underscores the severity of the hazard posed by undetected recalled sprinkler components in existing occupancies. Post-incident inspections identified recalled Central GB-series O-ring sprinklers installed within the building. Subsequent targeted inspections conducted by the Fall River Fire Department and a neighboring jurisdiction identified additional recalled sprinklers remaining in service at multiple properties, further

demonstrating that current NFPA 25 requirements do not reliably identify recalled components.

These findings are cited to illustrate the persistence of recalled sprinklers in service and the limitations of current inspection practices, not to assign causation in any specific incident.

NFPA 25 presently contains no explicit requirement to verify sprinkler recall status during inspection, testing, or maintenance activities. Without such a requirement, owners, inspection agencies, and Authorities Having Jurisdiction (AHJs) lack a systematic mechanism to identify and mitigate the continued presence of recalled sprinklers known to exhibit elevated failure rates under fire conditions.

This PI closes a critical gap in NFPA 25 by establishing a requirement for periodic verification of sprinkler recall status using available inventory records and identification methods. The proposed change does not mandate new testing protocols or blanket replacement but instead ensures that existing recall determinations issued by manufacturers and safety authorities are identified and addressed within the inspection and maintenance process.

Related Public Inputs for This Document

Related Input	Relationship
Public Input No. 152-NFPA 25-2026 [New Section after 5.2.1.5]	Referenced
Public Input No. 155-NFPA 25-2026 [New Section after A.5.4.1.1(4)]	
Public Input No. 157-NFPA 25-2026 [New Section after I.3]	

Submitter Information Verification

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Submittal Date: Tue Jun 02 14:42:09 EDT 2026

Committee: INM-AAA



Public Input No. 117-NFPA 25-2026 [Section No. A.5.2.2.3]

A.5.2.2.3 [link](#)

Examples include above suspended ceilings, some floor/ceiling or roof/ceiling assemblies, areas under theater stages, pipe chases, attics, and other inaccessible areas.

Statement of Problem and Substantiation for Public Input

This change clarifies that attics are to be considered a concealed space and unless the attic has a complete code-compliant floor throughout the inspector is not required to inspect the piping in the attic.

Related Public Inputs for This Document

<u>Related Input</u>	<u>Relationship</u>
<u>Public Input No. 115-NFPA 25-2026 [Section No. 5.2.2.3]</u>	Addresses components in concealed spaces

Submitter Information Verification

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Committee: INM-AAA



Public Input No. 118-NFPA 25-2026 [Section No. A.5.2.3.3]

A.5.2.3.3 [🔗](#)

Examples of hangers and seismic braces installed in concealed areas include above suspended ceilings, some floor/ceiling or roof/ceiling assemblies, areas under theater stages, pipe chases, attics, and other inaccessible areas.

Statement of Problem and Substantiation for Public Input

This change clarifies that attics are to be considered a concealed space and unless the attic has a complete code-compliant floor throughout the inspector is not required to inspect the hangers in the attic.

Related Public Inputs for This Document

<u>Related Input</u>	<u>Relationship</u>
Public Input No. 116-NFPA 25-2026 [Section No. 5.2.3.3]	Addresses components in concealed spaces

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Committee: INM-AAA



Public Input No. 155-NFPA 25-2026 [New Section after A.5.4.1.1(4)]

Sprinkler Recall Status Inspection

A.5.4.1.1(5) See A.5.2.1.6.1

Statement of Problem and Substantiation for Public Input

This Public Input (PI) addresses a continuing and imminent life-safety hazard associated with the widespread presence of recalled fire sprinklers that remain installed in existing buildings decades after multiple manufacturer and Consumer Product Safety Commission (CPSC) recall actions.

Certain wet and dry sprinklers utilizing dynamic O-ring water seal constructions were subject to major recalls affecting Central Sprinkler Company, Omega, Star, and Gemini brands. Based on industry testing and subsequent standards action, Underwriters Laboratories (UL) identified that degradation, sticking, and material transfer of O-ring seals could inhibit sprinkler operation under fire conditions. As a result of these findings, UL sprinkler standards were revised to prohibit the use of O-ring water seal constructions, with an effective manufacturing cutoff date of January 9, 2003.

Despite the age of these recalled sprinklers, large quantities remain installed in existing buildings. CPSC data indicate that major O-ring recalls affected tens of millions of sprinklers nationally (e.g., approximately 35 million under Central's 2001 program alone, plus earlier Omega and limited Gem/Star models), with only partial replacements documented. Consequently, recalled sprinklers are expected to remain in service across thousands of buildings, including occupancies serving vulnerable populations.

Field sprinkler testing data from UL Solutions, along with recent field-service testing results from Dyne Fire Protection Labs, demonstrate a pronounced disparity in operating performance between sprinklers incorporating O-ring water seals and those without such seals. UL's long-running field-testing program shows normal operation in approximately 63–71 percent of tested wet sprinklers with O-ring seals and approximately 44–49 percent of tested dry sprinklers with O-ring seals, compared to normal operation rates consistently exceeding 95 percent for sprinklers without O-ring water seals across multiple sprinkler types and service ages. Complementing this, Dyne's 2024–2025 field-service testing aggregates indicate that sprinklers utilizing O-ring water seal designs (still present in approximately 4–5% of submissions) continue to exhibit failure rates exceeding 50 percent when evaluated against applicable operational performance criteria. These findings demonstrate that the defect mechanism associated with O-ring water seals presents a materially elevated risk of failure that is not present in non-O-ring sprinkler designs.

NFPA 25 currently relies on visual inspection and age-based representative sample testing to assess sprinkler condition and performance. However, the defects associated with recalled O-ring sprinklers are internal and are not detectable through visual inspection from floor level. While NFPA 25 includes testing requirements for certain quick-response sprinklers at 20 or 25 years in service, these provisions do not require verification of recall status and are dependent upon complete records, correct sprinkler classification, and consistent implementation. As demonstrated by recent fatal and near-fatal fire incidents, these conditions are frequently absent in older systems, allowing recalled sprinklers to remain in service and appear compliant under existing inspection and testing frameworks.

In July 2025, a fatal fire occurred at the Gabriel House assisted living facility in Fall River, Massachusetts, resulting in the deaths of ten residents. The incident represents the deadliest fire in the Commonwealth of Massachusetts in more than four decades and underscores the severity of the hazard posed by undetected recalled sprinkler components in existing occupancies. Post-incident inspections identified recalled Central GB-series O-ring sprinklers installed within the building. Subsequent targeted inspections conducted by the Fall River Fire Department and a neighboring

jurisdiction identified additional recalled sprinklers remaining in service at multiple properties, further demonstrating that current NFPA 25 requirements do not reliably identify recalled components.

These findings are cited to illustrate the persistence of recalled sprinklers in service and the limitations of current inspection practices, not to assign causation in any specific incident.

NFPA 25 presently contains no explicit requirement to verify sprinkler recall status during inspection, testing, or maintenance activities. Without such a requirement, owners, inspection agencies, and Authorities Having Jurisdiction (AHJs) lack a systematic mechanism to identify and mitigate the continued presence of recalled sprinklers known to exhibit elevated failure rates under fire conditions.

This PI closes a critical gap in NFPA 25 by establishing a requirement for periodic verification of sprinkler recall status using available inventory records and identification methods. The proposed change does not mandate new testing protocols or blanket replacement but instead ensures that existing recall determinations issued by manufacturers and safety authorities are identified and addressed within the inspection and maintenance process.

Related Public Inputs for This Document

<u>Related Input</u>	<u>Relationship</u>
<u>Public Input No. 154-NFPA 25-2026 [New Section after A.5.2.1.3]</u>	Referenced
<u>Public Input No. 153-NFPA 25-2026 [Section No. 5.4.1.1]</u>	Referenced
<u>Public Input No. 152-NFPA 25-2026 [New Section after 5.2.1.5]</u>	Referenced
<u>Public Input No. 157-NFPA 25-2026 [New Section after I.3]</u>	

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Public Input No. 90-NFPA 25-2026 [New Section after A.5.4.1.1(4)]

TITLE OF NEW CONTENT

A.5.4.1.1(6)

Published laboratory testing data has identified higher failure rates for certain dynamic O-ring sprinkler designs.

UL revised UL 199 to prohibit the listing of O-ring water seal constructions after January 2003 following an investigation into sprinkler degradation and operational failures.

The term dynamic O-ring is intended to describe a sprinkler design that incorporates a movable elastomer sealing component within the operating assembly as part of the water seal. The elastomer sealing component is not limited to a circular or ring-shaped configuration and can include other geometries that perform the same sealing and dynamic movement function. In these designs, the elastomeric sealing component is not always mechanically attached to the sealing assembly and can be positioned between the sprinkler frame and sealing component to maintain the water seal. Because the sealing assembly must move relative to the elastomeric component while maintaining contact under pressure, the interface constitutes a dynamic seal.

See annex J for list of o-ring sprinklers not part of a recall or voluntary replacement program

Statement of Problem and Substantiation for Public Input

The proposed annex language is intended to provide guidance to assist in identifying dynamic O-ring sealed sprinklers that were not part of a recall or voluntary replacement program.

The dynamic o-ring sprinkler does have higher failure rates as compared to newer sprinkler designs. Published laboratory testing data has identified failure rates exceeding 50 percent for certain dynamic O-ring sprinkler designs.

UL revised UL 199 to prohibit the listing of O-ring water seal constructions after January 2003 following extensive investigation into sprinkler degradation and operational failures. Despite this action, many existing facilities continue to contain these sprinklers.

The proposed language is consistent with the intent of NFPA 25 to maintain water-based fire protection systems in reliable operating condition as stated in Section 1.2.1.

The purpose of this document is to provide requirements that ensure a reasonable degree of protection for life and property from fire through minimum inspection, testing, and maintenance methods for water-based fire protection systems.

Submitter Information Verification

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Submittal Date: Fri May 29 12:15:04 EDT 2026

Committee: INM-AAA



Public Input No. 202-NFPA 25-2026 [Section No. A.6.2.4.3]

A.6.2.4.3

~~Additional examples include-~~ Examples include above suspended ceilings, some flooring and ceiling or roof and ceiling assemblies, areas under theater stages, pipe chases, attics, and other inaccessible areas.

Statement of Problem and Substantiation for Public Input

This change clarifies that attics are to be considered a concealed space and unless the attic has a complete code-compliant floor throughout the inspector is not required to inspect the standpipe piping in the attic.

Related Public Inputs for This Document

<u>Related Input</u>	<u>Relationship</u>
<u>Public Input No. 198-NFPA 25-2026 [Section No. 6.2.4.3]</u>	Annex to change in Chapter 6.

Submitter Information Verification

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Public Input No. 211-NFPA 25-2026 [Section No. A.6.2.5.3]

A.6.2.5.3



~~Additional examples~~ Examples of hangers and seismic braces installed in concealed areas include above suspended ceilings, in some floor/ceiling or roof/ceiling assemblies, areas under theater stages, pipe chases, attics, and other inaccessible areas.

Statement of Problem and Substantiation for Public Input

This change clarifies that attics are to be considered a concealed space and unless the attic has a complete code-compliant floor throughout the inspector is not required to inspect the hangers and braces s in the attic.

Related Public Inputs for This Document

<u>Related Input</u>	<u>Relationship</u>
<u>Public Input No. 209-NFPA 25-2026 [Section No. 6.2.5.3]</u>	Annex to change in Chapter 6

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Committee: INM-AAA



Public Input No. 5-NFPA 25-2026 [Section No. A.12.3.1.1]

A.12.3.1.1 [🔗](#)

Water mist nozzles should be first given a visual inspection for signs of mechanical damage, cleaning, painting, leakage in service, or severe loading or corrosion, all of which are causes for immediate replacement.

Automatic nozzles that have passed the visual inspection should be laboratory tested for sensitivity (RTI), functionality, and K-factor. Thermal sensitivity should be ~~not less than that permitted in post-corrosion testing of new automatic water mist nozzles of the same type~~ such that the Response Time Index (RTI) does not exceed 350 (meters-seconds)^{1/2} for standard response water mist nozzles and 50 (meters-seconds)^{1/2} for quick response water mist nozzles. Automatic water mist nozzles should be tested for functionality at their minimum operating pressure specified by the manufacturer. Automatic water mist nozzles should have a K-factor within ± 10 percent of the value published by the manufacturer.

Some example testing standards include EN 12259-1, *Fixed firefighting systems — Components for sprinkler and water spray systems — Part 1: Sprinklers*; UL 2167, *Water Mist Nozzles for Fire Protection Service*; and FM Approvals Standard 5560, *Water Mist Systems*.

Water mist nozzles that have been in service for a number of years should not be expected to have all of the performance measurements of a new water mist nozzle. However, if there is any question about their continued satisfactory performance, the water mist nozzles should be replaced.

Statement of Problem and Substantiation for Public Input

This revision better describes the thermal sensitivity criteria applicable for automatic water mist nozzles tested from field installation sites and it also provides alignment with the approach currently referenced for automatic sprinklers and spray nozzles.

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Committee: INM-AAA



Public Input No. 59-NFPA 25-2026 [New Section after A.13.3.3.2]

A.13.3.3.4

If the test connection provides a means of measuring pressure, the pressure should be recorded and monitored. A decrease in pressure over time may indicate a degradation in the valve condition, internal piping condition, or valves upstream within the water supply.

Statement of Problem and Substantiation for Public Input

Flowing minimal water past the valve does not provide a true status of the valve. The operational control valve test operates it through the functionality, but if the stem is broken, it will not always present itself through this test. This provides guidance to record and monitor pressures, where applicable.

Submitter Information Verification

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Submittal Date: Fri May 15 10:25:37 EDT 2026

Committee: INM-AAA



Public Input No. 86-NFPA 25-2026 [New Section after A.13.3.3.2]

A.13.3.3.4 The valve status test is intended to verify that a system control valve has not been left fully closed following inspection, testing, maintenance, or other service activities. Its purpose is confirmation of valve availability not a performance evaluation. It confirms that water is capable of flowing through a control valve that was recently closed and reopened. This test is not intended to verify that a control valve has been returned to the fully open position, nor is it a substitute for main drain testing. The valve status test is a simple but critical safeguard. It moves verification beyond visual confirmation of the valve position and ensures actual water movement through the valve. A main drain test evaluates the condition of the water supply by comparing static and residual pressures and identifying potential supply obstructions or degradation over time.

See Section A.13.2.2 main drain for information on main drain testing procedures and purposes.

Statement of Problem and Substantiation for Public Input

The proposed annex language is intended to clarify the purpose and limitations of the valve status test to promote consistent application and interpretation within the field. Confusion currently exists between the intent of a valve status test and a main drain test, with some users incorrectly assuming the valve status test verifies a fully open valve position or serves as an evaluation of water supply performance. This clarification reinforces that the test is a confirmation of water availability and not a substitute for a main drain test or other water supply evaluation methods.

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Committee: INM-AAA



Public Input No. 40-NFPA 25-2026 [New Section after A.13.4.5.2.4]

TITLE OF NEW CONTENT

Type your content here ...A13.4.5.2.5.2 Records of dry pipe valve trip times and water transit delivery times should be compared to the specific times of 15, 40, 45, 50 or 60 seconds as required by NFPA 13 and NFPA 13R and note any increase in times to allow each individual test to be evaluated and determine if any further action is required.

Statement of Problem and Substantiation for Public Input

There is currently no reference to the different time requirements in NFPA 25 for inspectors or AHJ's to relate system performance or degradation of performance of existing systems. By having this information both in the standard and this additional annex material the necessary information is available so that comparison can be made to determine if any further action is required.

Related Public Inputs for This Document

<u>Related Input</u>	<u>Relationship</u>
<u>Public Input No. 39-NFPA 25-2026 [Section No. 13.4.5.2.5.2]</u>	required to add annex language

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Public Input No. 41-NFPA 25-2026 [Section No. A.13.6.2.1]

A.13.6.2.1 — [Link](#)

~~Hose valves can be tested without a full flow if the cap is left on the hose threads. The purpose of this requirement is to exercise the valve so it can be operated easily.~~

Statement of Problem and Substantiation for Public Input

This recommendation is not appropriate. Hose valve caps are not listed or rated to hold pressure. A separate test cap needs to be used with a test cock so that pressure can be relieved after the valve is exercised.

Submitter Information Verification

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Submittal Date: Tue May 05 15:25:11 EDT 2026

Committee: INM-AAA



Public Input No. 190-NFPA 25-2026 [Section No. A.14.2.1]

A.14.2.1



It is the intent of 14.2.1 to provide a reasonable assurance that corrosion and obstruction issues within fire protection systems are identified. It is not the intent to require verification that every piece of pipe in the system is free from corrosion and obstructions. An assessment of the internal condition of piping can be accomplished by several methods that meet the intent of this section. These methods include the following:

(1) Fire sprinkler systems, foam systems, and water mist systems as follows:

(a) Opening a flushing connection at the end of one main and removing the end fitting or piece of branch line or a sprinkler for the purpose of inspecting for the presence of foreign organic and inorganic material, including the following:

- i. In dry pipe systems and preaction systems, the branch line inspected should be the most remote one from the source of water that is not equipped with the inspector's test connection.
- ii. When performing normal maintenance that involves draining down a system to modify a system such as for tenant fit out or building renovations, or when removing or replacing piping, this inspection can be performed as described and properly recorded at that time. The time interval would then start for the next assessment of that system at the frequency determined by 14.2.1.1 or 14.2.1.2.
- iii. When possible, investigative work should be focused at those areas most prone to experiencing accelerated corrosion rates. These areas include high points of wet systems where trapped air accumulates, low points of dry and preaction systems where water will be trapped, and any bulk piping that sees frequent high volume flow of fresh water (i.e., bulk supply piping near a fire pump).
- iv. If a sprinkler is removed to perform this inspection, 5.4.1.2 requires a new sprinkler matching the characteristics of the replaced sprinkler.

(b) Utilizing alternative examination methods such as the following:

- i. Using video inspection equipment that is inserted into the system at strategic points to observe the internal condition of pipes. This equipment provides a visual exam of the pipes using a camera and lighting system on the end of a push cable. Video inspection equipment can be inserted in alarm, dry, and preaction valves for a look into risers, feed mains, some cross mains, and some branch lines, depending on the system configuration. The push cable can also be inserted in a check valve when performing the 5-year internal inspection required by 13.4.2.1 to view additional areas of a system, and in the fire department connection to perform the interior inspection required by 13.8.3.
- ii. Ultrasonic or similar technology that allows the pipe wall to be tested to determine the extent of any deterioration due to microbiologically influenced corrosion (MIC) or other forms of corrosion. This method would not typically be used for the internal inspection of piping required by this section because it might not detect the presence of solid material in the piping, such as wood, plastic, or other foreign obstructions, that are not a by-product of corrosion, because only small representative sections of pipe are examined.
- iii. A laboratory analysis of water samples obtained from the fire protection system, combined with collecting and inspecting solid material from fire protection system water discharged from a main drain, and an inspector's test connection, can provide an indication of the presence of corrosion, MIC, and/or foreign materials. If a high level of MIC is identified, or if a significant amount of foreign materials is found, further investigation might be warranted to verify the extent of corrosion, MIC, or other obstructions in the system. The solid materials should be collected with an appropriately sized strainer. If inspection of the solid materials identifies excessive rust, black water color, or sulfur (i.e., rotten egg) odors, an obstruction investigation as described in Section 14.3 is warranted.
- iv. A laboratory analysis of a pipe sample taken from a system location most prone to experiencing accelerated corrosion rates can identify the root-cause of metal loss that has occurred and provide the building owner quantifiable data on the severity of the metal loss. This information would allow corrective action to be

taken before the development of failures (i.e., leaks) in the system occur. Such locations include high points of wet systems where trapped air accumulates, low points of dry and preaction systems where water will be trapped, and any bulk piping that sees frequent high-volume flow of fresh water (i.e., bulk supply piping near a fire pump).

(2) Standpipe and hose systems as follows:

- (a) Opening a flushing connection or fitting at the end of one main, removing a remote hose connection fitting, and removing the end fitting of horizontal branch line (if present) for the purpose of inspecting for the presence of foreign organic and inorganic material, including the following:
 - i. When performing normal maintenance that involves draining down a system to modify a system such as for tenant fit out or building renovations, or when removing or replacing piping, this inspection can be performed as described and properly recorded at that time. The time interval would then start for the next assessment of that system at the frequency determined by 14.2.1.1 or 14.2.1.2.
- (b) Utilizing alternative examination methods such as the following:
 - i. Using video inspection equipment that is inserted into the system at strategic points to observe the internal condition of pipes. This equipment provides a visual exam of the pipes using a camera and lighting system on the end of a push cable. Video inspection equipment can be inserted in valves for a look into risers, feed mains, some cross mains, and some branch lines, depending on the system configuration. The push cable can also be inserted in a check valve when performing the 5-year internal inspection required by 13.4.2.1 to view additional areas of a system, and in the fire department connection to perform the interior inspection required by 13.8.3.
 - ii. Ultrasonic or similar technology that allows the pipe wall to be tested to determine the extent of any deterioration due to microbiologically influenced corrosion (MIC) or other forms of corrosion. This method would not typically be used for the internal inspection of piping required by this section because it might not detect the presence of solid material in the piping, such as wood, plastic, or other foreign obstructions, that are not a by-product of corrosion, because only small representative sections of pipe are examined.
 - iii. A laboratory analysis of water samples obtained from the fire protection system, combined with collecting and inspecting solid material from fire protection system water discharged from a main drain, and an inspector's test connection, can provide an indication of the presence of corrosion, MIC, and/or foreign materials. If a high level of MIC is identified, or if a significant amount of foreign materials is found, further investigation might be warranted to verify the extent of corrosion, MIC, or other obstructions in the system. The solid materials should be collected with an appropriately sized strainer. If inspection of the solid materials identifies excessive rust, black water color, or sulfur (i.e., rotten egg) odors, an obstruction investigation as described in Section 14.3 is warranted.
 - iv. A laboratory analysis of a pipe sample taken from a system location most prone to experiencing accelerated corrosion rates can identify the root-cause of metal loss that has occurred and provide the building owner quantifiable data on the severity of the metal loss. This information would allow corrective action to be taken before the development of failures (i.e., leaks) in the system occur.

(3) Private fire service mains, as follows:

- (a) Opening an accessible point on one main for the purpose of inspecting for the presence of foreign organic and inorganic material, including the following:
 - i. When performing normal maintenance that involves draining down a system to modify a system such as for tenant fit out or building renovations, or when removing or replacing piping, this inspection can be performed as described and properly recorded at that time. The time interval would then start for the next assessment of that system at the frequency determined by 14.2.1.1 or 14.2.1.2

(b) Utilizing alternative examination methods such as the following:

- i. Using video inspection equipment that is inserted into the system at strategic points to observe the internal condition of pipes. This equipment provides a visual exam of the pipes using a camera and lighting system on the end of a push cable. Video inspection equipment can be inserted in alarm, dry, and preaction valves for a look into the private main depending on the system configuration. The push cable can also be inserted in a check valve when performing the 5-year internal inspection required by 13.4.2.1 to view additional areas of a system, and in the fire department connection to perform the interior inspection required by 13.8.3.
- ii. Ultrasonic or similar technology that allows the pipe wall to be tested to determine the extent of any deterioration due to microbiologically influenced corrosion (MIC) or other forms of corrosion. This method would not typically be used for the internal inspection of piping required by this section because it might not detect the presence of solid material in the piping, such as wood, plastic, or other foreign obstructions, that are not a by-product of corrosion, because only small representative sections of pipe are examined.
- iii. A laboratory analysis of water samples obtained from the fire protection system, combined with collecting and inspecting solid material from fire protection system water discharged from a main drain, and an inspector's test connection, can provide an indication of the presence of corrosion, MIC, and/or foreign materials. If a high level of MIC is identified, or if a significant amount of foreign materials is found, further investigation might be warranted to verify the extent of corrosion, MIC, or other obstructions in the system. The solid materials should be collected with an appropriately sized strainer. If inspection of the solid materials identifies excessive rust, black water color, or sulfur (i.e., rotten egg) odors, an obstruction investigation as described in Section 14.3 is warranted.
- iv. A laboratory analysis of a pipe sample taken from a system location most prone to experiencing accelerated corrosion rates can identify the root-cause of metal loss that has occurred and provide the building owner quantifiable data on the severity of the metal loss. This information would allow corrective action to be taken before the development of failures (i.e., leaks) in the system occur.

Statement of Problem and Substantiation for Public Input

The annex language needs to align with the internal assessment pointers in the systems chapters.

Submitter Information Verification

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Submittal Date: Tue Jun 02 16:25:09 EDT 2026

Committee: INM-AAA



Public Input No. 54-NFPA 25-2026 [Section No. A.14.3.1(15)]

A.14.3.1(15) [🔗](#)

When the original system acceptance test results are not available, the following water delivery times should be used to determine when an obstruction investigation is warranted:

- (1) Portions of systems protecting dwelling units: 20 seconds or greater
- (2) Ordinary hazard: 63 seconds or greater with a test manifold simulating two open sprinklers
- (3) Extra hazard: 56 seconds or greater with a test manifold simulating four open sprinklers
- (4) High-piled storage: 50 seconds or greater with a test manifold simulating four open sprinklers
- (5) All other hazards with a test connection equal to a single sprinkler: 75 seconds or greater

A decrease in water delivery time should be monitored and recorded as it may be indicative of a blockage within the system or a decrease in volume, and could warrant an obstruction investigation.

Statement of Problem and Substantiation for Public Input

Smaller system volumes produce quicker water delivery times. If a water delivery time has been noticed to have significantly decreased as compared to previous testing, it may be due to an internal blockage or a change in volume. As an example, frozen water in piping can cause a decrease in system volume, allowing for a quicker water delivery time.

Submitter Information Verification

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Committee: INM-AAA



Public Input No. 93-NFPA 25-2026 [New Section after B.4]

B.5 Uniform Summary Report

B.5.1 This summary report is intended to serve as a cover sheet for ITM reports and provide a clear overview of identified deficiencies and their classification. The report is designed to simplify review by allowing jurisdictions and other stakeholders to quickly determine the presence and type of deficiencies without reviewing the entire contractor report. Use of this form is optional and intended to improve consistency and efficiency in report review.

Additional Proposed Changes

<u>File Name</u>	<u>Description</u>	<u>Approved</u>
summar_report_proposal.docx	uniform summary report	

Statement of Problem and Substantiation for Public Input

Adding a summary report to Annex B of NFPA 25 would provide jurisdictions and stakeholders with a standardized cover sheet to accompany all ITM reports. This summary report would clearly identify the presence of deficiencies and categorize the type of deficiency, allowing reviewers to quickly assess system conditions without having to sift through lengthy contractor reports.

Many jurisdictions currently spend significant time reviewing detailed inspection, testing, and maintenance documentation to determine whether deficiencies exist and what corrective actions may be required. A standardized summary report would streamline this process, improve consistency in reporting, and enhance efficiency for authorities having jurisdiction (AHJs).

Including this form in Annex B would provide jurisdictions with an optional, simplified tool that could be adopted to improve report clarity, reduce review time, and facilitate more effective code enforcement and follow up actions

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City:

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Submittal Date: Fri May 29 13:21:07 EDT 2026

Committee: INM-AAA

Uniform Summary Inspection, Testing, and Maintenance (ITM) Report

ITM Service Company:

Contact Telephone #:

Inspector's Name:

Inspector's Permit #:

Inspected Property Name:

Inspection Start Date:

Inspection Finish Date:

Inspected Property Address:

City:

State:

ZIP:

System(s) Inspected:

Inspection Status:

Brief Description of Noncritical Deficiencies:

Brief Description of Critical Deficiencies:

Brief Description of Impairments:

Additional Comments:



Public Input No. 47-NFPA 25-2026 [Section No. D.4.1]

~~D.4.1 – Dry Pipe and Preaction Systems — Scale:~~

- ~~(1) Dry pipe and preaction systems using noncoated ferrous piping should be thoroughly investigated for obstruction from corrosion after they have been in service for 15 years, for 25 years, and every 5 years thereafter.~~
- ~~(2) Dry pipe systems with noncoated ferrous piping should be kept on air year-round, rather than on air and water alternately, to inhibit formation of rust and scale.~~

Statement of Problem and Substantiation for Public Input

This annex text adds no value or guidance.

Internal inspections are already required every 5 years in section 14.2.1.1, and section D.4.1(1) repeats this frequency as a suggestion.

Dry pipe systems are required to be left dry at all times per section 5.4.2, and D.4.1 (2) alludes to an allowance to keep the system wet for a portion of the year.

Submitter Information Verification

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Submittal Date: Wed May 13 10:38:13 EDT 2026

Committee: INM-AAA



Informational References

Annex J- Dynamic O-ring Fire Sprinklers

J.1 General. Table J.1.1 contains examples of sprinklers that were assembled using a dynamic o-ring design

J.1.1 Dynamic O-ring sealing assemblies were listed for fire protection service under UL199 *Standard for Automatic Sprinklers for Fire-Protection Service*. In January 2003 UL revised the listing of these sprinklers. Revisions to UL 199 no longer permitted the use of dynamic O-ring sealing technology in newly listed sprinklers for installation within the United States. Although such sprinklers are no longer permitted under current U.S. listing requirements, legacy installations remain in existing systems, and similar designs not evaluated under UL 199 can continue to be manufactured or installed in jurisdictions outside the United States.

Table J.1.1- Dyanamic O-ring Fire Sprinklers

Additional Proposed Changes

<u>File Name</u>	<u>Description</u>	<u>Approved</u>
Dynamic_0-ring_list.docx	list of dynamic o-ring sprinklers	

Statement of Problem and Substantiation for Public Input

The proposed annex material is intended to provide guidance for identifying sprinklers that utilize dynamic elastomeric sealing components commonly referred to as dynamic O-ring sprinklers. Existing recalls and voluntary replacement programs address only specific listed models and manufacturers; however, similar sprinkler designs remain in service that are not currently included within those programs.

Submitter Information Verification

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Submittal Date: Fri May 29 12:18:56 EDT 2026

Committee: INM-AAA

WET Type Dynamic O-Ring Sprinklers

FIREGUARD CORP.

Model A

FIREMATIC SPRINKLER DEVICES INC.

Model S

Model A (with glass bulb)

Model A-1

Model A-2

GLOBE FIRE SPRINKLER CORP.

Model JN, GS8106, GS8107, GS8109, GS8118, GS8119, GS8127, GS8133, GS8101, GS8102, GS8115, GS8116, GS8108, GS8120, GS8103, GS8117, GS8156, GS8159, GS8164, GS8171, GS8176, GS8151, GS8152, GS8161, GS8162, GS8158, GS8166, GS8153, GS8163, GS5601, GS5602, GS5615, GS5616, GS5626, GS5632, GS5603, GS5617, GS5604, GS5605, GS5651, GS5652, GS5661, GS5662, GS5670, GS5675, GS5653, GS5663, GS5654, GS5655, GGS4201, GS4215, GS4226, GS4204, GS4251, GS4261, GS4270, GS4254, GS2801, GS2815, GS2826, GS2804, GS2851, GS2861, GS2870, GS2854

Model J-46, GS8128, GS8172

Model J-612, GS8129, GS8173

Model J-1220, GS8174

Model JN/RES/HSW, GS4230, GS5630

Model JN/RES/Concealed, GS4211, GS3511, GS3547, GS4247

Model JN/RES/2, GS5631

Model JN/RES/3, GS2810, GS4210

Model JN/RES/4, GS4234

Model X, GS1112, GS1113, GS1114, GS1121, GS1122, GS1123, GS1160, GS1167

ESFR-14, GL1401 Issued: April 2002 Revised: November 2009 3

GRINNELL CORP.

Model G100, G1100

Model G102, G1102

Model F920A

Model F920B

Model F920C

GRUNAU SPRINKLER MANUFACTURING COMPANY INC.

Model PH-1

RELIABLE AUTOMATIC SPRINKLER CO.

Model A

Model B, R1815

Model ZX-RES, R3311, R3314, R3331

Model ZX-RES/2, R3319

Model ZX-1, R3411, R3431, R3414

Model ZX-QR-INST, R3711, R3714

Model ZX-QR-HSWINST, R3731

Model ZX-QR-EC HSW, R5261

Model ZX-SR-INST, R3811, R3814, R3831

SPRAYSAFE AUTOMATIC SPRINKLERS, LTD.

Model B15

Model S15

Model S15-C
Model SQ15
Model SQ15-C
STAR SPRINKLER CORP.
Model PH-1
Model PH-2
Model PH-5 Issued: April 2002 Revised: November 2009 4

STAR SPRINKLER INC.

Model PH-2, S1687
Model PH-5, S2046
Model S100, S2687
Model S102, S3046

VENUS FIRE PROTECTION, LTD(ASTRA SPRINKLERS, LTD.)

Model U Issued: April 2002 Revised: November 2009

Dry Type Dynamic O-ring Sprinklers

ASTRA SPRINKLERS, LTD. (VENUS FIRE PROTECTION, LTD.)

Model B
FIREMATIC SPRINKLER DEVICES INC.
Model A
Model S
Model TU57
Model UD

GLOBE FIRE SPRINKLER CORP.

Model G

GRINNELL CORP.

Model F960, G6036, G6038, G6096, G6098, G6034, G6094, G6095, G6035

RELIABLE AUTOMATIC SPRINKLER CO., INC.

Model G3, R1616, R1636

Model G3A, R1696

Model G3FR, R4216, R4236

STAR SPRINKLER INC.

Model S170, S3230, S3233, S3240, S3243

Model S176, S3234, S3244

Model S178, S3235



Informational References

Annex I – Recalled Fire Sprinklers

I.1 General. Table I.1.1 contains examples of sprinklers that are subjected to mandatory and voluntarily recalls.

Table I.1.1 – Recalled Fire Sprinklers

Additional Proposed Changes

<u>File Name</u>	<u>Description</u>	<u>Approved</u>
recall_sprinkler_list.docx	list of recalled sprinklers	

Statement of Problem and Substantiation for Public Input

The proposed annex material is intended to provide guidance for the identification of recalled fire sprinklers. The annex is intended to assist owners, contractors, and authorities having jurisdiction in recognizing sprinkler designs and characteristics associated with recalled products that may remain installed in existing fire sprinkler systems.

Existing recalls and voluntary replacement programs apply only to specific manufacturers, models, and production periods identified within those programs. However, similar recalled sprinklers still remain in service in existing occupancies.

The annex material is not intended to expand existing recall programs or create new replacement requirements beyond currently identified recalled sprinklers. Rather, the guidance is intended to improve awareness and assist in the field identification of sprinkler designs that have historically demonstrated reliability concerns associated with degradation, sticking, or impaired operation.

Submitter Information Verification

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Committee: INM-AAA

Annex I – Recalled Fire Sprinklers

I.1 General. Table I.1.1 contains examples of sprinklers that are subjected to mandatory and voluntarily recalls.

Table I.1.1 – Recalled Fire Sprinklers

<u>Program / Recall</u>	<u>Brand</u>	<u>Models Affected</u>	<u>Years Affected</u>	<u>Reason / Notes</u>
<u>Voluntary Replacement Program</u>	<u>Central (Wet)</u>	GB, GB4-FR, GB-R1, BB2, ELOC, ELO-GB QR, GB-J, GB4-EC, GB-RS, BB3, ESLO, LD, GB-1, GB4-QREC, GB-R, SD1, ELO SW-20, K17-231, GB-ALPHA, GB-20, ROC, SD2, ELO SW-24, Ultra K17, GB4, GB-20 QR, BB1 17/32, SD3, ESLO-20 GB, ELO-16 GB, GB-QR, GB-LO, BB2 17/32, HIP, ELO-231 GB, GB MULTI-LEVEL, GBR-2, LF, BB3 17/32, WS, ELO-GB, GB-QR MULTI-LEVEL, GB-EC, GBR, BB1, ELO-LH, ELO-231 GBQR, ELO-16 GB FR	2001–2007 (Program Period)	O-ring seal design prone to corrosion or degradation, potentially preventing operation. Free replacement offered for affected sprinklers.
<u>Voluntary Replacement Program</u>	<u>Central (Dry)</u>	A-1, GB, GB4-EC, ELO-16 GB, H-1, GB-QR, GB4-QREC, ELO-16 GB FR, J, GB4, ELO-231 GB, K, GB4-FR, ELO-GB QR	Manufactured mid-1970s–2001	Same O-ring seal issue as above; covered under voluntary replacement.

<u>Program / Recall</u>	<u>Brand</u>	<u>Models Affected</u>	<u>Years Affected</u>	<u>Reason / Notes</u>
<u>Voluntary Replacement Program</u>	<u>Gem (Wet)</u>	F927	1995–2001	Sold under Gem name; part of Central’s voluntary replacement.
<u>Voluntary Replacement Program</u>	<u>Star (Dry)</u>	ME-1, SG, SG-QR, Q, Q-QR	1996–1998	Manufactured for Star; included in Central’s replacement program.
<u>Omega Recall</u>	<u>Central (Omega Series)</u>	C1, C1A, C-1A PRO, R-1, R-1A, R-1M, Flow Control (FC), Protector-M / M Protector, HEC-12, EC-12 RES, EC-20, EC-20A, Prohibitor QR, AC	Recall Period: Oct. 14, 1998 – Aug. 31, 2007 (with closure of Central Voluntary Replacement Program)	Defective sealing design. Recommended replacement with Belleville washer-type seal. Sprinklers delisted by UL (Recall No. 01-201). Replacement sprinklers were not affected.
<u>Globe Recall</u>	<u>Globe (dry)</u>	Model J	1990-1999 (placed on list June 12, 2007)	O-ring deterioration can cause sprinkler to weld shut and fail to discharge water.



Public Input No. 36-NFPA 25-2026 [Section No. I.1.2.10]

I.1.2.10 SFPE Publications.

Society of Fire Protection Engineers, 9711 Washingtonian Blvd, Suite 380, Gaithersburg, MD 20878.

SFPE Engineering Guide to Performance-Based Fire Protection, 2nd edition, 2007.

SFPE Handbook of Fire Protection Engineering, 2016 6th edition, 2026.

Statement of Problem and Substantiation for Public Input

Updating references for SFPE guide and handbook.

Related Public Inputs for This Document

<u>Related Input</u>	<u>Relationship</u>
Public Input No. 34-NFPA 25-2026 [Section No. A.4.9]	Updated guide material
Public Input No. 35-NFPA 25-2026 [Section No. A.4.9.1]	Updated handbook material

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Committee: INM-AAA



Public Input No. 151-NFPA 25-2026 [Section No. I.1.2.11]

I.1.2.11 UL Publications.

Underwriters Laboratories Inc., 333 Pfingsten Road, Northbrook, IL 60062-2096.

UL 2167, *Water Mist Nozzles for Fire Protection Service*, 2021.

CAN/ UL 2901, *Antifreeze Solutions for Use in Fire Sprinkler Systems*, 2022.

Comparative Fire Performance Tests Using Water and Antifreeze Solutions Discharged from Standard Spray Sprinklers, 2020.

Statement of Problem and Substantiation for Public Input

Update references, UL 2901 is now a Bi National Standard.

Submitter Information Verification

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Submittal Date: Tue Jun 02 14:26:21 EDT 2026

Committee: INM-AAA



Annex J - Recalled Fire Sprinklers

J.1 General. Table J.1.1 contains examples of sprinklers that are subjected to mandatory and voluntarily recalls.

Table J.1.1 – Recalled Fire Sprinklers

<u>Program / Recall</u>	<u>Brand</u>	<u>Models Affected</u>	<u>Years Affected</u>	<u>Reason / Notes</u>
Voluntary Replacement Program	Central (Wet)	GB, GB4-FR, GB-R1, BB2, ELOC, ELO-GB QR, GB-J, GB4-EC, GB-RS, BB3, ESLO, LD, GB-1, GB4-QREC, GB-R, SD1, ELO SW-20, K17-231, GB-ALPHA, GB-20, ROC, SD2, ELO SW-24, Ultra K17, GB4, GB-20 QR, BB1 17/32, SD3, ESLO-20 GB, ELO-16 GB, GB-QR, GB-LO, BB2 17/32, HIP, ELO-231 GB, GB MULTI-LEVEL, GBR-2, LF, BB3 17/32, WS, ELO-GB, GB-QR MULTI-LEVEL, GB-EC, GBR, BB1, ELO-LH, ELO-231 GBQR, ELO-16 GB FR	2001–2007 (Program Period)	O-ring seal design prone to corrosion or degradation, potentially preventing operation. Free replacement offered for affected sprinklers.
Voluntary Replacement Program	Central (Dry)	A-1, GB, GB4-EC, ELO-16 GB, H-1, GB-QR, GB4-QREC, ELO-16 GB FR, J, GB4, ELO-231 GB, K, GB4-FR, ELO-GB QR	Manufactured mid-1970s–2001	Same O-ring seal issue as above; covered under voluntary replacement.
Voluntary Replacement Program	Gem (Wet)	F927	1995–2001	Sold under Gem name; part of Central's voluntary replacement.
Voluntary Replacement Program	Star (Dry)	ME-1, SG, SG-QR, Q, Q-QR	1996–1998	Manufactured for Star; included in Central's replacement program.
Omega Recall	Central (Omega Series)	C1, C1A, C-1A PRO, R-1, R-1A, R-1M, Flow Control (FC), Protector-M / M Protector, HEC-12, EC-12 RES, EC-20, EC-20A, Prohibitor QR, AC	Recall Period: Oct. 14, 1998 – Aug. 31, 2007 (with closure of Central Voluntary Replacement Program)	Defective sealing design. Recommended replacement with Belleville washer-type seal. Sprinklers delisted by UL (Recall No. 01-201). Replacement

				<u>sprinklers were not affected.</u> _
<u>Globe Recall</u> _	<u>Globe (dry)</u> _	<u>Model J</u> _	<u>1990-1999 (placed on list June 12, 2007)</u> _	<u>O-ring deterioration can cause sprinkler to weld shut and fail to discharge water.</u> _

Statement of Problem and Substantiation for Public Input

This Public Input (PI) addresses a continuing and imminent life-safety hazard associated with the widespread presence of recalled fire sprinklers that remain installed in existing buildings decades after multiple manufacturer and Consumer Product Safety Commission (CPSC) recall actions.

Certain wet and dry sprinklers utilizing dynamic O-ring water seal constructions were subject to major recalls affecting Central Sprinkler Company, Omega, Star, and Gemini brands. Based on industry testing and subsequent standards action, Underwriters Laboratories (UL) identified that degradation, sticking, and material transfer of O-ring seals could inhibit sprinkler operation under fire conditions. As a result of these findings, UL sprinkler standards were revised to prohibit the use of O-ring water seal constructions, with an effective manufacturing cutoff date of January 9, 2003.

Despite the age of these recalled sprinklers, large quantities remain installed in existing buildings. CPSC data indicate that major O-ring recalls affected tens of millions of sprinklers nationally (e.g., approximately 35 million under Central's 2001 program alone, plus earlier Omega and limited Gem/Star models), with only partial replacements documented. Consequently, recalled sprinklers are expected to remain in service across thousands of buildings, including occupancies serving vulnerable populations.

Field sprinkler testing data from UL Solutions, along with recent field-service testing results from Dyne Fire Protection Labs, demonstrate a pronounced disparity in operating performance between sprinklers incorporating O-ring water seals and those without such seals. UL's long-running field-testing program shows normal operation in approximately 63–71 percent of tested wet sprinklers with O-ring seals and approximately 44–49 percent of tested dry sprinklers with O-ring seals, compared to normal operation rates consistently exceeding 95 percent for sprinklers without O-ring water seals across multiple sprinkler types and service ages. Complementing this, Dyne's 2024–2025 field-service testing aggregates indicate that sprinklers utilizing O-ring water seal designs (still present in approximately 4–5% of submissions) continue to exhibit failure rates exceeding 50 percent when evaluated against applicable operational performance criteria. These findings demonstrate that the defect mechanism associated with O-ring water seals presents a materially elevated risk of failure that is not present in non-O-ring sprinkler designs.

NFPA 25 currently relies on visual inspection and age-based representative sample testing to assess sprinkler condition and performance. However, the defects associated with recalled O-ring sprinklers are internal and are not detectable through visual inspection from floor level. While NFPA 25 includes testing requirements for certain quick-response sprinklers at 20 or 25 years in service, these provisions do not require verification of recall status and are dependent upon complete records, correct sprinkler classification, and consistent implementation. As demonstrated by recent fatal and near-fatal fire incidents, these conditions are frequently absent in older systems, allowing recalled sprinklers to remain in service and appear compliant under existing inspection and testing frameworks.

In July 2025, a fatal fire occurred at the Gabriel House assisted living facility in Fall River, Massachusetts, resulting in the deaths of ten residents. The incident represents the deadliest fire in the Commonwealth of Massachusetts in more than four decades and underscores the severity of the hazard posed by undetected recalled sprinkler components in existing occupancies. Post-incident inspections identified recalled Central GB-series O-ring sprinklers installed within the building. Subsequent targeted inspections conducted by the Fall River Fire Department and a neighboring jurisdiction identified additional recalled sprinklers remaining in service at multiple properties, further demonstrating that current NFPA 25 requirements do not reliably identify recalled components.

These findings are cited to illustrate the persistence of recalled sprinklers in service and the limitations

of current inspection practices, not to assign causation in any specific incident.

NFPA 25 presently contains no explicit requirement to verify sprinkler recall status during inspection, testing, or maintenance activities. Without such a requirement, owners, inspection agencies, and Authorities Having Jurisdiction (AHJs) lack a systematic mechanism to identify and mitigate the continued presence of recalled sprinklers known to exhibit elevated failure rates under fire conditions.

This PI closes a critical gap in NFPA 25 by establishing a requirement for periodic verification of sprinkler recall status using available inventory records and identification methods. The proposed change does not mandate new testing protocols or blanket replacement but instead ensures that existing recall determinations issued by manufacturers and safety authorities are identified and addressed within the inspection and maintenance process.

Related Public Inputs for This Document

<u>Related Input</u>	<u>Relationship</u>
Public Input No. 152-NFPA 25-2026 [New Section after 5.2.1.5]	Referenced
Public Input No. 153-NFPA 25-2026 [Section No. 5.4.1.1]	Referenced
Public Input No. 154-NFPA 25-2026 [New Section after A.5.2.1.3]	Referenced
Public Input No. 155-NFPA 25-2026 [New Section after A.5.4.1.1(4)]	Referenced

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