

INSPECTING FIRE SPRINKLER SYSTEMS

Water damage from failed sprinkler systems can lead to significant property damage claims as well as business interruption issues. Attention to regular inspection, testing, and routine maintenance of fire protection systems can help mitigate this exposure.



On May 4, 2016, the Centers for Medicare and Medicaid Services (CMS) issued a final rule to update healthcare facilities' fire protection guidelines (this includes hospices and senior living facilities), bringing them in line with provisions of the National Fire Protection Association's (NFPA) 2012 editions of NFPA 101 Life Safety Code and NFPA 99 Health Care Facilities Code. The final rule makes it increasingly important for healthcare organizations to complete the required activities outlined in the NFPA 25 Standard for the Inspection, Testing, and Maintenance of Water-Based Fire Protection Systems. While the NFPA 25 outlines the mandatory activities and their frequencies, the standard does not indicate who might typically best perform the various items; and facility staff often doesn't have adequate knowledge or experience in these systems. This bulletin offers a guide on what visual inspections, at a minimum, may be completed by in-house personnel. Organizations should consult with an outside fire protection contractor to perform activities that are more advanced, including those for routine testing and maintenance, as well as those activities that are outside of their internal capabilities. The NFPA defines an inspection as "a visual examination of a system or portion thereof to verify that it appears to be in operating condition and is free of physical damage." The inspection process provides some assurance that a fire sprinkler system will perform when it is needed most.

Depending on the size and experience level of facility staff, organizations may choose to perform the following visual inspections internally, and refer to an outside contractor for the additional activities required by the NFPA.

FACILITY/IN-HOUSE PERSONNEL

Daily Visual Inspections:

- Sprinkler systems – Heated valve enclosures (without temperature alarm – during cold weather)

Weekly Visual Inspections:

- Control valves – Position (sealed only)
- Backflow prevention assemblies – Unsupervised isolation valves
- Fire pumps – Pumps, motors, engines, controllers, batteries, fuel systems, switches, gauges, lubricants, coolant, piping, isolation valves, relief valves and pump house
- Sprinkler systems – Heated valve enclosures (with temperature alarm – during cold weather)

Monthly Visual Inspections:

- Control valves – Position (locked or electronically supervised)
- Backflow prevention assemblies – Electronically supervised isolation valves

- Fire pumps – Battery charging system
- Sprinkler systems – Dry pipe and alarm check valves

Quarterly Visual Inspections:

- Fire department connections – Condition and accessibility
- Pressure relief valves – Condition
- Standpipe and hose systems – Pressure regulating devices, piping and hose connections
- Fire pumps – Batteries (terminals)
- Sprinkler systems – Pressure regulating devices

Semiannual Visual Inspections:

- Fire pumps – Engine exhaust insulation

Annual Visual Inspections:

- Piping systems – Leaks, corrosion, damage and restraints (exposed outdoor)
- Standpipe and hose systems – Nozzles, hose storage devices and cabinets
- Sprinkler systems – Sprinkler heads, piping hangers and seismic braces

SUMMARY

It is critical for organizations to maintain fire system operational reliability and minimize the risk for property damage. Use the following resources to better maintain fire sprinkler systems in accordance with NFPA standards:

- Self-Inspection Quick Reference Table | This document provides an overview of NFPA standards for recommended test activities and testing frequencies.
- National Fire Protection Association | The NFPA website provides information and resources on fire, electrical and related hazards, including related codes and standards.

REFERENCES

National Fire Protection Association (NFPA). (2017). Standard for the inspection, testing, and maintenance of water-based fire protection systems (Standard No. 25). Retrieved from <https://www.nfpa.org/codes-and-standards/all-codes-and-standards/list-of-codes-and-standards/detail?code=25>