# WHEA NFPA 25 inspections A deeper dive



#### NFPA 25

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# Chapter 1 Administration

- Why do we do this?
  - 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 waterbased fire protection systems.
- Coordination with other codes NFPA 72

# Chapter 2 – Referenced Publications Too many to list here...

# Chapter 3 - Definitions

- AHJ Who? How many?
- Approved
- Listed
- Should / Shall
- Deficiency
  - Critical
  - Noncritical

# Chapter 3 - Definitions (continued)

- Impairment
  - Emergency
  - Planned
- Pressure regulating
- Pressure restricting

### Chapter 3 - Definitions (continued)

- Standpipe
  - Automatic / manual
  - Dry / Wet
  - Class | || |||
- Combined standpipe and automatic sprinkler system
- Wet / Dry / Antifreeze
- Deluge / Preaction

## Chapter 4 – General Requirements

- Requirements Responsibility of the property owner or designated representative.
  - Inspection
  - Correction and repairs deficiency
  - Occupancy changes

# Chapter 4 – General Requirements (continued)

- Impairments
- Records
- Inspection
- Testing
- Safety

## Chapter 5 – Sprinkler Systems

- Quarterly and annual stuff
- 5 year inspections
  - Internal pipe inspection
  - Check valve internal inspection
  - Gauges test or replace
- Sprinkler head testing
  - Standard response 50 years
  - Quick response 20 years
  - Dry type 10 years
  - Corrosive / High temp 5 years

# Chapter 6 – Standpipe and Hose Systems

- Quarterly and annual stuff
- 5 year inspections
  - Internal inspection
  - Check valve internal
  - Gauges
  - Hoses
  - Hydrostatic testing (dry) manual
  - Flow testing automatic standpipe

### Chapter 7 – Private Fire Service Mains

- Annually
  - Hydrant flow test
  - Inspect strainers
  - Monitors full range
- 5 year
  - Piping flow and compare to previous

# Chapter 8 – Fire Pumps

- Weekly inspection
  - Full list of items 8.2.2
- Weekly test run diesel fire pump 30 minutes
- Monthly test run electric fire pump 10 minutes
  - Checklist of items while pump is running –
     8.3.2.8

# Chapter 8 – Fire Pumps (continued)

- Annual test
  - Alarm signals
  - Flow test within 95% of rated
- Maintenance
  - Preventative maintenance program
  - Records must be kept

Fire Pump Test



Electric Pump with Bypass



Fire Pump Test



Fire Pump Test

Chapter 9 – Water Storage Tanks

Not covered today

## Chapter 10 – Water Spray Fixed Systems

- Components covered in other chapters, inspected, test and maintained by those chapters
- System test annually
  - Proper operation, response as designed automatic / manual
  - Alarm
  - Discharge pattern
  - Main drain test

# Chapter 11 – Foam Water Sprinkler Systems

- Components covered in other chapters, inspected, test and maintained by those chapters
- Inspections
  - Discharge devices monthly/quarterly
  - Proportioning system monthly

# Chapter 11 – Foam Water Sprinkler Systems (continued)

- Test
  - Discharge devices annually
  - Foam system
  - Foam water solution

Chapter 12 – Water Mist System

Not covered today

# Chapter 13 – Valves, Valve Components, and Trim

- Inspections, test and maintenance
  - Monthly, quarterly and annual
- 3 year
  - Full flow trip test dry and preaction
  - Deluge annually
- Air leakage test dry and preaction

# Chapter 13 – Valves, Valve Components, and Trim (continued)

- 5 year
  - Check valves, alarm valves, preaction/deluge valves, pressure reducing valves for sprinkler systems, hose valves, and hose racks.

 5-Year Internal Check Valve Maintenance.



Swing Check

• 5-Year Internal Check Valve Maintenance.



Wafer Check

 5-Year Internal Check Valve Maintenance.



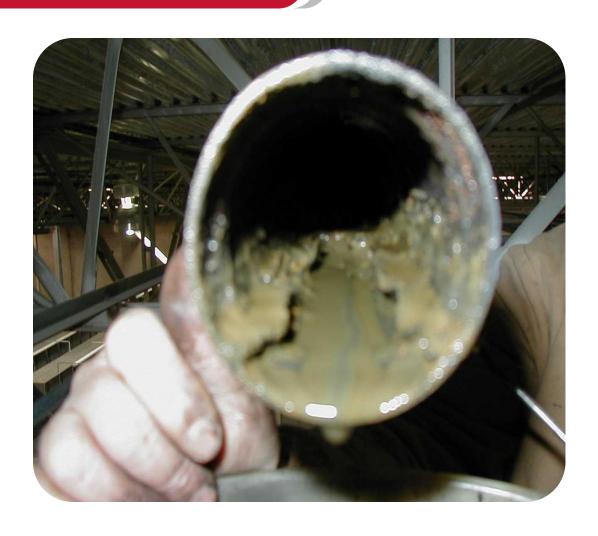
Flanged Swing Check

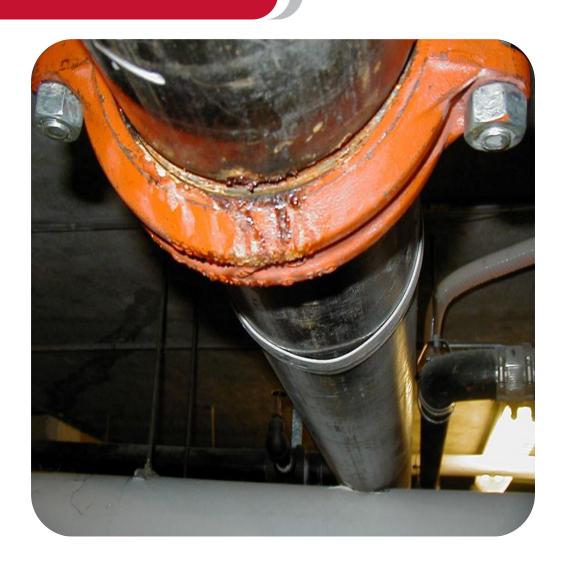
## Chapter 14 – Obstruction Investigation

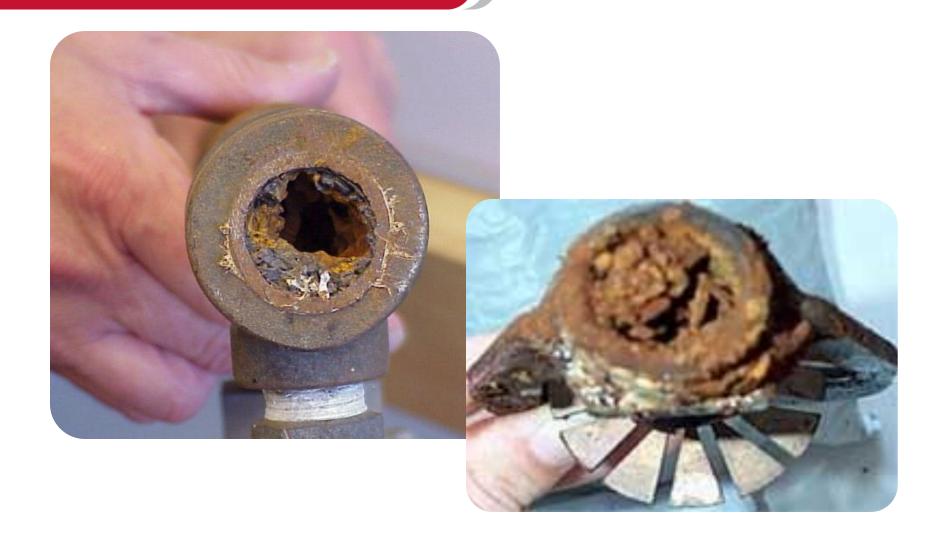
- 5 year internal inspection of piping
  - Wet systems can do every other one, do the other one the next time
  - Dry and preaction systems every 5 years
  - If something is found obstruction investigation required
- Obstruction investigation required if list of items 14.3.1
- Ice obstruction investigation

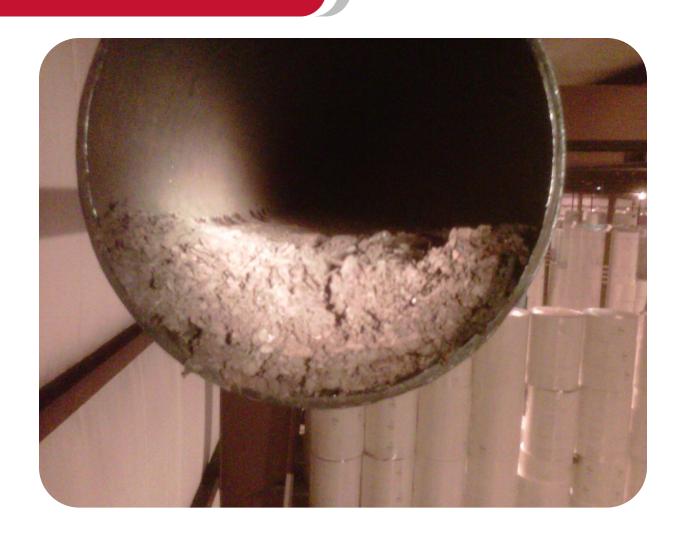


- Standard Internal Pipe Inspection
  - End of one main
  - End of one branchline
- Internal Pipe Exam for 'at-risk' systems
  - System Valve
  - Riser
  - Cross Main
  - Branch line









# Questions?