

# PREACTION/DELUGE SPRINKLER SYSTEMS INSPECTION, TESTING, AND MAINTENANCE 2020 Edition

Property Name:	<input type="text"/>			Inspector:	<input type="text"/>
Property Address:	<input type="text"/>			Contract No.:	<input type="text"/>
City:	State:	Zip code:	Date:		
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>		
Property Phone Number:	<input type="text"/>				
Inspection Frequency:	<input type="checkbox"/> Daily <input type="checkbox"/> Weekly <input type="checkbox"/> Monthly <input type="checkbox"/> Quarterly <input type="checkbox"/> Annual <input type="checkbox"/> Five-Year				

## Inspections: Daily

### Preaction and Deluge Valve (Cold Weather/Heating Season Only):

Enclosure, not equipped with a low temperature alarm, is inspected during cold weather to verify a minimum temperature of 40°F (4°C):

## Inspections: Weekly

### Backflow:

Isolation valves — open position and locked or supervised:

RPA and RPDA — differential-sensing relief valve operating correctly:

### Control Valves:

In the correct (open or closed) position:

Sealed:

Accessible:

Post Indicator Valves (PIVs) are provided with correct wrenches:

Free from damage or leaks:

Proper signage:

### Preaction and Deluge Valve:

Enclosure, where equipped with low temperature alarm, is inspected during cold weather to verify a minimum temperature of 40°F (4°C):

### Master Pressure-Regulating Device:

Downstream pressures are in accordance with design criteria:

psi:

Supply pressure is in accordance with design criteria:

psi:

Free of damage or leaks:

Trim in good operating condition:

## Inspections: Monthly

Gauges are operable and not physically damaged:

Gauges — normal air or nitrogen pressure maintained (not supervised):

Gauge on system side of dry valve reads proper ratio of air or nitrogen (not supervised):

psi:

Gauge on quick-opening device reads the same as system side dry valve gauge (not supervised):

psi:

### Control Valves (Locked or Supervised):

In the correct (open or closed) position:

Locked or supervised:

<b>Accessible:</b> <input type="text" value="- select an option -"/>	<b>Post Indicator Valves (PIVs) are provided with correct wrenches:</b> <input type="text" value="- select an option -"/>
<b>Free from damage or leaks:</b> <input type="text" value="- select an option -"/>	<b>Proper signage:</b> <input type="text" value="- select an option -"/>
<b>Preaction/Deluge Valve:</b>	
<b>Free from physical damage or leaks:</b> <input type="text" value="- select an option -"/>	<b>Electrical components are in service:</b> <input type="text" value="- select an option -"/>
<b>Trim valves are in the correct (open or closed) position:</b> <input type="text" value="- select an option -"/>	<b>Valve seat is not leaking:</b> <input type="text" value="- select an option -"/>

## Inspections: Quarterly

<b>Gauges – normal air or nitrogen pressure maintained when supervised at a constantly attended location:</b> <input type="text" value="- select an option -"/>	<b>psi:</b> <input type="text"/>
<b>Gauge on system side of dry valve reads proper ratio of air or nitrogen when supervised at a constantly attended location:</b> <input type="text" value="- select an option -"/>	<b>psi:</b> <input type="text"/>
<b>Gauge on quick-opening device reads the same as system side dry valve gauge when supervised at a constantly attended location:</b> <input type="text" value="- select an option -"/>	<b>psi:</b> <input type="text"/>
<b>Gauge on supply side of valve reads normal:</b> <input type="text" value="- select an option -"/>	<b>psi:</b> <input type="text"/>
<b>Waterflow alarm and supervisory devices are free of damage:</b> <input type="text" value="- select an option -"/>	

## Fire Department Connections:

<b>Visible and accessible:</b> <input type="text" value="- select an option -"/>	<b>Coupling/swivels operate correctly:</b> <input type="text" value="- select an option -"/>
<b>Plugs/caps are in place:</b> <input type="text" value="- select an option -"/>	<b>Gaskets are not damaged:</b> <input type="text" value="- select an option -"/>
<b>Identification signs are in place:</b> <input type="text" value="- select an option -"/>	<b>Check valve is not leaking:</b> <input type="text" value="- select an option -"/>
<b>Automatic drain valve in place and operating correctly:</b> <input type="text" value="- select an option -"/>	<b>Clapper operates correctly:</b> <input type="text" value="- select an option -"/>
<b>Interior is clear of obstructions (unless locked):</b> <input type="text" value="- select an option -"/>	<b>Visible piping supplying the fire department connection is undamaged:</b> <input type="text" value="- select an option -"/>

## Pressure-Reducing Valve:

<b>In the open position and not leaking:</b> <input type="text" value="- select an option -"/>	<b>Maintaining downstream pressure:</b> <input type="text" value="- select an option -"/>
<b>In good condition, with handwheel installed and unbroken:</b> <input type="text" value="- select an option -"/>	

## Control Valves (Electronically Supervised):

<b>In the correct (open or closed) position:</b> <input type="text" value="- select an option -"/>	<b>Electronically supervised:</b> <input type="text" value="- select an option -"/>
<b>Accessible:</b> <input type="text" value="- select an option -"/>	<b>Post Indicator Valves (PIVs) are provided with correct wrenches:</b> <input type="text" value="- select an option -"/>
<b>Free from damage or leaks:</b> <input type="text" value="- select an option -"/>	<b>Proper signage:</b> <input type="text" value="- select an option -"/>

## Inspections: Annual

<b>Hydraulic design information sign is securely attached to riser and legible:</b> <input type="text" value="- select an option -"/>	
<b>Sprinklers (visible):</b>	
<b>No damage or leaks:</b> <input type="text" value="- select an option -"/>	<b>Free of corrosion, foreign material, or paint:</b> <input type="text" value="- select an option -"/>

Installed in proper orientation:

– select an option –

Fluid in glass bulbs:

– select an option –

Spare sprinklers — proper number and type, including installation wrench:

– select an option –

Loading — sprinklers are free of dust:

– select an option –

No paint or coating other than that applied by the manufacturer:

– select an option –

Escutcheons/cover plates are present and installed correctly:

– select an option –

Minimum clearance between sprinklers and storage:

– select an option –

### Hangers/Seismic Bracing:

Not damaged or loose:

– select an option –

### Pipes and Fittings:

In good condition and no external corrosion:

– select an option –

No leaks or mechanical damage:

– select an option –

Correct alignment and no external loads:

– select an option –

### Fire Department Connections:

Interior of connection with locked plugs or caps is free of obstructions:

– select an option –

### Preaction/Deluge Valve:

Interior inspection following trip test:

– select an option –

Detection device condition inspection:

– select an option –

### Building:

Prior to onset of freezing weather, all openings are closed and water-filled pipe is not exposed to freezing temperatures:

– select an option –

Heat trace is per manufacturer's instructions:

– select an option –

Low temp alarm is free of physical damage:

– select an option –

## Inspections: Five Years

Obstruction inspection — no foreign or obstructing material is found:

– select an option –

Check valve — internal moves freely and in good condition:

– select an option –

Internal inspection of preaction/deluge valve strainers, filters, restricted orifices, and diaphragm chambers:

– select an option –

Internal inspection of valves that can be reset without removal of faceplate:

– select an option –

Internal inspection of backflow:

– select an option –

## Test: Quarterly

Alarm devices — water motor gong:

– select an option –

Detection system low air pressure supervisory device:

– select an option –

Main drain test, if the sole supply is through a backflow preventer or pressure-reducing valve:

– select an option –

Static psi:

Residual psi:

Do results differ by more than 10% from previous test?

– select an option –

Priming water — test level:

– select an option –

Low air alarm — test per manufacturer's instructions:

– select an option –

### Master Pressure-Regulating Device:

Partial flow test performed to exercise valve:

– select an option –

## Test: Semiannual

Valve supervisory switch(es) function:

– select an option –

Alarm devices — inspector's test or bypass opened and observed waterflow:

– select an option –

## Test: Annual

Valve supervisory switch(es) function: <input type="text" value="– select an option –"/>	Low temperature alarm (if installed) at the beginning of heating season: <input type="text" value="– select an option –"/>
All control valves operated through full range of motion and returned to normal position: <input type="text" value="– select an option –"/>	Pressure reducing valve partial flow test: <input type="text" value="– select an option –"/>
Automatic air maintenance device functional: <input type="text" value="– select an option –"/>	Valve status test performed: <input type="text" value="– select an option –"/>
Backflow preventer – forward flow test at a minimum flow rate of the system demand: <input type="text" value="– select an option –"/>	

**Main Drain Test:**

Static psi: <input type="text"/>	Residual psi: <input type="text"/>	Do results differ by more than 10% from previous test? <input type="text" value="– select an option –"/>
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**Full Flow Trip Test (Deluge Valve):**

System

System # <input type="text"/>	Unobstructed discharge from all nozzles: <input type="text" value="– select –"/>	Pressure reading at deluge valve (psi): <input type="text"/>
Compare if pressure readings to hydraulic design/water supply meets requirements: <input type="text" value="– select –"/>	Manual release functions correctly: <input type="text" value="– select –"/>	Valve status test performed: <input type="text" value="– select –"/>
Air maintenance device functions correctly (if provided): <input type="text" value="– select –"/>	Pressure reading at most remote nozzle or sprinkler: <input type="text" value="– select –"/>	psi: <input type="text"/>

**Preaction Partial Flow Trip Test:**

System

System # <input type="text"/>	Preaction valve – trip test with partially open control valve: <input type="text" value="– select –"/>	Water pressure (psi): <input type="text"/>
Air pressure (psi): <input type="text"/>	Tripping air pressure (psi): <input type="text"/>	Trip time (sec): <input type="text"/>
Water delivery time (min): <input type="text"/>	Results compared to previous results: <input type="text" value="– select –"/>	Preaction system tested for air leakage: <input type="text" value="– select –"/>

**Test: Five Years:**

Gauges tested or replaced: <input type="text" value="– select an option –"/>	Sprinkler pressure-reducing valve – flow test and comparable to previous results: <input type="text" value="– select an option –"/>
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**Fire Department Connections:**

Piping from fire department connection to fire department connection check valve has been hydrostatically tested at 150 psi (10 bar) for at least 2 hours:

**Routine Maintenance**

Sprinklers/pilot sprinklers tested or replaced per appropriate testing schedule: <input type="text" value="– select an option –"/>	OS&Y – stems lubricated annually: <input type="text" value="– select an option –"/>
Leaks causing drops in supervisory air pressure or electrical malfunctions causing alarms fixed: <input type="text" value="– select an option –"/>	Interior of valve cleaned after trip test and internal inspection: <input type="text" value="– select an option –"/>
Operate axillary drains after system operation and before freezing conditions: <input type="text" value="– select an option –"/>	
Comments: <input type="text"/>	
Date: <input type="text"/>	

Contractor Name:

License/Certification No.:

Contractor Address:

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This form covers a 6-month period.

Year:

System:

Location:

**General**  
1. If valves are sealed, note "yes" in this block. If any are not sealed, reseal and note "resealed" in this block.  
2. Gauges for dry, preaction, and deluge systems must be inspected for normal air and water pressures.  
3-6. Record pressure readings in psi (bar). A loss of more than 10% should be investigated.  
7. Record any notes about the system that the inspector believes to be significant. Place a number in the box and corresponding note in space provided below.

Date	Inspector	Valves Sealed (1)	Gauges (2)	Alarm Valve OK (3)	Dry Pipe Air Pres. (4)	Dry Pipe Water Pres. (4)	Preaction Air Pres. (5)	Preaction Water Pres. (5)	Deluge Water Pres. (6)	Notes (7)

Notes:

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