

Tips to Maintain Your Water- Based Fire Protection Systems for Fall & Winter

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Your fire protection systems need testing and maintenance to ensure they are ready for the winter. Here are a few tips to help start your preparations for the cold winter temperatures.

Dry pipe systems will be exposed to freezing environments during the winter.

- Have all low point drains been bled down? They should be bled weekly, as temperatures drop and moisture in the air condenses on the inside of the pipes.
- Is the air drier in top shape?
- Is the heater in the dry pipe valve closet turned on and set up properly? Valve closets should be maintained at no less than 40°F. Check the weather stripping and close up any wall openings.
- Are all hangers in good shape and no pipe is sagging?

Antifreeze Systems

- Has the concentration of the antifreeze solution in each system been checked to ensure it is adequate for the coldest temperature anticipated during the winter? If not, the solution should be changed.
- Is the antifreeze solution of the correct type? Where sprinkler systems are supplied by potable water connections, use pure glycerin or propylene glycol. Ethylene glycol is not appropriate for these systems and illegal to use in most jurisdictions due to its toxicity.

Fire Pump Houses

- Are the heaters serviced and turned on? This also includes the fire pump suction tank heater.
- Test the thermostat. The house should be maintained at no less than 40°F for electric pump houses. Pump houses with diesel drivers should be maintained at a temperature no less than what is recommended by the engine manufacturer. Usually, 70°F is adequate.
- Check the weather stripping and close up any wall openings.
- Test the air intake louvers.
- Have annual pump tests been completed and reviewed and deficiencies corrected?
- Is the hose header drained?

Fire Hydrants

- Are all hydrants flushed and the barrel drainage verified as working properly?
- Are the marker posts installed so they can be more easily located after a deep snow?

- Are hose cabinets up-to-date with equipment tested and ready for use?
- Is there a plan for snow shoveling around them?

Control Valves

- Are the marker posts installed at each post indicator valve (PIV) and sectional control valve (SCV) so they can be more easily located after a deep snow?
- Have the operators been tested to ensure smooth operation?
- Is there a plan for snow shoveling around them?

Sprinkler Piping

- Are areas above drop ceilings or in concealed spaces adequately heated so sprinkler piping does not freeze?
- Is the insulation along exterior walls in good shape?
- Close up any unneeded or unprotected wall openings, which could allow cold air to freeze piping. Repair broken windows.
- Does your facility have low building temperature supervision? If your boiler shuts down over the weekend, you may be at risk of freezing pipes in the building.
- Is the fire department connection in proper working order? Are swivels lubricated, and do they turn freely? Missing caps should be replaced after internally inspecting the piping for debris and cleaning if needed.

Hose Connections

- Is adequate heat provided for all hose connections?
- Are stairwells with hose connections heated?
- Are roof hose connections drained?

You should test and maintain your water based fire protection systems in accordance with NFPA 25, "Standard for the Inspection, Testing and Maintenance of Water-Based Fire Protection Systems." Requirements of this standard should be met or exceeded.

Discuss cold weather preparations at your safety meetings and ask for ideas to better protect your plant from cold weather hazards.