



## Massachusetts Department of Environmental Protection

Bureau of Water Resources – Drinking Water Program

### Seasonal System Shutdown Guidance

**MassDEP recommends that seasonal systems use this guidance to assist with performing appropriate shutdown procedures at your water system each year. A proper shutdown will help protect your water supply by avoiding potential water quality issues, and prevent delays in the next season's start-up.**

**This guidance is intended to provide an overview of possible shutdown procedures for water systems. Additional shutdown procedures may be necessary for your particular PWS, which should be followed accordingly. Submittal of certification that shutdown procedures have been completed is not required.**

#### **Prior to Shutdown:**

- Ensure that all of your routine compliance monitoring (i.e., coliforms, nitrate, etc...) is complete and paperwork has been submitted to your MassDEP Regional Office.
- Record the meter reading, date and time.
- Inspect all components of the system, from source throughout distribution to check for signs that repairs may be necessary (e.g., leaks, damage or worn parts, etc...).
  - Check for leaks by reading the water meter at a time when usage should be zero.
  - Ensure that the well cap is properly sealed on the casing (i.e., cap bolts are all present and tight against the cap, vent screens are not missing or damaged, electrical conduit is not broken or electrical wires exposed, gasket and O-ring are in place and properly sealed).
  - Ensure well casing is structurally sound.
  - Inspect all visible distribution lines and ensure they are protected to prevent damage.
  - Note necessary repairs and schedule repair or replacement.

#### **System Depressurization:**

- Turn off power to all pumps and treatment if applicable.
- Shut down any existing treatment system(s) by following manufacturer's treatment guidance.
  - Remove any sediment filters in place.
- Ensure all hoses are disconnected from any hose bibs (hose bibs may also be removed to prevent damage).
- Remove all water from the system piping.
  - For gravity systems, open an outlet at the highest and lowest plumbing points for draining.
  - For systems using compressed or pressurized air, be sure to use an oilless compressor.

- Ensure all appliances connected to the system that have the potential to freeze are drained (e.g., hot water heaters, furnaces, ice machines, refrigerators, water fountains/bubblers, etc...).
- Drain water from all water storage tanks.
  - For atmospheric water storage tanks, open the drain valve (or attach a hose to the valve to direct water to a specific location) for drainage.
  - For pressure tanks, disconnect the electrical power to the pump and drain the tank by opening the closest faucet. *\*Always be sure to read and follow the manufacturer's safety warnings for any work on pressure tanks.*
  - Inspect the physical condition of all tanks and associated appurtenances to ensure that all openings are appropriately screened or capped off, and valves are closed to prevent entrance of any contaminants.
- Exercise all distribution system shutoff and isolation valves to ensure they are properly functioning.
- Close valves; reconnect any piping removed or disconnected, and/or place caps or plugs on open distribution lines to prevent contamination caused by the entrance of insects or animals during the off season.
- Add an environmentally safe antifreeze to any sink and shower traps, as wells as toilet bowls to prevent freezing damage and keep sewer gases from entering buildings.
  - Never use automotive or RV antifreeze in a water system as they could contaminate the system with bacteria or toxic chemicals.

**Final System Inventory:**

- For systems with treatment, check that all chemicals and/or media used have not expired, or will not expire during the off-season. If expired, or will become expired during the off-season, dispose according to manufacturer's instructions.

**Other Resources for Winterizing Water Systems:**

AWWA Small Systems Committee Indiana Section, FYI-Small Systems, October 2012, pgs. 4-8: <http://www.inawwa.org/media/3Q12FYINewsletter.pdf>

If you are planning expansion or modifications to your system for the next season or have any questions, please contact the MassDEP Drinking Water Program Boston office, or your MassDEP regional office.

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