

WINTERIZING YOUR SPRINKLER SYSTEM

Avoid costly freezing damage with these helpful tips

FIRST STEPS

- 1 Close the irrigation main shut-off valve. This should be located somewhere along the main irrigation line, before the backflow prevention device. If you do not have a shut-off valve, you should consider installing one, preferably at the point where the irrigation line is attached to the household water line and cover it with a valve box. Do not use the valve of a backflow device as the main shut-off if possible. These valves need to be left partially open so they can drain water too.
- 2 Locate any manual drain valves and open them. Many sprinkler systems have manual or automatic drains placed at low points in the system so that water drains out by gravity. No system is ever installed so perfectly sloped that all areas will be drained evenly, so water will still pool in the low areas of the system, not to mention that valves and sprinkler bodies never completely drain by gravity. Additionally, automatic drains can become stuck closed or open, causing them to stop draining or waste a lot of water during the watering season.

Draining the sprinkler system can be further complicated if the sprinklers have check valves in them. These are often utilized on a sloped property to keep water from draining out of the system unnecessarily after every watering cycle.
- 3 To let air in so that water can come out, prop up every sprinkler riser within the sprinkler zone at the same time by tightening a rubber band around each riser, keeping them propped up while the water drains out of each sprinkler (*see an alternative to this manual drain method on the next page*).
- 4 Winterize the backflow by opening the test cocks 1/8-turn and closing the ball valves 1/8-turn or leaving it at a 45-degree angle.
- 5 Insulate all valves with bubble wrap, especially any that are above ground. A small amount of water, when frozen, can cause a large amount of damage to them.
- 6 Winterize your automatic controller by disconnecting the common wire from the controller. Where the valve wires connect within the controller, the common wire will be marked as "COM" or just "C".

Skipping this step can undo all the winterizing work if the controller accidentally turns on the system, possibly freezing pipes, icing up sidewalks, and causing other problems. Do not simply unplug the controller, as this does not keep the microprocessors warm and drains the battery.

(Continued on the next page)



Medford Water Commission recommends contacting an irrigation professional to help you avoid the potential damage and safety risks associated with these tasks.

However, some homeowners will feel comfortable winterizing their system themselves.

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Again, this is a task best done by a qualified professional, but if you have the appropriate equipment and feel comfortable doing it yourself, we have provided some suggestions to performing this task more safely and effectively.

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BLOWING OUT THE SYSTEM

One of the surest ways to winterize a system, and an alternative to manually propping up every sprinkler riser to get water to drain, is by using an air compressor to mechanically introduce air into the system to push the water out.

The biggest and most common mistake made when attempting a blowout is using the wrong type of air compressor. Blowouts require air in terms of *volume* (measured in cubic feet per minute, or CFM) as opposed to *pressure* (measured pounds per square inch, or PSI).

The compressor should produce a minimum of 60-100 CFM for systems with 2" piping and smaller (which includes most residences and small businesses) at 50 PSI. Air coming from compressors with less volume will most likely pass over, or through the water, preventing it from draining. In addition, uncontrolled high air pressure is dangerous and may cause parts of the system to literally blow apart.

SAFETY FIRST!

Wear ANSI-approved safety eye protection! Extreme care must always be taken when blowing out a sprinkler system with compressed air. Never stand over or near any sprinkler or valve when a compressor is running. Serious personal injury may result if you do not follow these recommendations.

The generally advised sequence of steps to perform a blowout on an automatic system is as follows:

- 1 Make sure the irrigation main shut-off valve is closed.
- 2 Turn on the air compressor, to build pressure to 50 psi. If you have a powerful machine, make sure you have it throttled down to avoid any issues.
- 3 Set the controller's station run times for 2-3 minutes, and start the controller, either semi-automatic or automatically, depending on the controller model.
- 4 Hook up the air compressor to the system. The connection is accomplished through a quick coupler valve or hose bib on the main line of the system. A Schrader valve is another method to connect to the system, but it is more restrictive. Backflow manufacturers recommend not using the test cocks on their devices for the purpose of a blowout.

Be aware that over-heating of plastic elements in your system may occur. Be observant and turn off the compressor for a while if something feels too hot.

- 5 Observe the water coming out of the sprinklers, and before the last station stops running, turn off or disconnect the compressor. Never run a compressor without a valve open.
- 6 Repeat the whole process a few times to ensure the maximum amount of water has been evacuated from the system.
- 7 Lastly, disconnect the common wire in the controller as described on the first page.