

WINTERIZING IRRIGATION SYSTEMS:



Summer operation of an irrigation system (left) can hinge on how it was "put to bed" for the winter. Photo courtesy, Rain Bird Sales.

BEATING THE ELEMENTS

By Eric Pollard

When discussing winterization of irrigation systems with professionals in the field, the only constant seems to be the diversity of opinions.

However, everyone does agree on two points—winterizing or removing the water from system components is crucial to the long-term reliability of a system and it must be considered during design and installation.

The first thing to evaluate is who should winterize. While some believe it depends on the type of pipe *continued on page 26*

Crushed Bricks



Landscaping Specialists will welcome this new innovation in grounds maintenance. **BRICK CHEXS**, a cost effective, low maintenance indestructible product which retains its red luster regardless of weather. It is without a doubt the Rolls Royce of landscaping beautification, and modification. It replaces mulch, and gravel, and is ideal as a soil substitute, in granular, chip, pebble, and nugget form.

A.A. Goode Enterprises, Inc.

P.O. Box 456, Colonial Heights, VA 23874
(800) 542-7107, (804) 526-5923, Fax (804) 520-6393
Circle 124 on Postage Free Card

Winterizing Irrigation Systems

continued from page 24

used (PVC versus polypropylene) and how deep the freeze line is, the prevailing opinion is that if the area gets freezing temperatures for more than 24 hours, winterization is necessary. Some areas of the country, such as Albuquerque, NM, get freezing temperatures but stay dry enough to warrant irrigation throughout the winter. In these situations, the system won't freeze because water is kept running through it, though care must be taken to protect the backflow preventer.

Methods Vary

Described by many as the "weak link" in the winterization process, the backflow preventer requires special attention. It must be protected during freezing weather, even if the system is to remain active, and it is crucial to make sure all water is removed from the backflow preventer when winterizing.

The process can be tricky. Code restrictions vary from county to county, so it's always best to check with the local water company to verify acceptable procedures.

For the rest of the system, there are two basic ways to winterize. The first is draining. While there are conflicting attitudes about the practicality of this method, there is agreement that it is still highly effective if the system was installed properly. It

doesn't take a lot of gravity to drain lateral pipes—only about a 1/2-inch elevation change in 10 feet. However, problems can arise depending upon installation procedures.

"Back when all systems were trenched, it was easier to install an automatic draining system," explains Tom Lee, owner of Indianapolis Irrigation in Zionville, IN. "But when you plow or pull poly pipe, you may hit highs and lows without knowing it, which can disrupt the downhill flow and cause water to get trapped in the lines."

Lee believes blowing out a system is the most effective method.

Blowing out a system basically means

taking a large volume of air pushing it from the point of connection through the lines, through each zone and out the sprayheads or rotors. And while the process is fairly straightforward, there are a number of variables to consider.

Air Amount Key

Opinions vary as to the right size of compressor (from 100 to 1,200 cfm) and the ideal amount of air pressure (from 20 to 70 psi) necessary to effectively blow out a system. The size of the system has a lot to do with these variables. But consensus seems to be that the volume of air is far more important than the air pressure.

"It takes a lot of air to push out a large column of water," Lee says. "And as you go down the line, you lose air. So if you don't start out with enough air, the compressor will run out and the water will start coming back at you."

Air pressure also must be carefully monitored when blowing out a system.

TOO MUCH PRESSURE CAN BLOW EQUIPMENT RIGHT OUT OF THE GROUND, CAUSING SERIOUS DAMAGE TO THE SYSTEM AND POTENTIALLY INJURING SOMEONE.

Too much pressure can blow equipment right out of the ground, causing serious damage to the system and potentially injuring someone. Another point to consider is air temperature. Lee suggests using an air cooler, which will prevent the risk of ballooning or melting poly pipe and fittings.

Once these items have been considered, the process is relatively simple. First, the main water supply must be shut off, either in the water meter pit or in the facility. Then, if there is a drain valve, it should be opened. Next, the compressor hose is hooked into the line as close as possible to the point of connection. Finally, starting with the zone

furthest from the compressor, the first valve is opened either manually or by using the clock. The compressor then is turned on and pressure gradually increased until the heads pop up. The system should be blown out until only a fine mist appears—no more than two minutes at a time per valve—then the next zone can be started.

Adequate drainage of the lines can be assured by repeating the cycle two or more times. And while most suggest using the controller to open valves, manual operation allows more than one zone to be blown out at a time.

The Controller Controversy

Another area of debate is what to do with the controller. For solid-state controllers, one idea is to set outdoor clocks to the auto/off mode and disconnect the common wire to the valves—this prevents a lengthy power outage or power surge from causing the unit to go into the backup mode and send electricity to the valves. Indoor-mounted models can be simply unplugged.

Conversely, some believe that it's good to keep power running to the controller, especially outdoors. This keeps the cabinet temperature higher and limits condensation, which can be damaging to the controller.

For mechanical controllers, it's generally advisable to set them for very short run times (one to two minutes) every 10 days or so. This keeps the motors lubricated and gets some heat to the solenoids. Of course, it's important not to run the controller longer than two minutes or so at a time because the solenoids could burn out.

The best time to winterize depends on geography and local weather patterns. There is no substitute for experience—knowing the time of year to which the first freeze will likely occur is vital. If you're new to the area, check with other sports turf professionals and extension agents to learn the region's seasonal tendencies.

Despite differing opinions on procedure, timing, and equipment, it is commonly believed that winterizing is crucial. It's cheap irrigation insurance against winter's icy blast and provides you with piece of mind in that when spring comes, your system will be ready for action. □

Editor's Note: Eric Pollard is the program manager, contractor division for Rain Bird Sales, Inc.