Preparing Your Irrigation System For Winter

By John Daniels, agronomist, Central Region

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Properly winterizing an irrigation system using an air compressor is critical to prevent damage from freezing temperatures in northern climates.

November finally has arrived and golf courses throughout the Central Region are finalizing important maintenance practices in preparation for winter. Those managing bermudagrass have already raised heights of cut and begun applying turf colorants before dormancy. In the north, mid-to-late November typically marks the time of year when irrigation systems are winterized.

With that in mind, I recently visited with Mike Skopik from Leibold Irrigation to discuss tips for preparing an irrigation system for winter. Here are some things to keep in mind in the coming weeks:

- Remove as much water from the lines as possible by running an irrigation program. Many well-designed irrigation systems have valves on the low ends that can be opened to further drain the lines. This should be completed a couple of days before connecting an air compressor.
- Many golf courses use between 600 to 1,200 CFM air compressors. A smaller compressor – e.g., 200 CFM – can be used but will increase the amount of time it takes to blow out the irrigation system.
- Be cautious of running a large number of heads at the same time as the increased airflow will lead to more friction and heat. There have been

reports of PVC failure from running 30 sprinkler heads at once with a large compressor.

- Utilize a high-flow pressure regulator that is independent of the air compressor to prevent damaging sprinkler heads. The pressure regulator should be installed between the compressor and the main connection point. Typically, a suitable pressure range for blowing out an irrigation system is 45 to 55 PSI.
- Start with the sprinklers closest to the connection point and work away until all heads have been blown out. While blowing out a second time could lead to more water getting out of the system, you run the risk of causing more damage to the sprinklers – especially on high spots, like hills, where added pressure could buildup.
- Don't forget about quick-coupler connections. Each one needs to be blown out.
- Make note of sprinklers that are damaged and/or in need of leveling.
- Disconnect power from the pump station and pump motors to limit damage from offseason power surges. This would also be a great time to clean any debris from in and around pump controllers and motors.
- Satellite control boxes also should be powered down and cleaned. Applying an insecticide can help keep satellite control boxes from becoming infested with pests.
- Consult with the respective manufacturers of your irrigation system components for additional steps regarding winterization.

Tips for next spring:

- When recharging your irrigation system in the spring, essentially do the reverse of what you did to winterize it.
- It's a good idea to power up the pump station and pump motors at least a couple of weeks before you plan to start using the system. This will allow the coils inside the electric motors that drive each pump to heat up, thereby removing any moisture that collected during the offseason.

- Do not start recharging an empty irrigation system with high water pressure – keep the water pressure at 60 PSI or lower when priming the lines. Operate each of the sprinklers until all excess air is flushed from the irrigation system. This also is a good time to check the functionality of any air pressure relief valves – you should hear air being forced out of the valves.

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