

Water Conservation

Home Irrigation System Overview



Water used in home lawns and landscape represents 60 to 80 percent of all water used by a household. Many homes use some type of irrigation system for the landscape. These irrigation systems can either be an in-ground sophisticated system or a simple sprinkler connected to a hose. Either system, if poorly maintained, means much of the water is wasted. Runoff, evaporation and overwatering are common problems of a faulty irrigation system.

Maintaining an irrigation system properly is one of the easiest and best ways to conserve water. An irrigation system should be checked at least two to three times every year. The first check should be in the beginning of spring before the watering season begins then at least twice during the summer months to ensure that it is operating correctly. Some basic irrigations maintenance tips are:

- Inspect the controller and make sure its power supply is working correctly.
- Update the time and date of the controller.
- Make sure all sensors are connected (rain, soil moisture). Check all electrical wire connectors.

- Change run times to reflect the current season and the needs of the landscape.
- Turn system on and inspect for any visible damage.

Some Common System Damages and Problems

Leaking Valves or Pipes

Many things can inflict damage on a system, including the weather, shovels or other sharp objects, mowers, vandalism or just normal aging of the system. Leaks can be large and easy to detect, but some may be small and not discovered for long periods of time. As soon as a leak is detected, it should be repaired.

Sprinkler Head Damage

Sprinkler heads can become damaged from many different causes. As these heads are damaged, they should be replaced to ensure that a system works efficiently. Sprinkler heads can become clogged with debris, such as trash from the water supply or dirt. Clogged nozzles can greatly affect the amount of water applied. As sprinkler heads become older, they can develop leaks from worn-out seals. When

this happens, seals should be replaced, if possible; if not, then a new head should be installed. Over time, sprinkler heads can become sunken and tilted in the ground. When this happens, their position should be corrected to provide the best coverage.

Common Problems Affecting the Efficiency of the System

Overspray and Runoff

Overspray from a sprinkler head results in poor uniformity, overwatering and watering of driveways, sidewalks and other hardscapes. Correcting overspray can be as simple as installing the proper nozzles, adjusting the existing nozzles or adjusting the system water pressure.

Adjust the Spray Arc

Having a correct spray pattern is a primary way to conserve water. Many sprinkler heads have spray patterns that are the same for all the heads. Zones that water different plants should have different spray patterns. Homeowners should update their nozzles to fit their landscape needs based on the manufacturer's recommendations.

Water Pressure

Problems occur when water pressure is too high or too low. Misting and rapid rotation of heads are symptoms that the water pressure is too high. This results in poor coverage and can damage an irrigation system. The installation of a pressure regulator corrects this problem. When water pressure is too low, the sprinkler heads will not cover the area they have been designed to cover. This results in loss of landscape plants. Low pressure heads may not pop up or rotate correctly. Adding a

booster pump that helps supply extra pressure to the system or setting watering times to start before the peak demand hours of 5:30 a.m. to 8:00 a.m. can help offset low pressure.

A Quick Check of Irrigation System Uniformity

Checking an irrigation system to determine the amount of water being applied is simple. Place 5 to 10 catch cans or measuring cups of

the same size in different areas of the same irrigation zone. Run that zone for 15 minutes, then collect all catch cans and measure the amount of water collected. The average of all these catch cans will give you the amount of water your irrigation system is putting out. If there are major differences within the zone, then some repairs to the sprinkler system may be needed. Once the amount has been determined, then run times can be adjusted depending on what type of landscape the zone is watering. Repeat this test for all zones in the system.

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