Landscape Water Use / “Do It Yourself” Sprinkler Test

You can develop a better understanding of your sprinkler irrigation system by conducting a quick test. The methods described here are in some respects a simplified version of a professional water audit. But we are confident this abbreviated sprinkler test will provide you with useful information about your irrigation system. You will be measuring precipitation rate (sprinkler application in inches per hour) and observing the uniformity of your system.

Conduct the test early in the morning to avoid wind.

You will need:
Paper and a pencil to write your observations and record measurements;
Ten clean, straight-sided containers of the same diameter and height (tuna or soup cans work well).

Time: 30-60 minutes : Test set-up (15 minutes), run the initial test (15 minutes), record the measurements (5 minutes).

The test is conducted in three simple steps:

SET UP: Run your system and make adjustments (straighten leaning sprinklers, remove vegetation that obstructs spray patterns, unclog nozzles, and adjust spray nozzles to avoid watering non-target areas).

Choose an area of five sprinklers that are representative of your site. Turn the system off and place the containers on the lawn within the area chosen. Set the containers in a grid pattern, placing about half of the containers 2 to 3 feet from sprinklers and the other half of the containers between sprinkler heads.

INITIAL TEST: Turn the system on and run your sprinklers for 15 minutes.

DATA COLLECTION: Use a straight ruler to measure the height of water in each container in inches, noting the variation in measurements.

To calculate the precipitation rate of your sprinklers, add up the measurements from each can and find the average. Multiply the average by 4 to determine the precipitation in inches per hour. Write this number down and save it. This is key for developing effective irrigation schedules.

To understand more about uniformity, look at the differences between the measurements in each can. Are the low measurements all in one area? Is the difference between measurements significant? You may have need to experiment further with adjusting sprinkler heads and retesting your system.

The goal is to achieve "head-to-head coverage", which is when the water sent from each sprinkler just reaches the sprinkler(s) next to it. This overlapping design will provide the most uniform coverage.