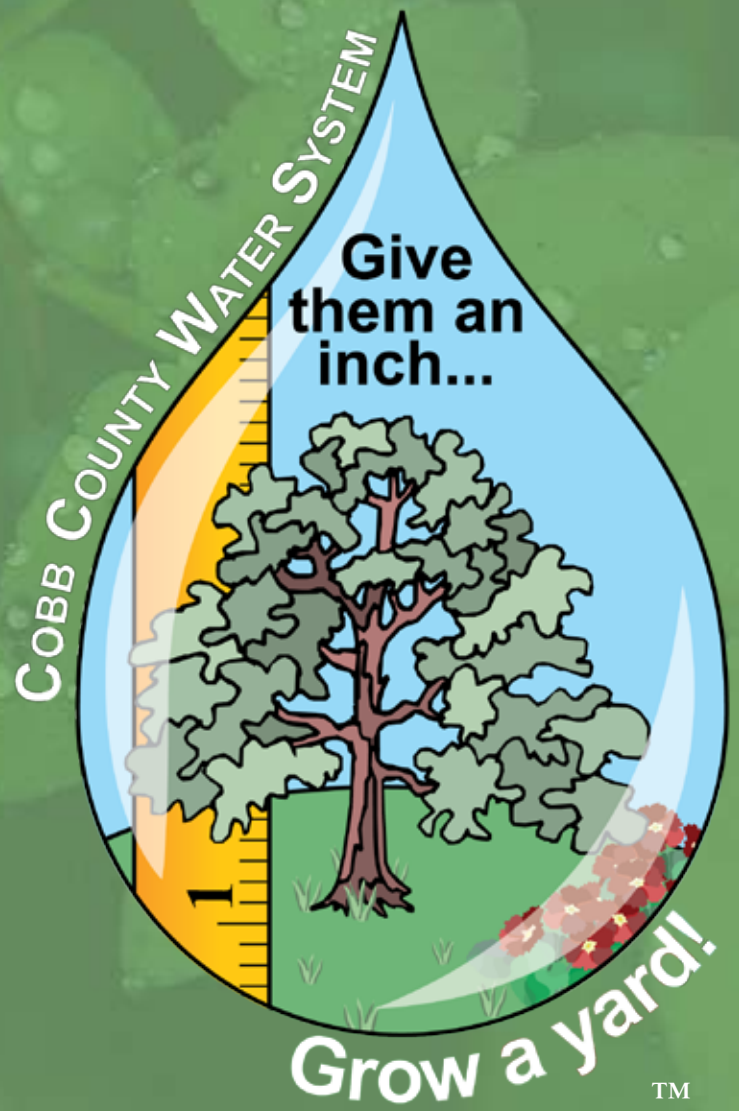
Wise Water Use

Irrigation System Audit



Determining Precipitation Rate

You will need a pencil, five clean straight-sided containers (tuna cans, for example) and a ruler.

Step 1 - Place containers evenly throughout one zone of your irrigation system.

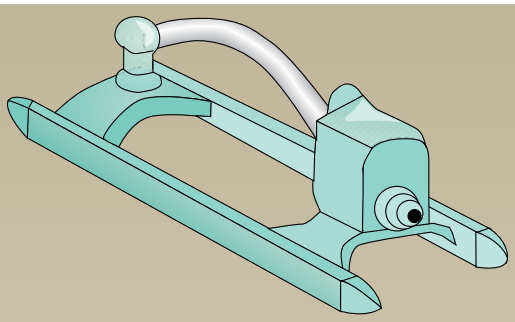
Step 2 - Turn that zone on for 15 minutes.

Step 3 - Measure the amount of water in all five cans.

Step 4 - Add the measurements from all five cans and divide by five.

Step 5 - Multiply the the average derived in Step 4 by 4.

This is how many inches your irrigation system puts out per hour. This information can be used to ensure proper watering. The approximate precipitation rate for a spray head is 2" per hour and a rotor uses approximately 1/2" per hour.



Uniform Coverage

How much water your system puts out is as important as the uniformity of coverage. Over time, a system can become less efficient. Sprinkler heads become blocked by plant materials. They can be damaged by lawnmowers or leaning from use over time.

The goal for an efficient system is to provide head to head coverage, defined as water from each sprinkler reaching the sprinklers adjacent to it. This overlapping coverage provides even water distribution avoiding dry spots and overwatering.

Check the measurements in each can when determining your precipitation rate. Are all the low measurements in one area? Is there a significant difference in measurements? This can indicate a system that is not providing uniform coverage.

Adjust for Uniformity

Uniformity should be checked at the beginning of irrigation season.

- Irrigation hardware should be compatible.
- Each zone should have the same make and model of sprinkler heads.
- The sprinkler heads within a zone should have the same precipitation rate.
- Plants with similar water needs should be grouped in the same zone.
- Adjust arc of sprinkler head to achieve maximum coverage without watering pavement.

Irrigation System Leaks

- Run one zone at a time and observe each sprinkler head in the zone. Bubbling, misting or unusual spray patterns indicate defective or damaged heads.
- Look for breaks in the pipe fittings.
- Excessively wet areas with standing water (unusually green turf, turf mounding, water seeping from turf or pavement edges) indicate underground leaks.
- Cracks in the pavement near the system can be the result of a leaky irrigation system.
- Use PVC pipe to listen at valve boxes for water running when the zone is not activated.
- If you detect leaks in your irrigation system contact your irrigation contractor.

Right Time — Right Soil

In Cobb County most of our soil is clay and clay loam mix. This means that when irrigating, water is slow to absorb, though with the right soil, plant, and irrigation system it is possible to distribute one-inch of water in one cycle without runoff. Typically, short cycles of six to ten minutes is all the water your yard can absorb at one time. More frequent short cycles is the best way to get water to the roots of your plants and reduce run off. For example water Zone A for seven minutes then water Zone B for seven minutes, follow with Zone C for seven minutes and then Zone D for seven minutes. Once all zones are complete, the cycle can be repeated and each zone will have had time to absorb the water.

An irrigation timer can be set to accomodate shorter, more frequent cycles. If there are fewer zones, set multiple run times with at least a 20 minutes absorption time to allow the water to soak in. This method of irrigation maximizes the amount of water being used by the plant and reduces the amount wasted as run off.

The goal of efficient irrigation is to water deeply, less frequently; a deep watering once a week of one-inch of water raises hearty drought tolerant plants. Frequent shallow watering creates water dependent plants, unlikely to survive a severe drought or curtailed water use.

Annual Irrigation System Check

- **Flush your system.**
  1. Turn the system off.
  2. Remove nozzles from sprinklers at the end of each line and remove caps from drip lines.
  3. Turn the system on for a few minutes until the water runs clear.
  4. Turn system off.
  5. Carefully check the nozzles and thoroughly rinse filter screens on drip lines.
  6. Reassemble the system.
  7. Turn system on to check for proper operation.
- **Inspect irrigation system for:** broken sprinkler heads, leaning sprinklers, overspray onto pavement, rotors not rotating, sprayheads misting, and uneven coverage.
- **Check for leaks and repair as soon as possible.**
- **Examine the timer.**
  1. Turn the timer on manually.
  2. Ensure each zone activates and runs for scheduled time.
  3. Review and adjust schedule to distribute 1-inch of water per week, in short repeated cycles. Choose one day a week to irrigate.
  4. Replace the battery (if there is battery back-up).
- **Examine rain shut-off sensor.**
  1. Clear any debris that accumulated over the winter.
  2. Check that it is not obstructed by a roof or cover.
  3. If your system does not have one, installing one is a simple cost effective measure to ensure you are not watering during a rain event.

Have your system checked once a year by a certified irrigation contractor to ensure it is operating at peak efficiency.

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