



Conducting a Catch-Can Test to Determine the Precipitation Rate for Your Irrigation System

Use this record sheet to conduct a catch-can test to find out the precipitation rate(s) of each zone(s) of your irrigation system. This will help you determine if you need to alter your irrigation system or make time clock adjustments to prevent over watering.

Supplies:

- 10 – 20 straight sided containers of the same size (tuna cans are ideal)
- Ruler
- Stopwatch or Timer
- A pen or pencil
- This record sheet

Step 1: Place the containers randomly under the spray pattern of one irrigation zone. (You will need to repeat these steps for the other zones).

Step 2: Turn on the sprinklers in that zone for 15 minutes.

Step 3: Turn off the sprinklers and measure the depth of water collected in each can.

Step 4: Record the amount of water in each can (in inches) below

1 2 3 4 5 6 7 8 9 10

11 12 13 14 15 16 17 18 19 20

Total of all Containers (in inches) _____

Step 5: Compare each container's water content to determine if the amount is about the same between them. If there are large discrepancies, changes should be made to the sprinklers or to the system to increase uniformity. Some things to consider when looking at the catch cans.

- a. Are there areas receiving much more water than others? Much less water?
- b. Do any sprinklers need to be added or changed so water is applied more evenly?
- c. Are there any sunken or tilted heads not spraying water correctly?

Step 6: Add all measurements together and divide by the number of cans to obtain the average depth.

$$\frac{\text{Total of all containers}}{\text{Number of cans used}} = \text{Average water depth of the zone}$$

Step 7: Multiply the average water depth by 4 to obtain the hourly precipitation rate of the zone.

$$\text{Average water depth of the zone} \times 4 = \text{Hourly precipitation rate of the zone}$$

Step 8: Determine if you are overwatering or underwatering within the zone. Most plants and lawns require only about ½" of water to revive them when showing signs of stress. Using the zone's hourly precipitation determine how long it will take to deliver ½" of water. Amounts to water can be found at:

<https://www.auroragov.org/LivingHere/Water/Conservation/WateringTimes/index.htm>

Step 9: Adjust your sprinkler system timer to deliver the appropriate amount of water for the zone to meet the losses from evapotranspiration (ET).

Step 10: Repeat for each zone. The catch-can test should be repeated any time your irrigation system experiences changes, such as the addition of sprinklers, changing of heads, valve replacement, etc.