

SLOW the FLOW

COLORADO

by Kara Csibrik

Slow the flow Colorado is a program of the CRC that provides free irrigation inspections to residents in participating cities. An Irrigation Inspection is a series of tests performed on an irrigation system that determines the efficiency of the system. The tests check the application rate, uniformity of application, and pressure of the system, as well as the soil type and root depth of the turf to determine how the efficiency of the system can be improved upon and to develop the most appropriate watering schedule for the landscape. A visual inspection of the system is also conducted to pin-point any flaws or repairs that need to be addressed. **If you would like to do your own irrigation inspection you can follow these simple tips and tests to determine the condition of your sprinkler system.**

First you have to calculate the precipitation rate. This test will tell you how much water your system is applying. You can do this by following the steps listed on this page.

Once you are done calculating the precipitation rate for each zone go to table A and look up the precipitation rate of each zone you are evaluating and obtain the cycles and minutes you need to water using the number in the column appropriate for your soil type. For example, if your precipitation rate is 1.4 and you have clay soil you must run your system 3 times a day for 7 minutes each time. Finally, to find out how many times a week you should run your system refer to Table B (i.e. if we are in September you should run your system just once a week).



Catch Cup Test

Precipitation Rate (Catch Cup) Test

In order to determine the appropriate watering schedule for your landscape you need to find out how much water your system is applying (the precipitation rate) by conducting a Catch Cup Test.

To perform this test you will need six identical, straight-sided, flat-bottom cans, such as soup or coffee cans. (Do not use short cans like tuna cans; they are too shallow and water may splash out.) You will need a ruler, a watch, a pen, and paper.

1. Choose a zone where you would like to find the precipitation rate.
2. Place six cans randomly around the area between sprinkler heads in the zone.
3. Turn on the sprinklers in the zone you are testing for exactly 10 minutes.
4. Pour all the water that has been collected in the cans into one can.*
5. With a ruler, measure the depth of the water in the can. This is your precipitation rate in inches per hour.
6. Empty the can.
7. Write down the rate for the zone and refer to table A on the next page to determine your watering schedule.
8. Repeat steps 1 through 6 for each irrigation zone.

*Note: If you notice that the amounts in the cans vary widely, it means that the system is not applying water evenly. In order to make the system more efficient, heads may need to be adjusted, repaired, replaced, or relocated.

A. How Long to Water

Based on Soil Texture

Time Required to Apply 1/2 inch of Water			
Precipitation Rate (inches x hour)	Clay Soils (Cycles) x minutes	Loam Soils (Cycles) x minutes	Sandy Soils (Cycles) x minutes
4	(3) 3	(2) 4	8
3.5	(3) 3	(2) 5	9
3.0	(3) 3	(2) 5	10
2.5	(3) 4	(2) 5	12
2.0	(3) 5	(2) 7	15
1.5	(3) 7	20	20
1.4	(3) 7	21	22
1.3	(3) 8	23	24
1.2	(3) 8	25	25
1.1	(3) 9	27	27
1.0	(3)10	30	30
0.9	(3)12	33	35
0.8	(3)14	37	40
0.7	(3)15	43	45
0.6	(3)17	50	50
0.5	(3)20	60	60
0.4	(3)25	75	75
0.3	(2)50	100	100
0.2	(2)75	150	150

Clays

Dry: Clods cannot be broken with fingers without extreme pressure.

Moist: Quite plastic and usually sticky when wet; forms hard ball on drying; stains fingers; squeezes out at the right moisture into 1- to 3-inch, thin ribbons; shows fingerprints. A silty clay feels smooth; a sandy clay feels gritty.

Loams

Dry: Clods moderately difficult to break; mellow, somewhat gritty.

Moist: Neither very gritty nor very smooth; forms firm ball; stains fingers; does not ribbon well, if at all.

Sands

Dry: Loose and single grained; feels gritty.

Moist: Will form very easily crumbled ball; does not stain fingers. Individual grains can be seen and felt.

Source: Michigan State University Extension.

B. How Often to Water

Month	x per week	Minutes based on Precipitation Rate
April	0 (Spring)	
May	1.5	In July and August, x per week can increase to 3 times in a non-drought year
June	2	
July	2	
August	2	
September	1	

This schedule is meant to serve as a guide for watering turf areas. Watch your lawn and make adjustments as needed. If the lawn is healthy, slowly trim back on the amount of time watered until you see signs of stress. This will be your most efficient watering schedule.

Irrigation Scheduling Tips

- Attention to irrigation system design and maintenance and landscape water needs can reduce water use by 20-50%.
- Consider installing a rain sensor on the irrigation controller to stop the system during and after it has rained.
- Consider installing a controller capable of running multiple programs in order to irrigate plants with different watering needs through different irrigation programs.
- Adjust your watering schedule throughout the season (from mid-April to mid-October, depending on weather conditions). This is essential to efficient irrigation.

To locate a certified irrigation specialist near you, contact the Irrigation Association at www.irrigation.org or call 703-536-7080

Information collected from:
 Colorado State University Cooperative Extension
 Utah State University Cooperative Extension
 Seattle Public Utilities

