



Scheduling Your Irrigation Timer/Controller

To accurately design a schedule for your automatic sprinkler system there are two things you need to know. How much water does your system apply each hour, and how much water does your landscaping require?

Finding out how much water your system applies (called the “system application rate”) seems like a complicated, multi-step process but when broken down into small steps it is actually fairly simple.

Calculating your system application rate:

- Set out 6 identical, straight-sided, flat-bottomed cans between sprinkler heads within one sprinkler zone.
- Run the sprinklers zone for 10 minutes. Zone 1 _____ Zone 2 _____
- Pour the water from all the cans into one can. Zone 3 _____ Zone 4 _____
- Measure and record the depth of the water in the can. Zone 5 _____ Zone 6 _____
- This is your application rate in inches per hour for that zone. Zone 7 _____ Zone 8 _____
- Repeat for each zone. Zone 9 _____ Zone 10 _____

Results:

Calculating your landscape water requirements:

The following is a listing of historical monthly averages for bluegrass water requirements. These requirements may change based on actual weather conditions.

Month	April*	May	June	July	August	September	October*
Monthly water need	2.73”	3.74”	5.24”	5.83”	4.95”	3.33”	2.43”

*April and October watering is optional and generally only once per week based on conditions

Developing A Watering Schedule - The following are 3 methods for providing the correct watering schedules:

• **Adjusting the watering days each month**

For optimal turf health it is best to water at least ½” (.5”) each time you water. Based on the application rate of each zone, use the runtime table (page 2) to set your controller for the correct time to apply ½”. Adjust the number of watering days each month based on historical or actual need (see chart above).

Month	April*	May	June	July	August	September	October*
Watering days	5	7	10	11	10	6	5
Times per week	1	2	2.5**	3	2.5**	1.5**	1

** Months with fraction days require 2 weeks at the lower frequency and 2 weeks at the higher frequency.

• **Use the “Percent Application” (available on some timer/controllers) instead of adjusting the times per month.**

If you have an irrigation controller that has the capability of adjusting irrigation on a percentage basis, set the base schedule for the water needed using the July average turf water requirement (see above) and adjust the percent application using the following percentages for the appropriate month:

April 46%, May 64%, June 90, July 100%, August 85%, September 57%, October 42%

These are historical averages. These percentages may change based on actual weather conditions during any year.

- **Calculate water requirements using actual ET**

Rather than using average water requirements, you may calculate the amount of water needed due to actual weather conditions. Consider using actual ET (evapotranspiration), which is the amount of water needed for healthy plants due to weather conditions. ET information and measurements can be obtained online at www.coloradoet.org.

To calculate actual water requirements, simply add the ET listed for grass (low water landscaping may require ½ the water required by bluegrass) for each day since you last watered. Since you have already calculated how much water your system applies each hour, use the runtime table to determine the number of minutes to run your system.

Using the Runtime Table

To determine how long to operate your sprinklers, find the application rate in inches per hour (in the left column) that matches your results for each zone.

Move right along the row until you are under the amount of water your zone requires (in bold listed in top row). The number in the box is the minutes your zone needs to run to apply the amount of water required.

For instance, if your sprinkler application rate is 1 ¼” and you need to apply .50 inches; the sprinklers should run for 24 minutes.

To determine the amount of water your landscape needs, see above or call your local extension service.

**Sprinkler Runtime Table
(Provided by the Northern Colorado Water Conservancy District)**

(Inches of water needed in hundreds)

In/hr	.20	.30	.40	.50	.60	.70	.80	.90	1.00	1.10	1.20	1.30	1.40	1.50
1/4	48	72	96	120	144	168	192	216	240	264	288	312	336	360
3/8	32	48	64	80	96	112	128	144	160	176	192	208	224	240
1/2	24	36	48	60	72	84	96	108	120	132	144	156	168	180
5/8	19	29	38	48	58	67	77	86	96	106	115	125	134	144
3/4	16	24	32	40	48	56	64	72	80	88	96	104	112	120
7/8	14	21	27	34	41	48	55	62	69	75	82	89	96	103
1	12	18	24	30	36	42	48	54	60	66	72	78	84	90
1 1/8	11	16	21	27	32	37	43	48	53	59	64	69	75	80
1 1/4	10	14	19	24	29	34	38	43	48	53	58	62	67	72
1 3/8	9	13	17	22	26	31	35	39	44	48	52	57	61	65
1 1/2	8	12	16	20	24	28	32	36	40	44	48	52	56	60
1 5/8	7	11	15	18	22	26	30	33	37	41	44	48	52	55
1 3/4	7	10	14	17	21	24	27	31	34	38	41	45	48	51
1 7/8	6	10	13	16	19	22	26	29	32	35	38	42	45	48
2	6	9	12	15	18	21	24	27	30	33	36	39	42	45
2 1/8	6	8	11	14	17	20	23	25	28	31	34	37	40	42
2 1/4	5	8	11	13	16	19	21	24	27	29	32	35	37	40
2 3/8	5	8	10	13	15	18	20	23	25	28	30	33	35	38
2 1/2	5	7	10	12	14	17	19	22	24	26	29	31	34	36
2 5/8	5	7	9	11	14	16	18	21	23	25	27	30	32	34
2 3/4	4	7	9	11	13	15	17	20	22	24	26	28	31	33
2 7/8	4	6	8	10	13	15	17	19	21	23	25	27	29	31
3	4	6	8	10	12	14	16	18	20	22	24	26	28	30