

Conservation Landscaping for the Lake Tahoe Basin



How To: Create a Turf Irrigation Schedule

For Water Conservation

What time of the day should I water?

- Watering at night and before 7 am takes advantage of relatively low wind and less evaporation.
- Use an automated controller to maintain a consistent schedule without having to be present to turn it on and off.
- A rain sensor is a great water saving option, which will temporarily suspend your irrigation schedule during storms.

How often do I need to water?

- Summer: typically not more than three days a week
- Spring and fall: 2 days a week or as needed
- Winter: only if there hasn't been significant precipitation in one month and there is no snow cover
- Optimize efficiency by making monthly adjustments to your schedule.
- Another great addition is a weather-based irrigation controller which automates your seasonal irrigation adjustments.
- Pay attention to your micro-climates! Certain areas of your property will need less or more water than others. Notice areas affected by the drying effects of wind and sun or protected and shady areas that retain more moisture.
- Less is more. Excessive water can damage plants more than too little water by suffocating the roots of needed oxygen. Turf needs water when it doesn't bounce back; if you leave footprints after walking on it.
- And don't forget to always follow local restrictions.

How long do I water?

- Make adjustments to your schedule to moisten the entire root zone, no more, no less. Watering past the root zone wastes water and pushed fertilizers and other pollutants into the water table. But watering not deep enough causes roots to not dive deep into the soil, making them not as resilient to drought and other stressors. Use a shovel or soil probe to check root and irrigation depth and make appropriate adjustments to your schedule. Probe in multiple areas to account for different microclimates' watering needs.

- Stop watering if there is runoff. This wastes water and



creates nutrient rich runoff that pollutes Lake Tahoe. If the root zone has not been saturated, resume the watering cycle in two hours after the soil has been allowed to absorb the water.

How much do I need to water?

It is very important to determine the precipitation rate of your irrigation system. Precipitation rate is the amount of water given to your landscape by your sprinklers and these rates vary widely. To determine the rate on an existing system, check manufacturer specifications or better yet, do a catch can test. A catch can test is done by placing cylindrical cans around your landscape and turning on your system. You can determine how much water is applied in a given amount of time, in a given area, by how much water is in each can. So if you run your system for 15 minutes and there is .5 inch of water in your can, the precipitation rate is 2 (.5 inches divided by .25 hours = 2 in/hr). Refer to the Turf Watering Management tip sheet for more information.



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Below is an example of precipitation rates, based on manufacturer specifications, of different high efficiency sprinkler nozzles and how it effects watering time.

Precipitation Rates	NRCS Recommendation (inches/wk)	Watering Time (minutes/week)		
		Toro Precision (30 PSI)	Hunter MP Rotator (40 PSI)	Rain Bird HE VAN (30 PSI)
Nozzles (in/hr)		1	0.39	1.58
April	0.98	58.8	150.8	37.0
May	1.18	70.8	181.5	44.8
June	1.45	87.0	223.1	55.1
July	1.6	96.0	246.2	60.8
Aug.	1.5	90.0	230.8	57.0
Sept.	1.12	67.2	172.3	42.5
Oct.	0.96	57.6	147.7	36.5

To determine watering time: take the NRCS Water Recommendation (in/wk), times it by 60, divide it by the precipitation rate to give you the number of minutes you need to water per week.

$$\frac{60 \times \text{Water needed per week (in/wk)}}{\text{Precipitation Rate (in/hr)}} = \text{Watering Time (min/wk)}$$

Putting it all together: Determining your Schedule

- Use the number of minute that you need to water per week and divide that into short irrigation cycles to discourage runoff while watering the entire root zone.
- Do occasional soil tests in multiple microclimates around your yard and adjust the cycle lengths appropriately.
- This schedule should be adjusted per month using the NRCS recommendations to maximize water efficiency, minimize water pollution, while supporting healthy turf