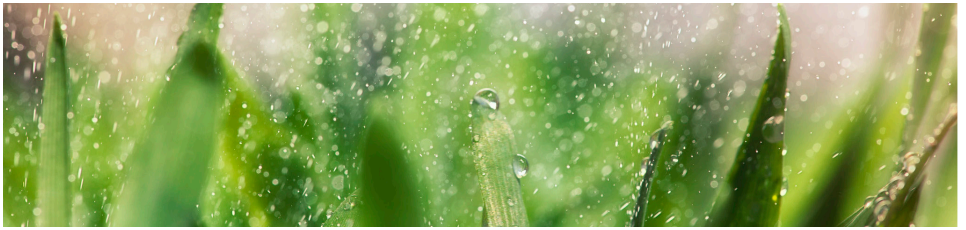

Cycle-and-Soak

Saves Water Outdoors

Do you know how much water your yard needs? Overwatering is more common than many realize and can cause weed growth, plant disease, and runoff that carries fertilizers and pesticides into local water bodies. Installing water-saving outdoor products and choosing native or drought-tolerant plants are great practices to be water-efficient outdoors. Unfortunately, the ground under your landscape could be contributing to water waste.

For example, landscapes with clay soils or steep slopes may not absorb water fast enough before it runs off. Landscapes with these characteristics may benefit from dividing irrigation runtimes into smaller intervals with short breaks in between to allow water more time to soak into the soil. This practice, commonly called "cycle-and-soak," can keep more water on the landscape and reduce water waste caused by runoff.

When Cycle-and-Soak Makes Sense

If your sprinklers are applying water faster than it can be absorbed, irrigation water may pool or run off the ground before it can be consumed by plant roots. This commonly occurs in clay soils, where the infiltration rate, or the rate at which water soaks into the soil, is slow. A soil with a high clay content is very dense and is more likely to result in puddles and runoff. Conversely, a sandy soil allows water to soak into the soil faster, so less water will pool on the surface.

Sloping landscapes may also benefit from a cycle-and-soak schedule. While sprinkler irrigation is not necessarily recommended on steep slopes, many homeowners still install their irrigation systems on sloped ground. In these cases, water may run off the landscape before it can be absorbed.

In either instance, breaking up irrigation runtimes into shorter

intervals and allowing water to soak in between watering lets plants receive the amount of water they need without water going to waste.

Getting Started With Cycle-and-Soak

To implement a cycle-and-soak schedule, split runtimes for each irrigation zone (or area of plants). Water in shorter intervals based on the amount of water the landscape can absorb at one time.

For each zone, record the total runtime that irrigation is scheduled to run (e.g., 15 minutes). Irrigate your first zone and record the amount of time it takes for water to begin pooling on the surface. This determines the maximum length of time to water in one cycle. If it is equal to or greater than your daily scheduled runtime, cycle-and-soak is not necessary. Repeat this step for the remainder of zones.

WaterSense and Cycle-and-Soak

The WaterSense label helps customers identify water-efficient irrigation controllers that automatically adjust the irrigation schedule based on soil moisture levels or local weather and landscape conditions. However, they don't necessarily monitor the rate at which water is soaking into the soil, so even though they might irrigate less frequently than a clock-timer controller, pooling or runoff can still occur.

In some landscapes, additional adjustments to your irrigation schedule can result in more water savings and a healthier landscape. If you have a WaterSense labeled controller, you can use cycle-and-soak on sloped landscapes or clay soils to program your controller.

With this information in hand, program your irrigation controller so that each zone irrigates in multiple short intervals that are no longer than the time recorded in the pooling exercise described earlier. Schedule as many intervals as needed so that the total runtime for the day is equal to the total daily runtime. Incorporate a 30-minute to 1-hour period without irrigating to allow water to soak into the ground between each interval. An example for two irrigation zones with a total irrigation runtime of 15 minutes in Zone 1 and 30 minutes in Zone 2 is shown below.

Controller Setting	**Zone 1 schedule in minutes** (total runtime of 15 minutes)	**Zone 2 schedule in minutes** (total runtime of 30 minutes)
Irrigation on	5	10
Soak (Irrigation off)	30	30
Irrigation on	5	10
Soak (Irrigation off)	30	30
Irrigation on	5	10
Cycle Complete	✔	✔

If you need help determining the amount of water your plants need each week and translating that amount into runtimes, contact an irrigation professional certified by a WaterSense labeled program or your local utility or extension office.

For more details about cycle-and-soak, check out this source from Castle Rock Colorado, https://crconserve.com/188/Cycle-Soak and another from Timberline Landscaping, www.timberlinelandscaping.com/cycle-and-soak-irrigation/.

For more information about WaterSense labeled controllers, or other water-smart landscaping and irrigation practices, visit www.epa.gov/watersense/outdoors.

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