

Cooperative Extension Connection

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Five Simple Steps for Conserving Landscape Water

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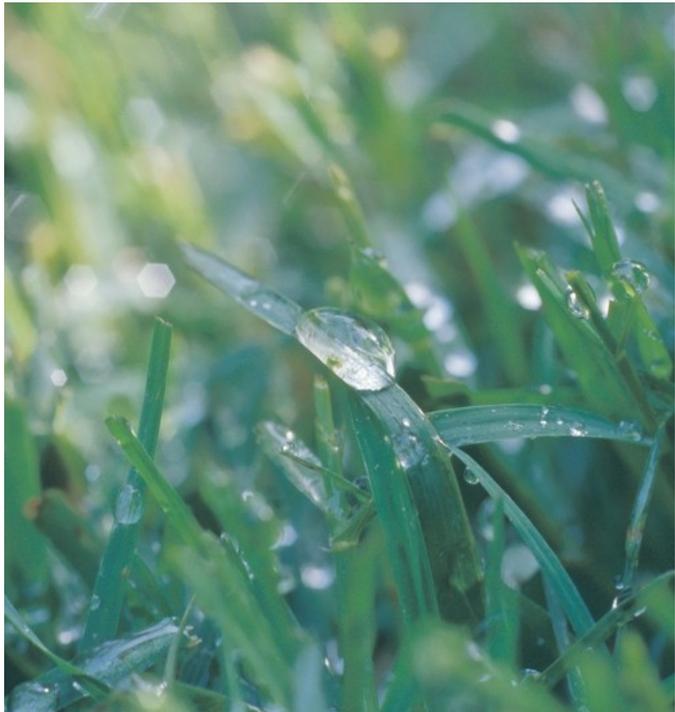
Does the site you manage have a water budget or water conservation goal that seems impossible to meet? Well, you may not need to stop irrigating the area or tear out and replace the existing plants with "water efficient" ones to meet the goal. Follow the five steps below and you will have carried out a simple, common-sense plan for lowering the amount of water needed in the landscape.

Each step can reduce water needs by as much as 10 percent. The impact on the landscape becomes more severe with each step; so stop with the step that results in enough water savings to meet your goal.

Step 1: Fix the hardware. Walk through the landscape while the irrigation system is running. Look for leaks at valves, heads and other parts of the irrigation system. Also, look for heads that apply water on pavement, are blocked by grass or other plant material, have poor spray or stream pattern, and are out of alignment.

Make the necessary adjustments or repairs. Be certain that spray or rotary heads are adjusted and spaced so that they apply water evenly from one head to another. If they do not, heads should be adjusted or added to get uniform water application. Also, be sure your irrigation controller is able to operate at least three separate programs with at least three start times. If it cannot, then replace it with one that has these features.

Step 2: Identify or create groupings of plants with similar water needs. This practice, known as *hydrozoning*, makes it easier to match irrigation schedules with plant water needs. During much of the year, most landscape plants need water less frequently and in less quantity than lawns. So, be sure each lawn area has its own valve or set of valves. Other areas of the landscape and garden, such as flowerbeds, groundcover areas, or shrub and tree plantings, should be irrigated by separate valves that can be set to water according to the unique needs of the plants.



Step 3: Assess and improve the irrigation schedules for each watering zone (hydrozone). Be sure the schedules for each valve apply the amount of water at the interval that meets the needs of plants without overwatering. Note how often and how long the irrigation system runs in order to keep the lawn and other plants up to standard. Compare these to the following general schedules and adjust yours down, if needed. In most non-desert locations, established lawns during the summer need irrigation no more than three or four days per week, with at least three watering cycles each irrigation day.

To apply enough water and avoid runoff, each cycle needs to run about 5 to 25 minutes, depending on the heads being use (rotary or fixed spray) and the amount of slope in the planting. Observe how many minutes it takes for runoff or puddling to begin. Then, take one minute off. This should be the maximum time at which you set one cycle. Cycles should be timed so that there is a break of several minutes to an hour between starts for each valve.

Established trees, shrubs and groundcovers usually need less water. Their irrigation should be less frequent (usually no more often than every 4 to 10 days in the summer). But enough water needs to be applied on a watering day to wet the soil about a foot deep. Again, schedule multiple cycles or use drip irrigation to do this without runoff.

Step 4: Reduce the amount of water applied to less than optimum. This practice is sometimes called *deficit irrigating*. With lawns and other frequently watered plants, reduce the runtime minutes by about 10 percent. For trees, shrubs and groundcovers, it is best to keep the runtime minutes the same and slightly extend the days between irrigation.

Lawns may develop some brown spots, and other plants may develop signs of drought stress.

Step 5: As a last resort, reduce the planted area being irrigated. First, consider reducing turf grass areas or discontinue irrigating turf areas, as these are replanted more easily than groundcovers, shrubs or trees.

This step is the most dramatic and can yield some substantial water savings if large areas are stripped of plants or go un-irrigated. Taking this action can also have significant negative side effects, such as increased heat load and dust in the area because the plants are no longer there to supply evaporative cooling, humidification and wind modification.