



WATERING METHODS, COMMON SENSE

Water is precious.

We all try to do our part to conserve it: we avoid leaving the water running while we brush our teeth, limit our shower time, and we think twice about pre-rinsing dishes for the dishwasher.

But, what can we do to conserve water for gardens and landscapes?

Are there helpful strategies for when and how we water?

The short answer — yes!

Time of day is one of the easiest water conservation tips to implement for a home garden. Early morning hours, maybe even before the sun is up, are best. Wind speeds are generally low, and water is more likely to be on-target to reach plants instead of being blown out of the garden or landscape. The sun hasn't had as much time to heat up the garden area compared to late afternoon. There is a greater chance of water infiltrating the soil instead of evaporating.

Early morning watering is also less appealing to problem insects such as mosquitoes that may enjoy night-time watering when things stay damp and cool, and it reduces the chances of potential disease and insect challenges.

WATER CLOSE TO GROUND

Consider the method or pattern of watering a landscape. There are many methods and application tools available. Sprinklers are perhaps one of the most common and come in a wide variety of sizes, shapes, and methods that distribute water.

Consider selecting a sprinkler that applies water closer to the ground compared to higher in the air. Water sprayed higher in the air has a greater chance of evaporating before the water even hits the ground. Less water reaching the ground means less water penetrating

deep into a soil profile, which requires more water to be applied.

The same applies for water droplet size. Mist has a greater chance of evaporating or being moved off target by wind. A slightly overlapping spray pattern from a sprinkler with a larger droplet can help reduce water waste yet still achieve the water goal.

Drip irrigation is an effective water management tool. The water moves slowly, so there is time for the water to soak into the soil as opposed to evaporating or pooling and running-off. It is an effective tool for watering only target plants. We do not want to make the water lines too long so water can travel the whole line and still effectively reach and water the last plant on the line. Find out and study the type of emitters suggested for your soil type and plant water demands. Emitters can be purchased to release different amounts of water per hour.

Deep watering extends the time between water applications but increases the overall water applied at one time. The method of deep watering (time spent watering is longer but with less frequency) also encourages plants to develop deeper, more abundant roots. These roots help plants reach water deeper in the soil profile but also create all-around better plant vigor that helps plants survive harsh winter conditions.

Training plants to chase after water reduces wasted labor on the part of the person making water applications.

MULCH INSULATES SOIL

Adding mulch is another relatively easy water conservation tip. Mulch decreases the amount of water that can evaporate from soil by acting as a protective layer and cools the soil surface. Similar to increased root growth with deep watering, mulch decreases winter desiccation by adding an insulation layer. Over time,

HELP KEEP WATER WHERE MOST NEEDED

depending on the mulch type, it may also work into the soil, which adds organic material.

Organic material increases the water-holding capacity of soil. Water-holding capacity is the amount of water a given soil can hold for plants to access and use. Increasing the water-holding capacity increases the water available to plants. Woody material can take several years to break down in most Wyoming soils, so a landowner can add organic material aside from mulch to improve the water-holding capacity in their landscapes.

THREE OTHER WAYS TO CONSERVE

There are minor alterations land managers can implement that can have a large impact on conserving water resources. These alterations include preserving rainwater, being mindful of containers that retain moisture, and investing in a moisture meter.

Remember to monitor storage containers and make sure they are covered to avoid evaporation. Consider the material containers are made of for storing water and growing plants. Clay pots tend to be very porous, which allows lots of moisture to escape through the sides and bottom as compared to plastic materials. Clay may not be the best choice when considering water efficiency, but they may have counter benefits for a gardener to consider.

A soil moisture meter can help with water efficiency. The most simple moisture meter is essentially a tool with a probe and gauge. The probe is placed in the soil, and the gauge reads how much moisture is in the soil. Simple meters are available for \$20 or less and may help a landowner water only when truly needed.

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Conserving water on a bigger scale

Although not usually an issue for gardeners, agricultural managers may be concerned with losing water from ponds or other holding tanks.

Only water on the surface area, in contact with air, is subject to evaporation, so reducing surface area reduces evaporation. That's why so many reservoirs are built in canyons so they can be deep with as little surface area as possible.

Reservoir and pond covers, often floating, can be used to reduce evaporation and help reduce contaminants in the water. In some cases, more likely if the water is for drinking, covers may be required by law.

Positioning windbreaks or hedges around the water can also help reduce airflow over the surface area. Evaporated water forms a moist layer over the surface area of an object. This moist layer makes it difficult for the air to accept more molecules from the liquid (pond, lake, water tank, and so forth). Wind draws water vapor away from the surface area and replaces it with dry air. The dry air can then accept more moisture from the liquid and the evaporation cycle continues.