



IF-5 Efficient Watering

Key Points

- Different soil types (clay, sand and loam) have different water infiltration rates.
- Using an on and off watering schedule is best for lawns.
- Drip irrigation is effective but must be monitored and updated frequently.
- Irrigation schedules must be adjusted for seasonal changes – reduced in spring and fall and increased as temperatures warm up.
- As plants mature, watering needs to be adjusted.

Water is critical for plant survival; since we do not receive reliable or sufficient rainfall throughout the growing season, we depend on irrigation.

The lack of sufficient water for plant growth can spell disaster for our plants; however, over-watering is just as detrimental and may cause more plant deaths than we know. Injury from over-watering is very common though not easy to detect until the plant dies. Lack of available water will cause symptoms such as wilting.

Watering Guidelines by Soil Type

Watering in general must be deep and thorough, and depending on soil type, infrequent. Most soils drain slowly and we need to allow time for water to drain and replace the oxygen levels. Use the soil type as a watering guide.

1. Clay soils absorb water slowly but retain it for a long time. Water moves slowly in clay soils. Soils in the Truckee Meadows/Carson City area are predominately clay. Watering needs to be applied infrequently and slowly, using an on and off method.
2. Sandy soils absorb water quickly and drain quickly. Apply water more often with short application times. Organic matter can help retain water in sandy soils.
3. Loamy soils absorb water well, have good drainage and retain enough water for good plant growth. Apply water at a moderate rate but less often than for sandy soil.

Each time you water, allow water to reach the expected root depth of various plants. Lawn roots are about 4 to 6 inches deep. Tree and shrub feeder roots will be within the top 2 feet. Use a trowel or soil probe to check moisture levels. Check this level 3 to 4 times as you water and record the average time for water to reach the rooting level. Keep in mind that water leaching below the root system is lost.

On/Off Schedule for Lawns

Many irrigation systems apply water faster than the soil can absorb; consequently there will be puddling or runoff. The fan type or spray nozzles are the most common offenders while rotary sprinkler heads are the most efficient. Apply water for a short time, 5 to 15 minutes per zone. Let the sprinkler system cycle through the zones three or four more times until accumulated water time reached 45 minutes to an hour per zone.

The best time to water is early in the morning, starting at 1 or 2 AM when it is cooler and less windy to reduce evaporation. All watering should be scheduled for the morning. Do not split the watering between morning and evening; it will not achieve the desired result of deeper soil infiltration.

Drip Systems for Trees and Shrubs

Drip systems can be operated any time because they avoid water loss due to evaporation and runoff. Drip should be checked frequently to insure emitters are not plugged and to see how far and deep water infiltrates in an hour. Drip emitters must be moved or more emitters added as the plant matures and roots extend beyond the planting site. See Drip Irrigation Fact Sheet for more details.

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Warning Signals for Under-watering

Get to know how your plant signals for water. When moisture is low, turf will turn a dark blue-black and show footprints when it's walked on. Plants will lose their luster and tips will droop. Browning on leaf tips and margins often signals a water problem.

Adjust Watering Schedules

When the weather changes, adjust your watering schedule and irrigation controller, if you have one. On warm or windy days, plants and soils dry out more quickly. During cooler and wetter months, water less. Check the soil periodically.

As plants grow, adjust the watering schedule. Even low-water-use plants require more water until they become established. Check these plants periodically and gradually decrease watering frequency, but continue to water deeply each time.

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