Water Wisely for Healthy Plants

Water deeply – A healthy plant has deep roots. The deeper the roots, the less temperature variations on the surface impact the plant and the more firmly the plant is anchored into the soil.. Watering plants to a two foot soil depth or more will force root growth downward as the water slowly drains away from the surface. Trees grow roots to a depth of three feet and shrubs to a depth of two feet if watered properly. If you are having difficulty getting water to those depths, a deep root waterer will help.

Water infrequently – Watering every day will drown your roots. Healthy roots require both air and water. The perfect ratio of air to water is 1:1. Many people try to reach this ratio by watering a little bit each day, only to find that they have a dead plant because the roots remain at the surface and are vulnerable to hot temperatures. Less frequent watering allows the soil to dry thus allowing air to occupy the soil's limited pore space. If the top two inches of soil is allowed to dry, the soil below that is usually moist and at the proper ratio. Your soil type will greatly determine how long your plant can go between watering. Check the moisture below the soil surface using a moisture probe or core tool.

Water the root zone – Healthy roots reach out to (typically) the same area as the plant's branching or canopy, thus a 1:1 ratio of root to shoot. Many over-watered plants have poor branch growth because the roots, which trigger branch growth, have not developed. Plants use this 1:1 ratio to shade their roots and shed water to the root zone. Water absorbing roots are usually at the tips of the roots and grow where there is water. To encourage the roots to grow out, it's important to move and add emitters to the plant's drip line as it grows.

Know your irrigation system, its capabilities and your application rate -- Native soils in northern Nevada can absorb water up to .02 to .08 gallon per square foot per minute. Amended soils can absorb water at a much higher rate, but only to the depth of the amendments. At that point the amended soil must reach a point of saturation before it drains into the native soils. That saturated soil can hinder root growth if the planting hole is too small which is why we recommend making the planting hole as wide as possible. How your water is applied and at what rate will allow you to determine the amount of watering time and the number of breaks between watering cycles needed to water adequately.

Water rates:

- hose watering – 5 to 8 gallons per minute
- bubbler head – 1 gallon per minute
- adjustable drip bubbler – up .33 gallons per minute
- drip emitter 1 gph – .0167 gallon per minute

Know plant symptoms of over and under- watering

Over-watering signs:

- leaves turn lighter shade of green or yellow
- if salts are present, brown margin on leaves and wilting
- young shoots are wilting
- growth is excessive
- moss, algae or mushrooms are present

Under-watering signs or poor root growth:

- older leaves turn yellow or brown and drop
- leaves are dull, wilted or drooping
- leaves curl
- stems or branches die back and lose flexibility