



Las Campanas Water Cooperative

SANTA FE, NEW MEXICO

Fall and Winter Watering

Tracy Neal, 2023

One gardening practice here that many people who come from other parts of the country find odd is watering the landscape through the fall and winter. An understanding of the way plants interact with patterns of temperature and precipitation will make it clear why this is important. Many people know that roots have a strong growth spurt in the spring as plants come out of dormancy; less well-known is the fact that roots have another growth spurt in late summer and fall. From mid-July on, hardy plants (trees, shrubs, and perennials) store carbohydrates in their roots, trunks, and branches to jump start their growth the following spring. At this time there is a lot of root growth to access nutrients for this storage process. It is important not to drought stress plants by abruptly discontinuing all irrigation once the weather starts to cool and plants move toward dormancy.

Warm soils keep roots active throughout the fall. Since water use slows down as the weather cools, it is useful to stretch watering frequencies as plants move toward solid dormancy from mid-September on. If you were watering perennials and shrubs every 3 days during the summer, you might change your schedule to every 4 or 5 days at this time. Once we start to have freezing weather and deciduous plants lose their leaves while perennials dry on top, typically some time in mid to late October, you can usually change your schedule to watering every 7-10 days. (Freezing weather signals the time when drip irrigation systems are turned off. Watering through the fall, winter, and early spring involves hand watering; luckily not as often as in the summer). By November, watering every two weeks will work for most plants. This timing is generally a good pattern to follow through December. ***These intervals should be seen only as a suggested guide. Since every site is different, as are the plants you are working with, it is important to let the plants and the variables of your site (sun, shade, soil types) indicate water needs. First-year plants will usually be less tolerant of any drought stress than established plants. Plants in hot sunny areas may go dormant later than those in shady sites. Sandy soils will dry out faster than***

heavier soils. All these variables should be taken into account as you water through the fall and winter.

Roots are active any time the soil temperature is over 34 degrees, and the soil doesn't tend to freeze here until late December or early January. Even then, it may only freeze down a few inches, so keeping some moisture in the root system year-round is important. Before climate change made winter moisture more scarce, we used to have snow cover in Santa Fe through most of the winter. The snow cover kept moisture in the ground by reflecting sunlight, keeping the soil frozen, and it added moisture as it melted. (Keep in mind that it takes about 10-12" of snow to create one inch of moisture, and a light dusting of snow on top of the soil does not equal a thorough watering.) This moisture kept plants hydrated as they came out of dormancy into our typically windy, dry spring and early summer weather. Winter watering is critical when we don't receive the heavy snows that keep the soil moist through the winter and going into spring. ***It's important not to depend on snowfall to provide the right amount of moisture at regular intervals through the winter.***

For new deciduous and perennial plants, watering every three to four weeks through the winter is usually sufficient. This applies in warm dry winters when there are no heavy rains or snowfalls to supply enough moisture to saturate plants' root systems at least once a month. Though water use by deciduous plants and perennials is strongly reduced after the tops go dormant, evergreens continue to transpire some moisture through the fall and winter, making them especially vulnerable to drought stress during warm dry winters. This applies to both needleleaf evergreens (like junipers and pines) and broadleaf evergreens (like Euonymus and Pyracantha). If you are growing evergreens in warm sunny areas and/or sandy soils, you might need to continue watering them every two to three weeks through the winter, especially if they were only planted this year. **Evergreens that are desert succulents (Agaves, beargrass, cactus, Yuccas) are an exception and shouldn't be watered in the winter.**

Established deciduous plants and perennials and plants growing in cold areas/heavy soils, may only need to be watered once a month in January and February and March. In very shady areas where the soil freezes solid, water deeply in December then wait for the soil to thaw out and start to dry down before watering again.

In spring, increase your watering frequency gradually as plants come out of dormancy and the soil warms up. You might go from watering once in February to watering every two to three weeks in March and April, depending on the weather and how long your plants have been in the ground. When soil temperatures and air temperatures warm up enough for plants to start putting out new growth, root activity will ramp up and an

adequate supply of moisture in the soil will be critical to support the new growth. Soils stay cool in the spring and thus dry out more slowly, so watering will not be needed as frequently as it is in the summer.

It's important to supply enough water to thoroughly moisten the top 12-18 inches of soil in the root zone every time you water. This can take a lot more time than expected when you are watering manually. If you have an open bed full of new plants, setting up a small sprinkler to water the whole area and letting it run for a long time is a good way to do this. If you have a thick cover of organic mulch, keep in mind that the mulch will soak up a lot of the water you apply; you may want to water two days in a row. If you are watering individual plants, it can be helpful to create "wells" around them to hold water. It's generally useful to fill the well, water something else, then come back after the water has sunk in and fill the well again. You may need to repeat this pattern two or three times to completely saturate the root zone. Established trees should be watered in a wide area around the tree, as least out to the dripline. Don't forget to disconnect the hose and drain it after watering. Though winter watering is not a chore that many gardeners enjoy, the benefits to your plants more than repay the effort.

Tracy Neal has worked in the field of horticulture for over fifty years. He moved to Santa Fe in 1986 to work as the nursery manager at Santa Fe Greenhouses. Since 1995 he has worked as a landscape consultant, designer, and teacher. He became a Certified Arborist in 2000 and is a member of the City of Santa Fe Municipal Tree Board. He currently works as the landscape consultant for the Design Review Committee of the Las Campanas Master Association.