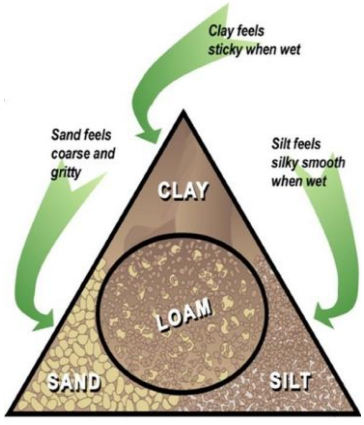
WATERING GUIDE

One thing you can count on is that your new trees and shrubs **NEED** water. How much water and how often will be highly dependent upon your soil type, size of plant, and seasonality. Given this, there is not one single correct method of watering.



Loam is a combination of all these
Credit: USDA-NRCS Bozeman, MT

Soil Type: It is important to determine what type of soil you have. There are three primary types of soil: sand, clay, silt and loam. Together, these soil particles determine what type of soil you have in your yard. A simplified soil type triangle is depicted to the left. Note: there are many different types of soil not included.

In general, clay retains the most water (poorly-drained), meaning watering requirements are not as frequent as silt (slow-drained), loam (average-drained) or sand (well-drained), **but watering is still required for the survivability of your plants**.

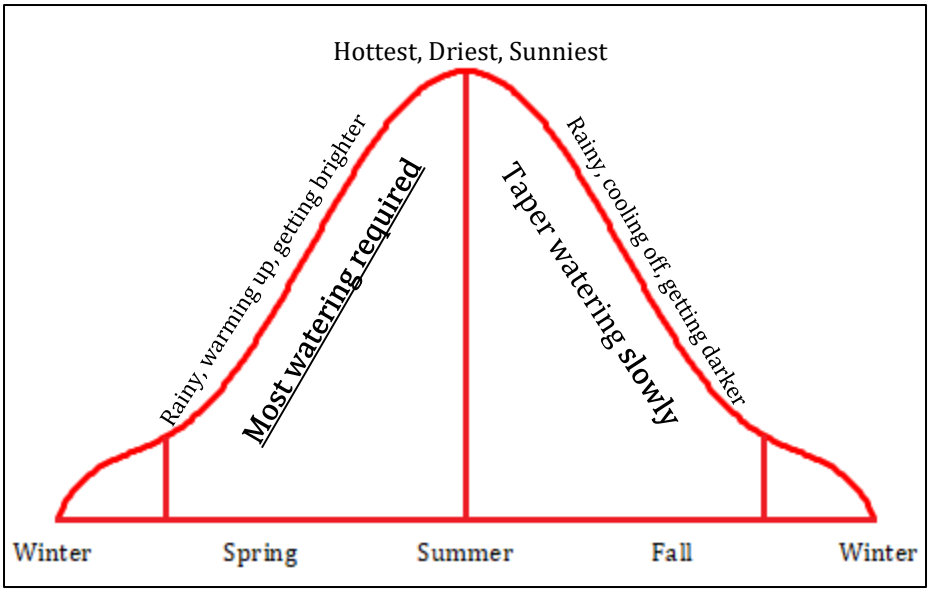
If you are unsure what soil type you have, observe how much water accumulates in your yard as the snow melts and the rainy season begins. Or, collect a soil sample and bring it to your local Cooperative Extension for analysis.

Plant Size: What size plant you purchased also plays an important roll in how much watering is required. The image below is a generalized depiction of how long you should water your plants based on container size. Specified duration of time is not included, because not all of the information needed is known yet.

Shorter duration **Watering Time** *Longer Duration*

#2 #3 #5 #6 #7 #10 #15 #20 #30 B&B

Season: Seasonality plays a massive role when determining how much water plants require to stay healthy. Although we track seasons by calendar months, plants track seasons based on precipitation, air temperature and sun exposure. In general, it tends to be the rainiest in Spring and Fall while temperatures and sun exposure times are mild and driest in Summer and Winter while temperatures and sun exposure times are extreme. Seasonal conditions may vary. The growing season for most plants is from Spring through Fall.



Rain's effect on watering: Rain is a benefit for plants, in that it provides some moisture to plant and soil surfaces. On the rare occasion of heavy rain, the soil might receive enough water to substitute a day of watering for a new plant. However, these events are rare in this region.

Generally speaking, a heavy rain consists of rainfall **exceeding 1 inch** in a 24-hour period. One inch of rain is the equivalent of applying 65 gallons of water to the top 6 inches of **loam** soil in a 100 square foot area, *and* the soil staying moist at least 4 hours after the rain event. Thinking about the other soil types, the amount of rainfall required to reach these numbers will vary – *more* rain for sand and *less* rain for clay.

Assuming a 2-inch layer of mulch has been applied on the soil surface, this means the rainwater is only penetrating 4 inches of the soil surface. The majority of most plant's root ball will be 10-12 inches below the soil's surface. The mulch will help retain moisture and insulate the roots from the elements, and will slowly release water to the root system.

Putting this all together, water availability for a new plant will be limited. Rain water will permeate the soil and will be consumed by established plants, mycorrhizal fungi, bacteria and other animals living in the soil. The new plant's roots will only be able to uptake whatever what it comes into direct contact with.

Because of this, **we recommend not skipping watering even when a rain event has occurred.**

When was the plant planted?

This factor is used to determine how frequently you should be watering your plant. Since you have read this guide before planting, you should water your plant **daily** for the next **2 weeks**.

The table to the right shows watering frequencies for the first two years of owning your new plant.

Time since planting	Frequency
WEEKS 1-2	Water **daily**
WEEKS 3-16	Water **once** every **3 days**
MONTHS 4-12	Water **once weekly**
YEARS 1-2	Water **once every other week**

Duration of watering:

The following table takes all of the aforementioned factors and combines them, with the exception of watering frequency; watering frequency is **variable** due to heat and drought.

	Soil Type				
Plant Size	Sand	Loam	Silt	Clay	
B&B	105-135	90-120	85-115	80-110	Minutes of watering
#30/20	75-105	60-90	55-85	50-80	
#15	65-95	50-80	45-75	40-70	
#10	65-95	50-80	45-75	40-70	
#7	45-75	30-60	25-55	20-50	
#5	45-75	30-60	25-55	20-50	
#3	45-75	30-60	25-55	20-50	
#2	40-70	25-55	20-50	15-45	

You will notice a trend of decreasing water times as both the size of the plant and more compact the soil type moves toward the right of the table.

Our watering times were determined based off the standard practice of using a soaker hose. Soaker hoses are a simple and effective way of watering one or more plants simultaneously at an even flow. The slow trickle of soaker hoses also ensures the roots are deeply watered, promoting a strong root system. You can also utilize a hose timer that automatically turns on and off to control watering duration. If the plants are located far away from hose access, we encourage the use of watering bags instead, as they have the same effect as a soaker hose.

Watering in short bursts from a typical hose nozzle prevents the deep-rooting of plants, making them prone to tipping over from wind, or overheating in drought-like conditions in summer.

Ask any of our nursery staff for watering solutions if you're unsure what the best option is for your situation.

All of the above factors (soil type, plant size, and season) will alter the overview above. It is essential all of these factors are considered when determining your watering schedule. Adjust your water schedule accordingly. Failure to do so will decrease your plant's chances of survival and will void our guarantee.