

SPRIT OF GARDENING

Watering New + Mature Trees

WATERING NEWLY PLANTED TREES

Watering newly planted trees correctly is very important in determining whether a new tree will survive. New trees have either lost a significant portion of their root system when harvested (caliper trees) or the root system was cut or damaged when planted (container trees). This means that the tree has fewer feeding roots to pull up water and feed the tree.

INITIAL WATERING

Once you have planted your new tree the initial watering rehydrates the tree roots and supplies the surrounding soil with moisture. It also helps to remove air pockets from the soil which can dry out roots and help bring the roots and the soil particles into contact until the root system can recover and replace those lost roots.

HOW TO WATER

Give the tree enough water to meet its needs and nothing more. By keeping it a little on the dry side we encourage the roots of the tree to seek out moisture in the area outside the initial hole and establish its new root system. However it is important not to allow the soil to dry out completely as a new tree will not survive long because of an insufficient root system. Clay soil is heavy, so a hole dug in clay acts like a bowl that holds water. It is important to check that the soil is draining and drying a bit between watering cycles.

WHERE TO WATER

When watering new trees you want to water directly under the canopy and into the root ball. The area just outside the edges of the hole should be watered to encourage roots to grow out of the initial planting hole.



WATERING SEASON

It is important to water throughout the growing season during dry periods.

Usually in Calgary it makes sense to water from May through August. In September, if it is very hot and dry, some watering can be done in the first two weeks. However, the tree will need to shut down and get ready for the cold winter ahead. Stop watering in early to mid-September to allow the hardening-off process to take place.

Once the leaves have come off in the fall, the tree is no longer using or taking up much water. It helps to deeply water in your trees towards the end of October, just before everything freezes up. This will ensure there is available water for the tree as soon as the soil starts to thaw again in the spring.

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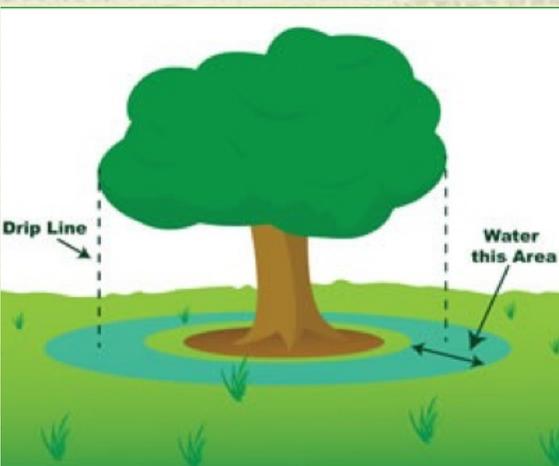
ESTABLISHED/MATURE TREES

WHERE TO WATER

Don't water directly adjacent to the trunk. This is because roots in this area generally do not absorb water and watering them can lead to problems if the trunk is being impacted by a pressurized spray or if the trunk is constantly wet.

Roots extend far beyond the edge of the tree's canopy or drip line. Many tree roots extend as far away from the tree as the tree is tall (A 50 foot tree might have roots extending 50 feet from the trunk in any direction).

Water in the outer half of the area inside the drip line and beyond the edge of the drip line to the distance of the height of the tree).



HOW TO WATER

- You can apply water effectively using sprinklers, drip irrigation or a hose running on the soil surface.
- Whichever method you use, supply water slowly. This helps reduce or eliminate any run-off. This means that you can water as fast as the soil allows the water to penetrate its surface and work its way down.
- Stop watering when runoff starts. Soils high in clay (like here in Calgary) accept water slowly, often as little as $\frac{1}{4}$ inch per hour. If water starts to pool or run off, stop watering, let it soak in, then start again. This may take a number of cycles over several consecutive days.
- Water deeply rather than frequently. A good deep watering should moisten the soil to a depth of 24-30 inches. The duration of the watering will change based on the type of soil the tree is growing in. Because most tree roots are found in the upper 18-24 inches of the soil profile, this is the zone that should be watered in each cycle.
- Deep watering will meet a tree's water needs for between 14 days to a few weeks during the hottest part of the summer, depending on the tree species and type of soil. Watering deeply also helps to make trees more tolerant of drought as the roots will grow into the soil deeper down. This soil dries out more slowly than the surface, making moisture available to the tree for a longer period of time.
- Before starting a new watering cycle, it is important to check the soil to see that it has begun to dry out. However, you don't want it completely drying out between watering cycles.
- Watering can be reduced or skipped if there is a long, slow rain. However, most of our local thunderstorms produce a huge amount of water in a short period of time. Most of this water does not have time to penetrate the soil and ends up running off into our sewer system.