



Community Trees

Community Tree Steward Program

Watering Newly-planted Trees

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The most neglected part of the planting process is the extended commitment to watering during the period of establishment (Watson and Himelick in *American Nurseryman*, 5/15/98). Unfortunately, specific recommendations regarding frequency and amount to apply are almost impossible to give, especially for urban sites or other sites where soils are poor.

The amount and frequency of irrigation depends on:

- Amount of rainfall
- Daily temperatures
- Wind conditions
- Moisture-holding capacity of the soil
- Drainage
- Stage of root system development

Also remember...

- Newly-planted trees and shrubs rely heavily on moisture in the rootball (for balled and burlapped plants) or rootmass (for container-grown plants) throughout the first growing season (**this is where the roots are**).
- Root growth is slowed in soils that are too wet or too dry.
- Until roots develop outside the rootball or rootmass, soil moisture available to the plant can be depleted very quickly, even if adjacent backfill soils are moist. It is difficult for water to move from the backfill soil into the rootball as fast as water is removed from the rootball via transpiration. It can take most of the first growing season for enough roots to grow into the backfill soil to absorb sufficient amounts of moisture.

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...and justice for all

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So, how much, how often, and how do you determine need?

- Frequently irrigated trees and shrubs establish more quickly than those receiving infrequent irrigation. This is especially true for container-grown nursery stock.

- Initially, the most important place to check water status (need) is in the rootball or rootmass. Water in the rootball will be the primary source of water for the plant until the root system grows into the backfill and site soil.

- To water the rootball or rootmass, apply water slowly near the base of the plant. Commercially manufactured bags or tubes (Treegator(and Growth Ring') designed to hold water and release it slowly, can be helpful when placed over the rootball, especially if the soil absorbs water very slowly.

- It is virtually impossible to provide a “cookbook” recipe for amount and frequency of irrigation. In general, newly-planted trees and shrubs may need supplemental irrigation twice a week. **But do not overwater!** Daily watering (with just 1 gallon of water per inch of trunk caliper, for example) might provide the most **uniform** soil moisture conditions for developing roots. Watering should be continued through the fall season as needed.

- Frequency of watering can be reduced and the area to be watered enlarged as the root system becomes established. **One gallon of water per square foot of soil surface area within and just beyond the root-zone** is a good, but generalized recommendation.

- Newly-planted trees and shrubs should not be irrigated with the same amount of water and frequency as newly-installed turfgrass (too much will be applied). Shady locations may not require as much water as sunny locations. And automatic irrigation systems must be monitored continuously and turned off during periods of heavy rainfall.