

Managing Urban Green Spaces in Times of Drought

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Abnormal seems to be the norm when it comes to recent weather events. The landscapes we work with and manage have experienced a great deal of what we refer to in our shop as “climate weirdness.” It is just not normal to go without measurable rain and with temperatures near 100 degrees for well over a month. It takes a toll on us but it’s even harder on our landscapes.

Water restrictions soon may become mandatory for many communities and businesses. To best use the potentially limited water resources we have on hand, how can we best manage landscapes to get through this period of drought? Here are some suggestions:

- One of the best things we can do is to prioritize efforts in the landscape. In terms of environmental, economic and social benefits, landscape priorities tend to run in this order: first trees, then shrubs, followed by perennials and ornamental grasses and, finally, turf grasses. Before all of my turf friends run over to burn my office down, the point is simple—it’s a lot easier to replace turf than to replant established trees.
- Newly planted trees need supplemental watering to survive. Normally we define “newly planted” as within the last five years, but I’m extending that to ten years given the current extreme drought conditions. Not only are trees planted within the last five years struggling, but even well-established trees that are 20 years old or more are beginning to show severe stress.
- Concentrate watering under the canopy of the tree and for a long enough duration that water is getting beyond the turf-rooting zone to a depth of 8-12” or more. Tools to strategically do this include: soaker hoses, gator bags (or similar products) and root feeders. Root feeders are one of my favorite tools to efficiently water a lot of trees in a short period of time and direct the water right at the critical rooting zone 8”-12” below the surface of most soils. The other benefit with a root type feeder is that, by forcing water down into the rooting area, you are also increasing oxygen levels of the soils and creating more favorable growing conditions. This can be especially beneficial in high-use areas like parks where soil compaction is a limiting growth factor.

*A cautionary note is that all of these tools and methods have pros and cons. For example, do not use gator bags if you are going to leave them on the trees empty with no water as they will act like little convection ovens on the tree trunk. Note also that while most of these watering systems allow for the incorporation of fertilizers, especially in the case of root feeders, that is the last thing you should do during a time of drought,

since adding fertilizer could cause a flush of growth and further stress your plants with higher water demands. Just keep it simple and get water down into the tree’s root system.

- Mulch / remulch all trees and planting beds to maintain an average 3-4” layer of well-seasoned, aged chips.

Mulch helps maintain soil moisture and reduces soil temperature but, most importantly, it keeps mowers and weed whackers away from tree trunks and valued shrubs and perennial beds. I recommend using “utility grade” chips, which are typically fairly large, thin chips produced from utility clearing operations, as opposed to double ground or grinder chips. These larger chips typically last one or two seasons, layer well and do not mat together, allowing good gas exchange between the soil and atmosphere. Remember that low oxygen levels in soil are the most limiting factor for root growth in most urban soils. Keep away from mulch products such as river rock, pea gravel, etc. as they can dramatically increase soil temperatures. Also avoid cypress mulch as it readily mats together and takes a long time to break down and add to the soil profile.

- This last recommendation is potentially the most important. Think long-term solutions to water conservation practices and landscape management requirements. Within the average life of a public or park landscape it will typically experience many periods of drought and extreme weather. Observe what works and what does not and alter your landscape designs, plant selection and management input to take such things as drought into consideration.



Plantings close to driveways or other hardscaping need to be able to take the heat.