

# Drought Stress on Trees and Shrubs is Costly



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Prolonged drought puts great stress on trees, leaving them susceptible to attack by insects and diseases. Urban trees suffer even greater distresses during prolonged dry spells as they are often surrounded by or in proximity to concrete or other heat-reflecting impervious surfaces and subject to mower damage, air pollution and, in our more northerly communities, salt spray.

When water authorities implement water-conservation measures in response to lack of rain they invariably target turfgrass. Unfortunately, the publicity arising from their efforts usually do not take into account trees and other valuable woody ornamentals. These expensive-to-replace plants are often overlooked as communities and property owners comply with requests to dramatically reduce or forego irrigation of their lawns.

This can lead to very expensive and environmentally unacceptable consequences in keeping our communities green. All of us recognize that trees beautify and make our communities more livable.

The prolonged drought in California is taking a heavy toll on its trees, including its urban trees. A recent article in the [Chino Champion newspaper](#) highlights the devastation to the trees in the upscale Los Angeles suburb of Chino Hills (pop. 74,900). As of July 2016, Los Angeles County is part of a large portion of central California remaining in extreme drought in the United States. However, many other regions of the country are suffering abnormally dry conditions this summer.

**Read more:** [Prolonged Drought Wreaking Havoc](#) via Tree Services Magazine

“More than 400 trees are in distress in Chino Hills and 350 dead or diseased trees will be removed this year because of the drought and state-imposed restrictions that forced the city to reduce landscape irrigation by 49 percent,” reports the newspaper. The cost to remove the trees will be

approximately \$175,000.

How valuable are this city's urban trees? Mike Curtiss, landscape maintenance inspector and certified arborist, said the city's inventory of 42,580 trees can be conservatively estimated as having a value of just over \$99 million.

Are the trees in the communities where you live and provide services any less valuable?

For the most part, mature trees can withstand several weeks of dry conditions with few, if any, lasting effects. The same can't be said for young or newly planted trees and other costly ornamentals. They haven't had time to establish an extensive enough root system to shrug off a drought, even a minor one, without serious consequences.

**Read more:** [Drought stress: Don't Forget Trees and Shrubs](#)

"In the root system of a tree or shrub, the delicate root hairs that extend from epidermal cells and feeder roots at the extremities of the root system are responsible for the bulk of water uptake. Confined to the upper 15 inches or so of the soil profile, they are also the first part of the root system affected by dry soil conditions. With the death of root hairs, the water absorbing capacity of the plant is severely reduced," writes Ron Kujawski, [University of Massachusetts Extension, Landscape Nursery & Urban Forestry Program](#).

"The effect of drought is particularly acute for newly transplanted trees and shrubs since they are already devoid of a sizeable portion of their water-absorbing roots – the roots being lost in the digging and transplanting process," he adds.

That's why it is so important that you, as a landscape professional, during a prolonged dry spell, don't focus solely on the health of turfgrass on the properties you maintain. Keep a sharp eye out for signs of drought stress on your clients' young trees and ornamentals, as well.

Even if you are not responsible for the care of the trees and ornamentals on these properties, the right thing to do is to alert your clients to their plants' distress and advise them on proper watering.

**Read more:** [What a Tree Under Drought Stress Looks Like](#) via *Tree Services Magazine*

If you need a refresher or feel uncertain about how to diagnose and what to do about the stresses caused by droughts to trees and shrubs, access and print out the excellent publication "[Long-term Drought Effects on Trees and Shrubs](#)" by Kujawski of the University of Massachusetts Extension. The well-written fact sheet fully covers the subject.

"While drought periods may come and go," writes Kujawski, "plant practitioners need to be aware that the negative effects of drought on plant growth and health may continue to be a problem for years to come. It is important to keep in mind when evaluating the causes of plant problems."