



Guide for Homeowners: Drought-Damaged Trees

Watch for several seasons

Unlike with most other natural disasters, damage from droughts progresses slowly, taking several years to become apparent and may not show up immediately. For that reason it is important to monitor trees for several seasons after the drought to assess damage and decide if the tree will need to be removed. It may take several years for larger trees to succumb.

Immediate impacts include wilting, curling, burning or browning of leaves, premature leaf drop or dried out needles. While droughts can impact young and mid-mature trees, large mature trees can be severely affected as well.

Long-term drought stresses trees – weakening them and making them prime targets for insects and other diseases. Drought- and disease-stressed trees can create hazards in the landscape so care must be given to prevent human injuries and property damage.

As you replant, choose drought-resistant tree species such as those listed on page 2.



Robert L. Anderson, USDA Forest Service, Bugwood.org

Visible drought damage can include curling and browning of leaves such as on this sugar maple.



Arborvitae in the Midwest were especially hard-hit in the drought of 2012.

Managing drought-stressed trees

Follow these guidelines to help lessen drought damage:

Water trees slowly with a soaker hose, with drip irrigation, or by using watering bags or a 5-gallon bucket with a small hole in the bottom. A 5-gallon container-grown tree will need roughly 5-10 gallons of water per week when there is no rainfall. If possible saturate the ground to a 2-foot depth once a week.

Water until the first hard freeze in the fall.

Water older plantings (3-plus-years-old) if a water supply is available and water conservation restrictions are not in place.

Water in the morning or evening hours to prevent moisture loss to evaporation. Morning watering is preferred.

Maintain a layer of mulch around the base of trees 2-4 inches deep. Keep mulch 4 inches from the trunk of the tree.

Avoid extensive pruning, which adds stress to trees in an already stressful time and diverts some of the tree's resources into recovering from the pruning wounds.

Don't fertilize during droughts (neither trees nor the lawn near trees).

Consider postponing plantings if your location has very sandy, rocky or shallow soils that do not hold water well.

Tree assessment after natural disasters

Many factors go into making the decision to cut down a tree. The list below can provide you with some general guidelines. **We still recommend that you seek out the advice of experts including city foresters or certified arborists.**

Things to consider:

- The tree's health prior to the disaster
- The tree's age. Contact an arborist or city forester if it has historical value.
- The tree's suitability to its site
- The potential for future injury (For example, the same area might be prone to flooding again)
- The timing of the natural disaster (during the growing season or when the tree was dormant)
- Species (For example, a damaged ash tree would not be as important to save as a mature oak.)
- Adjacent trees (Is the tree the only one providing benefits in an area vs. a tree growing among other healthy trees?)
- Extent of damage. **In general, remove the tree if more than 50 percent of the crown has been lost, more than 1/3 of the circumference of the trunk damaged or if the tree leans more than 45 degrees.**
- History of the tree's stressors. Keep in mind that a tree that has been weakened by flooding, strong winds, ice or hail is less vigorous and may be more prone to a secondary insect or disease attack or more negatively affected by an environmental condition such as an unusually cold winter.

Remember, removing a tree unnecessarily that could potentially recover means a large and immediate loss of many tree benefits. If you decide to keep the tree, continue to monitor its health. Sometimes the damage is not visible for several years. **Plan to do periodic reassessments, for example at six months or one year** depending upon available resources.

Finding certified arborists

The International Society of Arboriculture (ISA) lists certified arborists and those with ISA Tree Risk Assessment Qualification certification in your area:

<http://ww2.champaign.isa-arbor.com/findanarborist/findanarborist.aspx>

Some drought-resistant tree species

In addition to local site conditions, be sure to consider the species' hardiness zone when choosing species.

River birch	Honey locust- thornless	Ironwood
Hickories	Oak: Bur, Chinkapin,	Hackberry
Pecans	Shumard, White, Red	Pines
Catalpa	Hawthorns	Eastern Red Cedar
Redbuds	Serviceberry	Dawn Redwood
Gingko	American Elms	Crabapple
Kentucky Coffee Tree	(disease-resistant hybrids)	

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Getting Help



Trees Forever's Recover, Replant, Restore!

- Use our resources. Start with checking out www.treesforever.org/Guides
- Volunteer coordination for clean-up and replanting
- Help build and facilitate a tree committee
- Hold workshops on tree selection, proper tree planting and care, diseases and stressors

Call (800) 369-1269 to find out how Trees Forever's *Recover, Replant and Restore* program can help.

Illinois Department of Natural Resources

www.dnr.illinois.gov/conservation/forestry/urbanforestry

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