DROUGHT

AND BEYOND

CARING FOR TREES, PLANTS, AND SHRUBS DURING THE DROUGHT AND BEYOND

Here are steps that will help conserve water, preserve and protect landscape during the drought, and also help produce stronger, healthier plants for many years to come.

Mulch soil surface. Organic mulch such as bark and commercial compost reduces water loss due to evaporation, prevents weeds by covering weed seeds and keeps the soil cool in the daytime. Apply a two-inch layer of mulch around shrubs, trees, annuals, vegetable gardens and even in containers.

Install drip irrigation. Drip irrigation is a watering system network of flexible poly tubes that carry water from the source, a faucet or sprinkler valve, to feeder tubes and emitters that drip, spray or soak individual plants. This method helps eliminate waste and weeds putting water only where it is needed. Watering is done in a slow, steady and timed fashion. A drip system typical uses 40 to 60 percent less water than conventional methods.

Water infrequently, deeply and thoroughly. Roots will grow where the water is. The deeper the water, the deeper the roots. With deep roots, plants have a large soil reservoir from which to draw water. Plants will develop a greater tolerance to dry spells if watered infrequently.

Learn when to water. Water when the soil is dry, not before. If water begins to run off, take a break and allow the soil to absorb the water. Repeat the cycle until desired depth is reached. Dig a hole to check penetration.

Schedule watering when there is little or no wind and the temperatures are cool, which is usually early morning. Sun and wind steal moisture.

Build basins around trees and shrubs to minimize runoff. Apply water directly to roots. If the system is not automated, use a root feeder (a hollow probe that attaches to a hose and siphons water directly to the plants roots) for deep watering.

Properly condition and fertilize soil. Water does not easily penetrate clay solid and may pass too quickly beyond the root zone of plants in sandy soil. Adding organic matter to these soils will help correct imbalances and reduce water waste.

Pull weeds. Weeds compete with other plants for limited water and nutrients.

My neighbors have told me that installing mulch rings around trees is good. Is that true?

YES, trees love mulch, if applied correctly.

Homeowners and professional arborists depend on mulch in landscapes for several reasons. Functionally, mulches **discourage weeds** from growing, **conserve moisture** during drought periods, and allow **better use of water** by controlling runoff and increasing water-holding capacity of light, sandy soils.

Mulches help **maintain a uniform soil temperature**. A 3- to 4-inch layer of mulch can **add to the aesthetic value** of a garden while **protecting the base of trees** from being injured by equipment, such as **lawn mowers**.

Mulch rings also **decrease competition** from lawn grass. Lawn grass, especially when lush, robs trees of valuable nutrients and moisture.

Many organic materials can be used as a mulch. Bark mulches and wood chips are the two most commonly used mulches in most of the country. In the south, pine needles are included in that list.

Mulch can be applied just about any time of the year when trees and shrubs are being planted. The best time, however, to apply mulch in established bed areas would be in mid-spring when the soil temperature has warmed up enough for sufficient root growth. If applied earlier, the mulch will keep the soil temperature lower and root growth could be delayed.

Mulches should be applied 2 to 3 or 4 inches in depth over relatively clean, weed-free soils. Do not pile mulch more than 4 inches. Identify and eradicate the weeds before the mulch is applied. Keep mulch pulled 12 inches back from the tree trunk.

Most arborists consider organic mulches as the most compatible with trees. There are, however, several inorganic materials used as mulches. These include weed barriers.

Black plastic is sometimes used to discourage weeds, however it interferes with the normal oxygen and water supply to the tree's roots. When the plastic is used, a very shallow root system is created and during drought periods the plants may not withstand the stress. **It is recommended not to use black plastic around trees.**

There are, however, several **landscape fabric "mulches"** available that will function the same as plastic, but allow for normal water and oxygen exchange. These materials, sometimes called **geotextiles** or **weed barriers**, are placed on bare soil around trees and shrubs with mulches used on top. There are many brands and types of materials from which to choose. They have proven to be beneficial in discouraging weeds and conserving soil moisture.

Are your lawn and landscape plants showing the ill effects of dry weather?

Often, damage continues to show up for a number of years after a drought. To prevent more trouble water when rainfall is scarce – and don't wait!

A plant's root system sustains the plant with the moisture and nutrients it takes in from the soil. For trees and shrubs, as for grass, most roots lie in the top few inches of soil. This means that when it doesn't rain, the root zone dries out fast unless you water. When roots are water-stressed, they shrivel and die, causing plants to suffer.

Even if you start watering at the first signs of trouble, such as leaf wilt or tip browning, chances are that damage has already begun occurring to plant root systems. That's why it's best to water before plants "tell" you they need help.

When moisture does return, plants go into a recovery mode. Lawns will need lots of water as grass plants that survived the drought spread to fill in bare areas left by the crown death of some plants. In addition, some lawns will need overseeding or even total renovation if damage is too severe.

For larger plants that have been without water, the diminished root system may not be able to meet all the health and moisture needs of the whole plant. New shoots and twigs may not be sent out for years, until the root system is once again capable of both taking care of current needs and sending out new growth. Some stressed plants will eventually lose the fight to stay alive, falling prey not only to the lingering effects of drought but to insects or diseases that invade stressed plants.
Protect your precious plants. Water!

Drought-stressed trees may exhibit signs of dieback or decline. This may be the tree's way of coping with a stressful situation. If the roots are unable to supply enough moisture and nutrients to the crown of the tree, the crown will usually begin to die back to bring the tree's crown and root system into a more favorable balance. It should be mentioned that it is often difficult to determine if a tree has died from drought stress or has simply become dormant and appears to be dead. Two simple tests can be done to help determine if a drought-stressed tree is alive or possibly dead. First, collect some small twigs about one-eighth inch in diameter and try to break the individual twigs. If they snap and break like dead, dry twigs it could mean the tree has died. On the other hand, if the twigs bend and don't break with a snap, the tree may still be alive. Second, use your fingernail to scrape bark from a small twig or branch. If the tissue under the bark is green and moist, the tree may still be alive. To be absolutely sure the tree is not dead, wait until the next spring to see if it sprouts a new crop of leaves.