

FOR IMMEDIATE RELEASE

July 18, 2011

CONTACT: Greg Howe
Urban Forester
479-444-3470
ghowe@ci.fayetteville.ar.us

TREE CARE DURING DROUGHT CONDITIONS

For the year, Northwest Arkansas may be up 9 inches over the average annual rainfall, but since May 23rd no significant rain has fallen. The rain that came on July 12 and 13 was nice; however, it did little to ease the current rain deficit for the last 60 days, which has led people wondering how they can help their trees through these tough drought conditions. The forecast for the next two-weeks gives little chance for rain and has heat indexes over 100, so it is natural to wonder if your trees and other vegetation are at risk for damage or death due to drought conditions. Determining this may be more specifically based on the species of plant, the soil it grows in, the location it is in, and how well the tree's root system is established.

Drought-tolerant species can withstand drought conditions better than those species that naturally occur in wetlands. Vegetation at the bottom of hills, near depressions or intermittent creek beds may be able to find moisture from an underground water source, which makes their location for surviving drought better than a tree located at the top of the hill. New or young trees do not have an expansive root system and probably will not be able to withstand drought as well as larger, mature trees with large root systems.

How can you tell if your tree or shrub needs water? Large trees will usually, on a regular sunny day, uptake 50 - 350 gallons of water. Some factors that make this vary are humidity, day length, sun intensity and wind speed. When rain or adequate irrigation do not replenish the available water in the soil, plants generally respond to this lack of water by 1) wilting—this is evident by the appearance of drooping leaves; 2) leaf curling—leaves tend to curl down closing off the bottom of the leaf from air flow and reducing the amount of top surface exposed to the sun; 3) early fall color and leaf drop—as the tree overheats it stops food production, just as in the fall when the leaf dies it falls off; 4) leaves die—leaves that are generally a healthy green slowly dull, turn brown, die and fall off. Vegetation showing any of these signs is in need of supplemental water.

How can you help your trees through these drought conditions? Water your tree or other vegetation, but be efficient and effective in how you water. Watering from an irrigation system, whether it is through rotary spray heads, a hose sprinkler or hand held hose, costs money and can waste water. Be efficient by watering only soil under trees and shrubs. Make sure the irrigation system is not watering driveways, sidewalks or the leaves of the tree. Water needs to be slowly applied over the entire area under the drip line of a tree. A hose left slowly trickling at the base of a tree trunk is better than no water at all but is

not efficient in watering the tree because most of the water-absorbing roots are away from the trunk and are out under the canopy.

Also, be aware that trees and other vegetation only get water after the thirst of the soil and lawn has been satisfied. The soil must first be near saturation before it will allow the trees roots to take in water. Lawn roots are very shallow. They grow in the top 2 inches of soil and will absorb water before most tree roots that get a chance to absorb the water.

The following are suggestions to be both efficient and effective in watering your trees:

- The best time to water is at night from 10 p.m. to 8 a.m. Trees relieve water deficits (refill) over the night-time hours. Watering at night allows effective use of applied water and less evaporative loss.
- Saturate the soil around the tree within the “dripline” (the outer edges of the tree’s branches) to disperse water down toward the roots.
- For evergreens, water 3’-5’ beyond the dripline on all sides of the tree.
- Deep watering to a depth of 12” inches below the soil surface is recommended. A few heavy (high volume) waterings are much better than many light, shallow waterings. A greater proportion of the applied water is utilized by the tree with heavy watering.
- The objective is to water slowly, dispersing the flow of water to get the water deep down to the trees roots.
- Don’t dig holes in the ground in an effort to water deeply. This dries out roots even more. A soil needle/deep root feeder attached to a hose is acceptable to insert into the ground if your soil is not too hard and compacted.
- Overhead spraying of tree leaves is inefficient and can cause the tree to lose what water is held in the leaves. This should be avoided during drought conditions. Watering at ground level to avoid throwing water in the air is more efficient.
- Trees in limited rooting areas such as in containers or pots, on major slopes or confined by pavement, driveways, etc. need additional care to assure water is reaching the root system in adequate amounts.
- Do not fertilize during drought.
- Treat pests or disease quickly. Drought stresses a tree or shrub and makes it vulnerable to pest and diseases. These vectors further stress the tree causing a downward decline in the tree or shrub.

###