



Arizona Community Tree Council, Inc.



COLLEGE OF AGRICULTURE & LIFE SCIENCES
CAMPUS ARBORETUM



THE UNIVERSITY OF ARIZONA
Cooperative Extension



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ARIZONA URBAN TREE STRESS ALERT

- Arizona is in exceptional drought. Temperatures are extremely hot.
- Cities and towns are especially hot because parking lots, streets and rooftops store summer heat day and night
- **Some urban trees are at risk of dying and need to be watered now**

WATER RIGHT NOW TO SAVE TREES

- Ideally make sure all your trees get water periodically
- If you can't water all trees, prioritize trees showing signs of heat or drought stress:
 - Yellow, brown or graying leaves or needles
 - Drooping, curled up leaves
 - Leaves dropping to the ground in summer
 - Thinning tree canopies
 - Twigs and branches getting brittle and/or dying
- **WHERE TO WATER:** Water soil above the tree's active root zone—the area where most water is taken up by roots. This root zone generally starts around the outer edge of the tree canopy and extends to twice or more the canopy width (see recommended watering locations below)
- **WHEN TO WATER:** If possible, water in evenings when the sun is low or set, to reduce evaporation from soil
- **HOW LONG TO WATER:** Water at a slow rate for several hours so water penetrates 1 to 3 feet into soil

- **HOW OFTEN TO WATER:** Water well once a week while the weather is hot and dry. Water more often if trees are showing stress
- **CHECK TREES THAT ARE ON DRIP IRRIGATION:** If a tree is showing signs of stress, water the tree now with a hose (see recommended watering locations) to reduce stress to the tree. Then improve drip irrigation strategies:
 - Move emitters to the active root zone (emitters next to trunks are not effective)
 - Increase drip irrigation frequency and duration
 - Run the irrigation system in the evening or overnight
- **MULCH THE SOIL:** Add several inches of organic mulch over areas of tree roots (keep mulch 6 inches away from the tree trunk). This reduces water lost to evaporation
- **PROTECT TREE TRUNKS FROM SUNBURN**
 - Heavily pruned trees with tender exposed bark can get sunburned. Palo verde trees are especially vulnerable
 - If bark is turning yellow or brown, splitting, or showing other sun damage, wrap the bark loosely with strips of burlap to reduce sun exposure
- **KEEP WATCHING FOR SIGNS OF TREE STRESS:** Inspect trees weekly. If you see signs of stress, increase watering

RECOMMENDED WATERING LOCATIONS

WATER ABOVE THE ACTIVE ROOT ZONE

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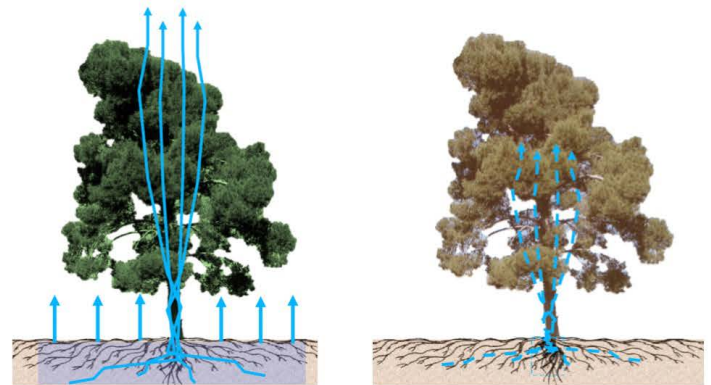
ACTIVE ROOT ZONE

ACTIVE ROOT ZONE

OVERHEAD VIEW OF GARDEN HOSE WATERING: SET THE HOSE ON THE GROUND A FEW FEET OR MORE OUTSIDE THE TREE CANOPY. WATER FOR SEVERAL HOURS AT A LOW FLOW RATE, THEN MOVE THE HOSE TO A NEW POSITION

OVERHEAD VIEW OF SOAKER HOSE WATERING: ARRANGE SOAKER HOSE ON THE GROUND A FEW FEET OR MORE OUTSIDE THE TREE CANOPY. WATER FOR SEVERAL HOURS AT HIGH FLOW RATE, THEN MOVE IF NEEDED

WHY TREES NEED WATER RIGHT NOW



- Long tubes (xylem) carry soil water from the roots, up the trunk to the leaves (or needles)
- Leaves/needles transpire water into the air, cooling the tree and the air around it
- Water evaporates from soil as well
- Dry soil and intense heat can cause extreme stress to trees.
- In some cases, water might not be able to reach the leaves/needles
- Trees provide important benefits to urban areas—the cost of watering a stressed tree is small compared to cost of removing a dead tree