Irrigation Systems: The goal of any irrigation system is to give plants a sufficient amount of water in the absence of rainfall. Both sprinkler and drip irrigation can be incorporated to achieve water conservation in the landscape. **Sprinkler irrigation** is the most commonly used method of turfgrass watering. Make sure the sprinkler heads are adjusted properly to avoid watering sidewalks and driveways. Also, a properly adjusted sprinkler head sprays large droplets of water instead of a fine mist which is more susceptible to evaporation and wind drift. Water in the early morning to avoid excessive waste through evaporation. Retrofit an existing sprinkler system with multiple stream rotor heads to save up to 30% on your water use. Perform an irrigation audit to save the most water. **Drip irrigation** offers increased watering efficiency and plant performance when compared to sprinkler irrigation. Water applied by drip irrigation has little chance of waste through evaporation or runoff. Replace your sprinkler head in your flower beds with drip irrigation to save water and more effectively irrigate.

Mulching Conserves Moisture: Use a layer of organic mulch to cover the soil surface around plants. A good mulch conserves water by significantly reducing moisture evaporation from the soil. Mulch also reduces weed populations, prevents soil compaction, keeps soil temperatures more moderate, and provides a source of plant nutrients as it decomposes.

Proper Mowing and Fertilizing Conserves Water: Mowing grass at the proper height conserves water. Applying fertilizer to the lawn at the proper times and in the proper amount can save time, effort and money through reduced mowing and watering. Use a slow-release form of nitrogen to prevent ground water contamination. Have the soil tested to determine the rate of fertilizer. Most north Texas lawns do not need any phosphorus, so use a Nitrogen only fertilizer.

By following these guidelines and tips, you can proudly create your own Earth Kind landscape.

Quick Tips

- Make sure your irrigation system is in good working order. Find any leaks and broken heads.
- Turn off automatic sprinkler settings. Irrigate based on plant stress or on-line tools. **http://texaset.tamu.edu**
- Don't water lawns during heat of the day; water in early morning.
- Watch your landscape watering—don't water sidewalks, driveways or streets, or let water run down the street.
- Use low volume drip or trickle irrigation for garden and bedding plants.
- Mulch trees, shrubs and other plants to keep moisture in the soil longer. This also controls weeds that compete with plants for water.
- Watering deeply and infrequently encourages deeper roots which withstand dry weather better. A deeply watered lawn should be able to go 5 to 8 days between irrigations.
- To irrigate trees and large shrubs in the lawn, water at their drip line—that is where the feeding root system of a tree or shrub is.
- Mow frequently to avoid cutting more than one third of the leaf blade on any cutting.
- Rainwater harvesting systems can provide supplemental water for landscapes and pets.
- Don't use the hose to clean off sidewalks or driveways; sweep them clean.
- Don't put debris, yard clippings or leaves down storm drains.

Need Help? Contact the Horticulture Help Desk
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mgcollin@ag.tamu.edu, 972-548-4219

http://earth-kind.tamu.edu
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Drought Response: How to keep your landscape alive during the drought

Texas AgriLife Extension Service
Collin County

COLLIN COUNTY

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Drought: How to keep your landscape alive during drought

Being prepared for drought is the best defense homeowners can have to keep their landscapes alive when drought conditions occur. If you have lived in Texas for very long, you know that drought regularly occurs and there is no such thing as a "normal" year when it comes to rainfall. Drought preparation requires the incorporation of water conserving principles into the lawn and landscape prior to drought conditions.

Earth-Kind Environmental Stewardship is a research and education program offered by the Extension Service. The program is a landscape management system that is focused on water conservation, pollution prevention, waste reduction, and energy conservation.

Principles of Earth-Kind include:

- Planning and design
- Soil analysis
- Practical turf areas
- Appropriate plant selection
- Use of mulches
- Appropriate maintenance

Earth-Kind®
Texas AgriLife Extension Service

Start With a Plan: Creating a water-efficient landscape begins with a well-thought-out landscape design. Designing a landscape with the practical use of turf grass can lower your water use and maintenance efforts. Visit the Earth-Kind website for more detailed advice.

Soil Analysis and Preparation: To increase plant health and conserve water, incorporate at least 3 inches of compost to the soil of shrub and flower bed areas. This increases the soil's ability to absorb and store water in a form available to the plant. Get a soil test done to determine how much, if any, fertilizer is required. Current studies are showing that no fertilizer is needed in landscape beds if you maintain a 3 inch layer of wood mulch.

Plant Selection: Selecting drought tolerant plants that are either native or adapted to your local environment can have a tremendous impact on your ability to save water. Texas is blessed with an abundance of beautiful native plants which are naturally adapted to the region. Most have lower water demands, fewer pest problems and less fertilizer needs. Combining Texas natives with well-adapted non-native plants is a key to a beautiful, interesting landscape which conserves water.

Grass Selection: When considering a landscape's water requirement, it is important to note that turfgrasses require more frequent watering and maintenance than most other landscape plants. Carefully select grass according to its intended use, planting location and maintenance requirements. Planting the lowest water use turfgrass adapted to the region is an effective way to reduce landscape irrigation requirements. Achieving a significant reduction in water consumption and landscape maintenance may also involve reducing the size of water-sensitive lawns through the use of patios, decks, shrub beds and groundcovers.

Watering: Of the tremendous amounts of water applied to lawns and gardens, much of it is never absorbed by the plants and put to use. Some water is lost to runoff by being applied too rapidly, and some water evaporates from exposed, unmulched soil; but, the greatest waste of water is applying too much too often. In addition to overwatering the plant, excess irrigation can leach nutrients deep into the soil away from plant roots, increasing the chances of polluting groundwater. Similarly, runoff caused by excess irrigation can carry polluting fertilizers and pesticides to streams and lakes. The waste or pollution of high quality water through inefficient irrigation practices can be eliminated through proper watering techniques.

Lawns: Most lawns receive twice as much water as they require for a healthy appearance. The key to watering lawns is to apply the water infrequently, yet thoroughly. This creates a deep, well-rooted lawn that efficiently uses water stored in the soil. To know when to water the lawn, simply observe the grass. Wilting and discoloration are signs of water stress. Watering only when needed and watering thoroughly produces a deep-rooted lawn which is more water efficient and drought enduring.

Trees and Shrubs: All trees and shrubs need more frequent watering from planting time until becoming well rooted, which may take two or three growing seasons. Once established, plants can then be weaned to tolerate less frequent watering. Water established trees, shrubs and groundcovers infrequently, yet thoroughly. In the absence of rain, most trees and shrubs benefit from a once-a-month thorough watering during the growing season. Remember, normal lawn watering is not a substitute for thorough tree and shrub watering. Apply water and fertilizer just inside and a little beyond the dripline, not at the trunk. Simply lay a slowly running hose on the ground and move it around the dripline as each area becomes saturated to a depth of 6 to 10 inches.