



Drought Alert:

Water Efficient Practices for Saving Your Landscape

Texas Cooperative Extension
Texas A&M University System
College Station, Texas

Irrigation Systems for Water Efficient Landscapes

There are two types of irrigation systems for use in landscapes -- sprinkler irrigation and drip irrigation. Within a water efficient landscape, use a combination of these two systems in watering lawns, trees, shrubs, groundcovers and flowers.

The goal of an irrigation system is to give the plants a sufficient amount of water without waste. In addition, by zoning the irrigation system, higher water requirement plantings can be watered separately from lower water requirement areas.

Sprinkler irrigation is the most commonly used method of watering. The two kinds of sprinkler irrigation systems are the hose-end sprinkler and the permanent underground system with raised sprinkler heads.

The differences in these two sprinkler systems are in the cost, convenience and efficiency. Permanent, sprinkler systems are much more expensive than hose-end sprinklers. Yet the permanent system is much more convenient and can be much more efficient in applying the water.

The major advantage for sprinkler irrigation is in lawn watering. A sprinkler system, hose-end or permanent, is the most widely accepted way to water a turfgrass area.

There are some drawbacks to sprinkler irrigation. First, sprinklers wet the plants and flowers, as well as the soil. Water which remains on a plants through the night increases disease and decay. The best time to sprinkler irrigation is early morning prior to sunrise and just after to allow time for the plant leaf surface and flowers to dry before nightfall.

Another disadvantage of sprinkler irrigation occurs on windy days. Watering in as little as a five mile per hour wind will distribute the water unevenly over the soil surface and cause a great deal of evaporation.

Perhaps the most efficient way to water the home landscape is with a properly designed and well-maintained drip irrigation system. Drip irrigation slowly applies water to soil. Water flows under low pressure through emitters laid alongside the plants.

Water applied by drip irrigation has little chance of waste through evaporation or runoff. The water is applied directly to the plant's root zone. This also eliminates waste from applying water to unplanted or weedy areas.

Overall irrigation requirements will vary according to plant species, soil type, rainfall, and temperature. Established, well-adapted plants require less frequent watering than newly planted trees and shrubs. A minimum length of time to operate a drip irrigation system is two to three hours; however, it may take four to six hours to thoroughly wet the root zone of an established large shrub or small tree.

Covering the drip system with mulch is often recommended to hide the drip tubing from view and add to the life expectancy of the system.

- 0 -

Douglas F. Welsh, Ph.D.

Professor and Extension Horticulturist