

Rainwater Harvesting

Can rain save you money? Yes. Even if you live where annual rainfall averages only 12 inches, you can save money by collecting and storing rainwater and using it to irrigate your trees, shrubs and lawn.

Efficient water use is increasingly important to Texas. With the state's growing population and limited supply of both groundwater and surface water, Texans must use water wisely. Rainwater harvesting is an innovative approach anyone can use.



Rainwater harvesting captures, diverts and stores rainwater for later use. Rainwater can even be used for drinking, with proper treatment. But the easiest way to use stored rainwater is for landscaping. In many communities, 30 to 50 percent of the total water is used for landscape irrigation. If that demand for a limited natural resource can be reduced, everyone benefits.

Harvesting rainwater for use in the home landscape:

- Saves you money by reducing your water bills.
- Reduces demand on the municipal water supply.
- Makes efficient use of a valuable resource.
- Reduces flooding, erosion and the contamination of surface water with sediments, fertilizers and pesticides in rainfall run-off.

Rainwater is good for plants because it is free of salts and other minerals that harm root growth. As rainwater percolates into the soil, it forces salts down and away from root zones, allowing roots to grow better and making plants more drought tolerant.

Rainwater harvesting can be used both in large-scale landscapes, such as parks, schools, commercial sites, parking lots and apartment complexes, and in small residential landscapes.

Whether your landscape is large or small, developed or new, the principles described on this Web site can help you install a rainwater harvesting system.

How It Works

A rainwater harvesting system consists of the supply (rainfall), the demand (water needed by plants), and a system for collecting water and moving it to the plants. Simple systems distribute rainwater immediately. Complex systems store some or all of the rainwater for later use.

Rainfall. "Run-off" is the rainwater that flows off a surface. If the surface is impermeable (for example, pavement, concrete, roofs), run-off occurs immediately. If the surface is permeable, run-off will not occur until the surface is saturated. Run-off can be harvested (captured) and used immediately to water plants or stored for later use.

Plant Water Requirements. The types and numbers of plants in your landscape, along with their growth stages and sizes, determine the amount of water your plants need to be healthy. Because rainfall varies throughout Texas, different plants have become adapted to conditions in different regions of the state. Plants native to your region are the best choices for your landscape because their water requirements are usually met by normal rainfall amounts.

Water Collection and Distribution System. Rainwater collection and distribution systems can be incorporated into almost any existing site, although it is easier to incorporate them into new construction.

This article was from Texas A&M Agri-Life:
<http://texaswater.tamu.edu/conservation.rainwater.html>

For complete details on designing, building and maintaining rainwater harvesting systems, go to our partner Web site, <http://rainwaterharvesting.tamu.edu>.