

off, as the grasses and plants grow dormant. Only in the spring will the system be turned back on when conditions warrant.

### Harvesting Rainwater Makes a Difference!

In the second year of having the system, LSGCD utilized only harvested rainwater to irrigate the landscaping for 11 consecutive months. It saved not only water but also money. Utilizing such a system makes for happier plants, due to the natural benefits of rainwater.

### Nearly Everyone Can Harvest Rainwater

Rainwater harvesting can be done on a variety of levels, from small scale to commercial. Lone Star GCD keeps digital copies of the Texas Water Development Board's Texas Manual on Rainwater Harvesting. To get a free copy, stop by the District office. Or, if you prefer an on-line version, look under the "Links" tab on our website at [www.LoneStarGCD.org](http://www.LoneStarGCD.org).



*The photo above shows how a residential rainwater harvesting system can be blended into existing landscaping. Most home improvement stores carry an inventory of rain barrels that can easily be installed by the average homeowner.*

### Want to Learn More?

Visit the Lone Star Groundwater Conservation District's website to read about the District's authority, history, conservation tips and educational information about the county's groundwater resources.

[www.LoneStarGCD.org](http://www.LoneStarGCD.org)



655 Conroe Park North Drive  
Conroe, Texas 77303  
936.494.3436  
936.494.3438 (fax)



Your Water. Your Future.



Lone Star Groundwater Conservation District's Rainwater Harvesting System

[www.LoneStarGCD.org](http://www.LoneStarGCD.org)

**Why Rainwater Harvesting is Important** Montgomery County is booming, and local and state leaders are hard at work to ensure that the infrastructure necessary to accommodate the rapidly-expanding economy is in place.

Montgomery County taps into the Gulf Coast Aquifer System to draw out needed groundwater, which has seen steadily increasing pumpage levels due to the county's exciting growth.

It only makes sense to protect and preserve the county's natural resources so that an abundant, high-quality supply of water will remain.

There are numerous ways to conserve water. Rainwater harvesting is a tool which can be used by all - from homeowners to businesses.

**Lone Star GCD's Rainwater Harvesting System** When designing the Lone Star GCD campus, it was important to the board of directors and staff that it be more than an office building, but that it also serves as an educational center.

The first step was to start from the ground up - actually

under the ground - with the District's rainwater harvesting system.

Three area drains located in the parking lot collect surface runoff and are discharged by gravity into the arroyo or "dry river bed". That water is then conveyed, again by gravity, into a below-ground plastic tank with a capacity of 15,000 gallons.

In addition to the runoff from the parking lot, some of the gutter and downspouts from the building's roof are also directed to the underground tank.

The remainder of the roof's downspouts are directed to four stand-alone, 2,500 gallon, above-ground cisterns. Each are lined with a polymer and are equipped with a water-level gage. When the rainwater in the below-ground tank is depleted, the water from the above-ground tanks can be emptied in to the main tank.

A pump with a floating intake is situated on the bottom of the large underground tank. That pump distributes the rain water under pressure to a standard irrigation system.

When and if all of the stored rainwater is depleted, the system automatically diverts to the City of Conroe water supply.

When the rainwater system is sufficiently replenished, the irrigation system automatically switches from City of

Conroe supplies back to the rain collection system.

The irrigation system consists of drip, standard spray heads and bubblers. Ninety percent of the system is drip, the most conservative way to irrigate. All trees are watered with bubblers, which direct needed water to the roots, eliminating evaporation that occurs with typical spray heads.

The District also wanted to showcase conservation in its landscape design and selection of plants. All trees, grasses and shrubs are either native, adaptive or chosen for their drought tolerance.

Water-conservation methods even extend to the small section of turf grass which lines the arroyo by choosing to plant Zoysia grass. This species has proven to be less "thirsty" than other more commonly used types such as St. Augustine.

With moderate rains and the judicious application of water via an efficient irrigation system, significant amounts of potable water can be saved over a growing season. In the winter, the system is simply turned.

