Story by Courtney Swyden

Be Water Smart

Conservation program incorporates rain gardens

WaterSmart, a water conservation program, uses a unique approach to protect and conserve water quality and quantity in upper Texas Gulf Coast urban landscapes.

Part of the Texas Coastal Watershed Program (TCWP), WaterSmart is creating rain gardens as just one method of demonstrating how water conservation can function in an attractive landscape.

In December of 2005, the first demonstration WaterSmart rain garden was established at the Bay Area Courthouse Annex in Clear Lake City in partnership with Harris County Precinct 2. The rain garden, which filters stormwater coming from the annex's roof and sidewalks, has generated much interest from businesses and homeowners.

John Jacob, team leader of TCWP, said, "We are having a major impact with early adopters—those who are willing to make a switch to more sustainable landscaping practices now.

"We need many, many more of these early rain-garden adopters to be able to start to reach all the rest of the homeowners and groundskeepers who manage landscapes," he said.

Chris LaChance, WaterSmart Program coordinator, said rain gardens are a new concept to many people, although other parts of the country (Michigan, the northeast, Pacific Northwest) have been using them for several years. "When the light bulb goes off, they realize it's a win-win situation. They can create a beautiful addition to their landscape, help protect water quality, recharge groundwater and add habitat for wildlife," she said.

The WaterSmart program brings information about runoff pollution and water conservation to the attention of homeowners, garden clubs, environmental groups and city planners, and addresses coastal issues. Texas Cooperative Extension and Texas Sea Grant provide the leadership for the program. And a grant from Houston Endowment provides funding.

LaChance said there are other water conservation methods that can function in attractive landscaping such as edible landscapes, or even adding shrubs or vines.

According to the TCWP Web site, residential and commercial landscapes on the upper Gulf Coast of Texas consume at least 50 percent of municipal water supplies during the summer months. In addition, runoff from highly maintained landscapes pollutes sensitive bays and bayous.

Jacob said, "Residential and commercial landscapes are a major source of polluted runoff in our bays and bayous, and they are perhaps the 'lowest hanging fruit' that we can pick in addressing this area."

Rain gardens can be created by taking advantage of naturally low-lying areas that collect water. Rain gardens help divert the flow of excess water from roofs, driveways, parking lots, and lawns, while offering a low-maintenance way of gardening. This site is ready to be excavated and planted with water-loving plant species.

The program's Web site explains that rain gardens are made from a shallow depression in the landscape at least 10 feet from a building. The sod is removed and excavated to create a shallow, bowl-like area. Compost and sharp sand is added to the soil and planted with a mixture of native or non-invasive adapted trees, shrubs, grasses and flowers that can tolerate temporary wet conditions. A layer of mulch prevents weed growth and aids in filtration.

These low spots fill with water during periods of heavy rain, helping to reduce water runoff by capturing, soaking up and filtering excess water from roofs, driveways, parking lots and lawns.

She said that rain gardens can be simple or complex. No rain garden is too small or too large, and cost and size is really site specific. People need to understand deed restrictions and landscape ordinances to allow for any variance that might need to be obtained before installation. People must also understand that it is important to "call before you dig" to be sure that no utility lines are present, LaChance said.

Supplemental grants from entities such as Texas General Land Office's Coastal Management Program, Galveston Bay Estuary Program and others allow LaChance to install demonstration gardens; coordinate workshops; consult with communities, homeowners, and environmental groups; and offer presentations to a wide variety of audiences.

Minimal grass cover and maximum use of native and adapted plants produce a WaterSmart landscape that requires less water, little or no fertilizers and pesticides, and is easy to maintain. The WaterSmart

This rain garden has been designed to fit naturally with the landscape and was planted with water-loving plant species. These plant species create a landscape that will collect water and aid in diverting the flow of runoff water.

program's goal is to provide a tool that will help people landscape in a way that is low maintenance, beautiful and does not negatively impact the environment.

"The next phase of the WaterSmart program will add a new component to the existing program, landscaping for wildlife, called Habitat Highways," said LaChance.

Jacob said that the WaterSmart program will be needed for a long time because people will want to continue to water and fertilize lawns. "We will need to help them minimize the impacts," he said.

For more information, visit TCWP's WaterSmart Landscapes Web site at: http://www.watersmart.cc/.

Awards

Dr. Ed Smith, director, Texas Cooperative Extension (far left) and Dr. Elsa Murano, vice chancellor and dean for Agriculture and Life Sciences, and director, Texas Agricultural Experiment Station (far right) present a Partnership Award to Kenny Zajicek, fiscal officer; Aubrey Russell, chairman; and Joe Freeman, state district II field representative, all from Texas State Soil and Water Conservation Board, during the Texas A&M Agriculture Conference in January. The award recognizes agencies and organizations that collaborate with Extension to enhance the outreach and impact of Extension for the people of Texas. TWRI nominated the board for its work together.