

# Innovative partnering

## Texas A&M, McKinney develop water conservation venture

The city of McKinney, Texas and Texas AgriLife Research and Extension Urban Solutions Center at Dallas are partnering on a six-year plan to educate and bring research-based innovations to McKinney residents. The goal is to help them manage water resources efficiently.

This partnership developed after the summer of 2006 when McKinney, one of the fastest growing cities in the United States, was faced with a severe drought that placed the city in a stage three drought contingency plan. City officials had to limit water usage and worried that, if the drought continued into 2007, McKinney would go into stage four.

“Stage three was a major wake-up call for the area and required us to implement limitations on water use,” said Brian Loughmiller, a McKinney city council member. “We looked for creative measures that we could implement in water conservation that would last beyond the end of the drought and hopefully result in a greater appreciation for water conservation even during times where it appears that we have a water surplus.”

McKinney Mayor Bill Whitfield agreed. “McKinney has no choice,” he said. “It is the

second fastest growing city in the country (among cities of 100,000 or more). Its population reached 100,000 in 2005 and is expected to eventually top 350,000.”

According to both city officials, partnering with the Dallas center provided the city with a way to develop long-term water conservation strategies.

The University of Texas at Arlington's Program in Landscape Architect assisted in the design of a one-acre water conservation garden for McKinney. The garden will demonstrate drought-tolerant plants and turfgrasses, new irrigation technologies and other water conservation techniques.



Clint Wolfe, the center's grant and program coordinator, said the first goal of the partnership is to educate city officials, developers, landscapers, homeowners, adults, and children about water conservation and quality. The center developed a water conservation seminar series and a three-part television series on water conservation that airs on the city's local cable access channel.

"The first television piece focused on the city's water supply," Wolfe said. "The remaining news pieces focus on areas in which homeowners overuse water resources, do not plan for landscape water use, are unaware of water-conserving plant material choices, and do not know where to go for irrigation planning and efficiency or information on new technologies such as evapotranspiration (ET) controllers."

The center's last goal is to change McKinney residents' perception of what a water-conserving landscape looks like by developing a one-acre water conservation garden consisting of drought-tolerant plants.

The center will demonstrate for residents and other water users how well-researched, drought-resistant plants can conserve water in the rapidly growing city.

"We could pass ordinances that would require developers to use these water conserving plants," Whitfield said in a Dallas Morning News article last year. "We're trying to be conscious of our water and the plants we use. We've got to make this a better place to live and work."

Wolfe said, "The overall goal is to show homeowners and developers how they can use the plants in their landscapes while conserving water."

The garden, scheduled for completion by May 2008, will also demonstrate new irrigation technologies, such as drip irrigation for turf, the use of ET controllers, and other similar technologies. The site will be a key educational component for changing the opinions of residents on what a water conscious landscape can look like, he said.

"In addition to the technical and scientific expertise they lend to the city, the Urban Solutions Center also provides us a mechanism for identifying funding sources through the state and possibly federal government agencies that may be necessary to help implement water conservation procedures," Loughmiller said.

Wolfe agreed, explaining that the center is committed to soliciting third party funding to help answer these questions. To date, the center has received \$530,834 in grants for educational programs, demonstrations, and research plots.

These research projects include a turfgrass drought-tolerance study conducted by Drs. Jim Heitholt and Ambika Chandra, and a management of salinity in landscape ornamentals study by Dr. Raul Cabrera.

In another project, Dr. John Sloan and Cabrera are measuring the quality of urban stormwater runoff and are devising ways in which to clean up or treat water with plant material before it enters local streams or reaches water supply reservoirs.

The center is seeking other funding for research on water efficiency, ET irrigation controllers, using green roofs to mitigate urban stormwater runoff, and breeding salt-tolerant grasses and ornamentals.

"San Antonio has gone a long way in the last 20 years in reducing its per capita consumption," Wolfe said. "That's what McKinney said it planned to do, and it is the first city in the metroplex to spend significant money to make it happen."

"The center can deliver complete solutions using the experience of other cities in Texas that already have had success with these kind of research-based solutions," Wolfe said. "We will provide these solutions, new technologies, and information for McKinney residents to use."

To comment on this article, visit its electronic version at <http://twri.tamu.edu/news/2008>. 