Description
In support of the state water plan, Water for Texas-2002, and Governor Perry’s Pure Water, Plentiful Water initiative, the Texas Agricultural Experiment Station will strengthen its Irrigation Technology Center (ITC), a statewide network of water research, education, and equipment development/testing programs.

Relevance and Background
In Texas, agricultural irrigation accounts for 65% of the total freshwater consumed annually, and landscape irrigation accounts for 20 to 40% of total municipal water use. Texas’ rapidly growing population and industries are also placing increased demands on existing water supplies and conveyance systems. Regional water shortages are expected to become increasingly prevalent in the next decade.

As much as half of irrigation water may be lost because of inadequate equipment or uninformed management. Research is needed to develop more efficient and economical irrigation equipment and management strategies. Design standards and equipment testing are also needed to assure optimum performance of irrigation systems. The demand for education relating to the use and conservation of water continues to grow, with homeowners, agricultural producers, landscape and irrigation professionals, agency personnel, and educators having specific needs.

Objectives
With the leadership and coordination of the ITC:

- Strengthen our statewide network of world-class irrigation research and education programs.
- Develop more efficient irrigation products and management practices.
- Provide training for agricultural and landscape irrigators.
- Assist organizations in identifying policies that encourage conservation.

The ITC will operate through five divisions: Urban Programs, Agricultural Crops, Wastewater Reuse, Equipment Testing and Certification, and International Programs.

A coordinated research and outreach program will be developed in San Antonio to support the Urban Programs, Equipment Testing and Certification, and International Divisions. Activities will include sprinkler testing, runoff collection, irrigation scheduling and landscape irrigation testing. Federal and local support will be sought to establish state-of-the-art laboratories and outdoor facilities for developing equipment design standards. International education and technology transfer programs will be also conducted.

The Agricultural Research and Extension Centers at Amarillo and Lubbock will provide key facilities and leadership for the Agricultural Crops Division. They will cooperate to develop precision irrigation management systems for the High Plains. These efforts will be coordinated with expanded irrigation technology programs in San Antonio, Weslaco, Uvalde, Fort Stockton, Pecos, Eagle Lake and El Paso. Research and education programs will seek to maximize agricultural water use efficiencies throughout the state.

Programs at College Station, El Paso, Dallas, Overton and other locations will be enhanced to support the Urban Programs and Wastewater Reuse Divisions. Research and education efforts will address urban landscape irrigation, municipal/industrial wastewater processing and reuse, storm water catchment and recirculation, and on-site water treatment and reuse.

Partners
The ITC will be a unit of the Texas Agricultural Experiment Station, working in close cooperation with Texas Cooperative Extension. Major partners will be the USDA Natural Resources Conservation Service and USDA Agricultural Research Service. Local/regional cooperators will include San Antonio, El Paso and other municipal water systems, San Antonio and other river authorities, BexarMet, City of San Antonio, Edwards Aquifer Authority, underground water conservation districts on the High Plains, agricultural commodity organizations, and irrigation districts. The ITC will also collaborate with the Environmental Protection Agency, U.S. Geological Survey, U.S. Bureau of Reclamation, Texas Water Development Board, Texas Natural Resource Conservation Commission, Texas State Soil and Water Conservation Board, and Texas Department of Agriculture.

Requested Budget
FY 2004: $2.0 million
FY 2005: $2.0 million