

# SE-TAC

## Southeastern Regional Small Public Water Systems Technical Assistance Center



## 2nd Annual Report November 2001-October 2002

What is the Southeastern Small Public Water Systems Technical Assistance Center (SE-TAC)?

The Safe Drinking Water Act (SDWA), 42 U.S.C. 300f et. seq., was significantly amended in 1996. In particular, the SDWA amendments authorized the Environmental Protection Agency (EPA) to make grants to institutions of higher learning to establish and operate small public water system technology assistance centers (TACs). The Southeastern Regional Small Public Water Systems Technical Assistance Center (SE-TAC) administered by the Mississippi Water Resources Research Institute at Mississippi State University, is one of eight TACs nationwide. The SE-TAC's goal is to provide seed money for new or enhanced training, technical assistance, or pilot projects that will directly and significantly enhance the ability of small public water systems in the Southeastern United States to meet the Safe Drinking Water Act's increased technical, monitoring, and reporting requirements and protect public health.

**Alabama, Arkansas, Florida, Georgia, Louisiana, Mississippi,  
North Carolina, Oklahoma, South Carolina, Tennessee, Texas**

**Administered by the Mississippi Water Resources Research Institute  
[www.gri.msstate.edu/se-tac](http://www.gri.msstate.edu/se-tac)**

# ADVISORY BOARD

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American Water Works Association, Southwest Section

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City of Graham

## TEXAS

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Texas Rural Water Association

**Doug Holcomb**

Texas Commission on Environmental Quality

**Barbara Monroe**

Community Resource Group, Incorporated

## Project Collaborators and Partners

- \* Alabama Department of Environmental Management
- \* Alabama Rural Water Association
- \* Auburn University Center for Governmental Services
- \* Auburn University Environmental Institute
- \* City of Beauregard, Alabama Water Authority
- \* Florida Rural Water Association
- \* Florida Department of Environmental Protection
- \* Louisiana Rural Water Association
- \* Louisiana State University Water Resources  
Research Institute
- \* Mississippi Rural Water Association
- \* Mississippi State University GeoResources Institute
- \* Mississippi Water & Pollution Control Operators'  
Association
- \* Mississippi Department of Environmental Quality
- \* Mississippi Department of Health
- \* North Carolina Rural Water Association
- \* North Carolina State Revolving Fund
- \* North Carolina State University Water Resources  
Research Institute
- \* North Carolina Public Water Supply
- \* Tennessee Association of Utility Districts
- \* Texas A & M University Water Resources Institute
- \* Texas Agricultural Experiment Station
- \* Texas Commission on Environmental Quality
- \* Texas Cooperative Extension
- \* Texas Rural Water Association

## Project Funding and Leveraging

Sub-recipient	SE-TAC	Match	Total
Alabama Rural Water Association	37,145	15,275	52,420
Florida Rural Water Association (PE)	49,488	65,000	114,488
Florida Rural Water Association (GPR)	31,000	31,000	62,000
Mississippi Rural Water Association	17,367	6,946	24,313
Mississippi Water & Pollution Control Operators' Association	45,000	5,000	50,000
North Carolina Rural Water Association	50,000	5,000	55,000
Tennessee Association of Utility Districts	50,000	83,220	133,220
Texas Rural Water Association	50,000	58,311	108,311
<b>Total</b>	<b>\$330,000</b>	<b>\$269,752</b>	<b>\$599,752</b>

# MISSION

The SE-TAC's mission is to use the unique capabilities of universities to build partnerships throughout the southeastern region of the United States to directly and significantly protect public health by enhancing small water systems' capacity and sustainability to protect source water.

How does the SE-TAC work?

The SE-TAC's goal is to build partnerships and collaborative relationships between the EPA, state primacy agencies, and technical assistance provider organizations to maximize the capabilities and expertise of each partner; encourage universities to actively apply their training, research, and outreach resources to these efforts; and support the development and transfer of new and/or enhanced technical and capacity development training to small public water systems in the southeastern United States.

The SE-TAC relies on the expertise of an advisory board to help accomplish its goals. Comprised of representatives from state drinking water primacy agencies, state rural water associations, and other technical assistance provider organizations, the SE-TAC Advisory Board is:

- \* A forum to annually refine and translate EPA's national small public water system priorities into the SE-TAC's project priorities, and provide strategic guidance in developing the SE-TAC's regional Request for Proposals (RFP) and proposal grading criteria.
- \* A network to help broadly distribute the SE-TAC's competitive RFP regionally; and
- \* A panel of experts to grade the grant proposals based on their direct, day-to-day knowledge of the priority challenges facing the Southeast's small public water systems.

Representatives from Alabama, Louisiana, Mississippi, North Carolina, and Texas participate on the SE-TAC's advisory board because these states are representative of the region. The 15-member advisory board is comprised of 3 voting members from each of these states, with each state's seats allocated as follows:

- \* 1 state rural water association or equivalent organization
- \* 1 representative from the state's Department of Health or similar state agency with primacy or significant jurisdiction over safe drinking water programs
- \* 1 technical assistance provider, including, but not limited to a Community Resource Group Incorporated or section of the American Water Works Association, or similar organization active in assisting small community water systems in that state

Working closely with the advisory board, the SE-TAC funds two types of activities:

- 1) A regional grants competition
- 2) Small, non-competitive demonstration projects at Water Institutes/Centers in the five advisory board states

## Regional Competitive Grants Program

The regional competitive grants program is designed to address regional small public water system priority issues identified by the advisory board. Individual board members may submit proposals in response to the RFP; however, they are not allowed to evaluate their own proposal. In its 2nd funding cycle, the SE-TAC budgeted \$330,000 for regional competitive projects.

## SE-TAC Project Priorities:

For the 2nd funding cycle, the SE-TAC Advisory Board adopted the following priorities:

1. Regional/Multi-State (funding up to \$50,000)
  - 1.1. Train the Trainer (easily transferable training programs)
  - 1.2. Capacity Development
  - 1.3. Educate the General Public about Small Drinking Water System's Issues and/or Challenges
  - 1.4. Partnership Development
  - 1.5. Applied Research
2. State-level (funding range from \$10,000-\$50,000)
  - 2.1. Develop/Enhance/Expand Training Materials (must be internet compatible)
    - 2.1.1. videos, multimedia, audio/visuals, overheads, etc.
    - 2.1.2. manuals, workbooks, handouts, etc.
  - 2.2. Develop/Enhance/Expand Hands-on Training
    - 2.2.1. Managerial
    - 2.2.2. Financial
    - 2.2.3. Technical
  - 2.3. Equipment (multi-purpose testing, diagnostic equipment for statewide use)
  - 2.4. Consolidation Efforts/Demonstration Projects
    - 2.4.1. financial planning assistance (bill payment, operations, purchasing)
    - 2.4.2. long range planning
  - 2.5. Applied Research

A brief description of current projects is provided below.

## Competitive Projects

Alabama Rural Water Association (ARWA) - Management Training. Working with the Auburn University Center for Governmental Services, the ARWA developed strategic management training materials and conducted four on-site training sessions attended by 117 small public water system managers and board members. Course approved by the state primacy agency for 5 continuing education hours at each location.

Florida Rural Water Association (FRWA) - Public Water/Wastewater System Engineering Services. A modification and extension of 1st cycle project, in which FRWA partnered with the Florida Department of Environmental Protection to hire a professional engineer (PE) to provide on-site technical support to Florida's small public water and wastewater systems. The project was continued with additional funding in the 2nd cycle. This project is giving systems and local communities direct assistance to identify compliance problems and alternate solutions, as well as to define their infrastructure needs and various mechanisms to meet those needs.

Florida Rural Water Association (FRWA) - Ground Penetrating Radar (GPR) Equipment Grant. The GPR continues to be used extensively to assist small public water systems throughout Florida in locating utility, raw water lines and distribution lines, valves, and other items to facilitate regular maintenance and to avoid damage during new construction.

Mississippi Rural Water Association (MSRWA) - Utilizing GPS Equipment for Leak Detection Purposes Equipment Grant. A modification and extension of 1st cycle project, "Computers for Training," which allowed MRWA to purchase computers to train water/wastewater and groundwater technicians on reporting requirements for compliance with the SDWA. The leak detection equipment secured through 2nd funding has been used almost weekly by circuit riders on small systems throughout Mississippi. Specific examples are Leesburg Water Association (E. coli tested positive on a new 8" pipe, leak detection and "pigging" done to clear the pipe - it tested clear and in service now) and the Town of Gloster (circuit riders helping to georeference town's valves and fire hydrants; job 75% complete for engineering mapping).

Mississippi Water & Pollution Control Operators' Association - Waterworks Operator Continuing Education Training Program Equipment Grant. Purchased equipment (lap top computers/video projectors) to conduct field training. Project training completed; equipment is continuing to help bring training to field locations.

North Carolina Rural Water Association (NCRWA) - Train and Assist Transient Non-community Systems in Monitoring Requirements/Procedures. Project start delayed by difficulty in filling the trainer position.

Tennessee Association of Utility Districts - Performance-based Training for Water Treatment Plant Operators. Approximately 66% of the project's work plan has been completed to date by developing performance based water treatment training material for groundwater pumping, preliminary treatment of raw water, aeration, iron and manganese control, corrosion control and odor control.

Texas Rural Water Association (TRWA) -

A modification and extension of 1st cycle project, "Technical Training for Small Drinking Water System Operators: Making Hands-On Instruction Available at the Local Level," which supported a mobile classroom housing demonstration equipment in three custom-built trailers. The project received additional funding in the 2nd cycle, allowing TRWA to continue transporting the classroom to local small system personnel for training seminars. Remote training includes classes on utility safety (i.e., self-contained breathing apparatuses, harnesses and other rescue equipment). The 2nd cycle funding also supported the development of an "Enhanced Pump and Motor Maintenance" manual which will serve as a long-term reference document.

## Non-competitive Demonstration Projects

In addition to the competitive program, the SE-TAC budgeted a total of \$55,000 for non-competitive sub-awards (authorized by the federal Water Resources Research Act 42 U.S.C. 10301 et seq.) for each Water Resources Research Institute in the five states represented on the advisory board. These funds allowed Water Resources Research Institutes to work with their respective state's advisory board members to identify and undertake a priority small public water system project in their state. Also, in consultation with EPA Region IV, the Mississippi Department of Health and the Mississippi Department of Environmental Quality, the SE-TAC provided \$30,000 for a source water protection demonstration project to explore the use of remote sensing and geo-spatial technologies to identify failing septic systems and unsewered communities in a priority area in Mississippi.

Auburn University's Environmental Institute - GIS Development for Managing Rural Water Systems. Pilot project with the Beauregard Water Authority to develop a desktop geospatial application to map the system's utilities (wellheads, valves, hydrants, and pipelines) and identify potential source water threats. Also trained utility personnel on how to maintain and update this application.

Louisiana State University's Water Resources Research Institute - Technical Assistance for Louisiana Rural Watershed Issues. A modification and extension of 1st cycle project, which established an internet-based information infrastructure to enhance the dissemination and exchange of technical information about the Safe Drinking Water Act, technology available to achieve the Act's goals, and the technical and financial assistance opportunities for small drinking water systems. Funding during the 2nd cycle has allowed the Louisiana Water Resources Research Institute to enhance its computer-based information transfer infrastructure for small public water systems.

Mississippi State University's GeoResources Institute (GRI), Source Water Protection - Spatial Technologies Assessing Rural Septic Systems (STARSS). A pilot project coordinated with the Mississippi Departments of Health and Environmental Quality, the STARSS project plans to detect and map septic system failures using mobile computing, field mapping, remote sensing and GIS technologies. The pilot project effort is directed at developing a GIS/GPS field application for septic system mapping, inspection, and fault reporting.

Mississippi State University's Water Resources Research Institute - Supporting Partnerships for Source Water Protection. A modification and extension of 1st cycle project, "Enhancing Rural Public Health Protection and Water Supply Through Partnerships," in which the Water Resources Research Institute undertook two distinct activities to support the SE-TAC's efforts in Mississippi: 1) conducted Consumer Confidence Report (CCR) Workshops; and 2) co-hosted a strategic planning meeting for federal and state agencies and other organizations to identify and promote opportunities for partnerships to integrate isolated water supply and safe drinking water programs to promote public health for small public water system customers. Additional 2nd cycle funding will build on partnerships established in the 1st cycle to support the use of geospatial technologies to identify and prioritize interagency efforts for source water protection and integration of Clean Water Act and Safe Drinking Water Act programs in identified priority areas.

North Carolina State University's Water Resources Research Institute - Development of Technical Literature to Assist Child Care Centers and Schools in Complying with the Safe Drinking Water Act Requirements. Experienced certified operators were consulted to identify and develop publications to: 1) inform potential day care center operators on how to be approved as a public water supply; and 2) inform certified operators about methods to keep up with sampling requirements to publicize information available on the Public Water Supply Section's website and how to use that information to keep their system in compliance.

Texas A & M University's Water Resources Institute - Small Public Water Systems Training on Preventing Bacterial and Pesticide Contamination and Source Water Protection. More than 200 participants attended training sessions on fecal coliform, E. coli, cryptosporidium, and giardia and disinfection by-products associated with water treatment practices. Presentations on source water protection for public water supply systems, and pesticide contamination and impacts to small water systems were also included. Several one-day training workshops were conducted in West, South, and Central Texas, with live broadcasting over the Internet. Several fact sheets related to these programs have also been developed.



**Alabama**

**Arkansas**

**Florida**

**Georgia**

**Louisiana**

**Mississippi**

**North Carolina**

**Oklahoma**

**South Carolina**

**Tennessee**

**Texas**

## Completed Projects

Alabama Rural Water Association (ARWA) - Energy Efficiency in Water Utilities. ARWA purchased leak detection equipment to advance and supplement the existing Alabama State Department of Energy Program by providing a more conclusive leak detection service, resulting in monetary savings in both water production and energy costs.

North Carolina Rural Economic Development Center - Planning for Regional Water Source Alternatives: Central Coastal Plain Capacity Use Area. Through a stakeholder process the State Department of Environment and Natural Resources' Division of Water Resources developed the Central Coastal Plain Capacity Use Area Rule (CCPCUA), to coordinate and regulate groundwater withdrawals to protect the sustainability of aquifers in the region. Water users must reduce groundwater withdrawals over a 16-year period, some by as much as 75%. The project assisted small drinking water systems in eastern North Carolina in developing a plan which evaluated current water use, future water supplies, and the cost to develop these supplies for local governments to assist them in the decision-making process.

Southeast Rural Community Assistance Project, Incorporated - Board Member Training for Small Water Systems. This project provided board member training for 60 small water systems in 47 communities in North Carolina, South Carolina, Georgia, and Florida to enhance the financial, technical, and managerial expertise for small public water system board members.

Western Piedmont Community College - Development of a D-well Correspondence/Internet Course. This project created a comprehensive correspondence/internet course to provide small water system operators in North Carolina with D-Well training in preparation for certification from the Department of Environment and Natural Resources. D-Wells primarily serve mobile home parks, churches, summer camps, resort areas, and small subdivisions with small distribution lines and are often operated by grounds or maintenance personnel with other job responsibilities and limited access to resources necessary to operate a system.

Alabama Water Resources Research Institute - Energy Efficiency in Rural Water Systems. This project allowed the Alabama Water Resources Research Institute to collaborate with the Alabama Rural Water Association to help the state's small water systems reduce the amount of water lost through leaks and reduce their overall energy costs.

North Carolina Water Resources Research Institute - Developing Technical Literature to Assist Rural Churches in Complying with Sampling Requirements of the Safe Drinking Water Act. This project allowed the North Carolina Water Resources Research Institute to develop, print, and distribute a "user friendly" educational publication on bacterial contamination for rural churches in the state. The publication is available online at [www2.ncsu.edu/ncsu/CIL/WRRRI/Churchwater.pdf](http://www2.ncsu.edu/ncsu/CIL/WRRRI/Churchwater.pdf).

Texas Water Resources Institute - Educating Texas Rural Water System Managers About Cross-Connection Issues. The Texas Water Resources Research Institute collaborated with a number of state partners to develop training materials and conduct a one day workshop on cross connection issues.

## What is TACnet?

Nationally, eight TACs work with state and federal regulatory agencies to assist small public water systems to acquire and maintain the technical, financial and managerial capacity to consistently provide safe drinking water and meet the SDWA's public health protection goals. To leverage resources and avoid duplication, many of the TACs have developed partnerships and cooperative relationships with state Rural Water Associations, state American Water Works Associations, state primacy agencies, Environmental Protection Agency, NSF International, and United States Department of Agriculture Rural Utility Service. The TACs are expanding their collaboration and cooperation between and among themselves through a voluntary TACnet program. The TACnet program helps coordinate the development and maximize the distribution of educational and training materials between TACs nationally. Resources provided by the different TACs include but are not limited to on-site technical assistance; training for water system operators and managers; technical assistance in conducting sanitary surveys and self-assessments; water treatment technology research and evaluation; and development of computer-based management, system finance, and monitoring requirements. Some TACs are also working with small systems to implement source water protection plans.

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