

7th Annual Report

November 2006 - October 2007

www.wrri.msstate.edu/se-tac/



Southeastern Regional Small Public Water
Systems Technical Assistance Center

Who We Are

Established in September 2000, the Southeastern Regional Small Public Water Systems Technical Assistance Center (SE-TAC) is administered by the Mississippi Water Resources Research Institute (WRRI) at Mississippi State University. SE-TAC is one of eight university-based small public water system technology assistance centers (TACs) nationwide. Funded by the Environmental Protection Agency (EPA) under the Safe Drinking Water Act's (SDWA) 1996 amendments, the TACs work with state and federal agencies to assist small public water systems in acquiring and maintaining the technical, financial, and managerial capacity to consistently provide safe drinking water and meet the SDWA's public health protection goals. Each of the TACs has a unique programmatic focus or geographic scope. Some TACs emphasize research. Others feature training programs and materials. SE-TAC has adopted a very applied approach to directly and meaningfully supporting small public water system issues in the Southeastern United States.

Our Mission

To build partnerships among water utility organizations, state primacy agencies, technical assistance providers, and universities throughout the Southeastern Region of the United States to protect public health by enhancing small water systems' capacity to protect and provide safe drinking water.

What We Do

To accomplish its mission, SE-TAC works closely with EPA and a diverse, multi-state advisory board 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 SDWA's increased technical, monitoring and reporting requirements, and protect public health.

All SE-TAC activities support the 2003-2008 EPA Strategic Plan's Goal 2 of Clean and Safe Water and more specifically sub-objective 2.1.1 Water Safe To Drink.

Alabama

Mark Bohlin (2000 – Present)
Society of Water Professionals,
Alabama Chapter

Dennis Harrison (2005 – Present)
Alabama Department of Environmental
Management, Drinking Water Branch

Kathy Horne (2000 – Present)
Alabama Rural Water Association

Louisiana

Don Broussard (2006 – Present)
American Water Works, Southwest
Section

Patrick Credeur (2000 – Present)
Louisiana Rural Water Association

Glenn T. Cambre (2006 – Present)
Louisiana Department of Health &
Hospitals, Office of Public Health

Mississippi

Keith Allen (2005 – Present)
Mississippi State Department of Health,
Division of Water Supply

Pete Boone (2000 – 2007)
Mississippi Rural Water Association

Tom Johnson (2000 – Present)
Community Resource Group

Kirby Mayfield (2007 - Present)
Mississippi Rural Water Association

North Carolina

Brad Boris (2003 – Present)
North Carolina Section American
Water Works Association

Debbie Maner (2004 – Present)
North Carolina Rural Water Association

Lee Spencer (2001 – Present)
North Carolina Department of
Environment and Natural Resources
Public Water Supply Section

Texas

Tom Duck (2000 – Present)
Texas Rural Water Association

Doug Holcomb (2000 – Present)
Texas Natural Resource Conservation
Commission, Public Drinking Water

Mike Howe (2005 – Present)
Texas Section American Water Works
Association

How SE-TAC Works



SE-TAC advisory board members represent state rural water associations, state agencies with primacy or significant jurisdiction over safe drinking water programs and other technical assistance provider organizations throughout SE-TAC's 11-state region.

SE-TAC includes eleven states and relies heavily on the expertise of a multi-state 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 SE-TAC's project priorities and provide strategic guidance in developing the SE-TAC's regional Request for Proposals (RFP);
- A network to help broadly distribute the SE-TAC's competitive RFP throughout the Southeast; and,
- A panel of on the ground experts to grade grant proposals based on their direct, day-to-day knowledge of the priority challenges facing small public water systems in the Southeast.

Representatives from Alabama, Louisiana, Mississippi, North Carolina, and Texas participate on the SE-TAC Advisory Board because issues facing small public water systems in these states provide a cross section of common needs and priorities throughout our eleven-state region.

The 15-member advisory board is comprised of three voting members from each state, with each state's seats allocated as follows:

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

Current Funding Priority Areas

SE-TAC solicits proposals in the following areas, in support of the 2003-2008 EPA Strategic Plan's Goal 2 of Clean and Safe Water and sub-objective 2.1.1 Water Safe To Drink. The entire plan can be found at www.epa.gov/ocfo/plan/2003sp.pdf. Generally, the five (5) priority areas all expand on the broad capacity development category. The Board considers all five (5) priority areas to be equally important.

I. Training/Technology Transfer

Compliance with the SDWA's increased reporting and monitoring standards requires additional and timely training for small public water systems' board members and/or operators. Technology assistance or transfer projects are sought, with an emphasis on proposals to develop or enhance training materials (e.g., videos, multimedia, audio visuals, manuals, workbooks, handouts) or the delivery of training to small public water systems (e.g. develop training courses or provide technical assistance to systems developing their Standard Monitoring plans). Novel technology transfer and training approaches to establish or enhance the ability of small public water system operators or boards to access and use relevant web-based and CD ROM technology are also encouraged.

II. Capacity Development

Proposals to enhance the technical, managerial, and financial capacity of small public water systems to directly and significantly assist them in complying with SDWA are encouraged. Potential areas of interest include but are not limited to alternative water supplies, system consolidation, optimization of existing facilities and processes, compliance with new regulations (e.g., LT2ESWTR or Stage 2 DBPR rule requirements), long-range planning (e.g., product catalogue for small system staff so that operators could have a handy reference for ordering equipment in the event of a malfunction), demonstration projects in financial and managerial methods and/or practices, as well as technology applications to improve small public water systems' managerial and financial viability and reporting.

III. Source Water Protection Implementation

Innovative approaches to implement state source water protection plans or methodologies for small public water systems are sought. Applicants are encouraged to consult their state primacy agency to determine priority source water threats (i.e., Non-Point Source Pollution including agricultural/ industrial runoff, failing septic systems, animal feeding operations) and/or priority geographic areas for

demonstration or outreach projects. Letters of support and/or a willingness to participate in demonstration or pilot projects from small public water systems are also important. Projects must relate to implementation of approved Source Water Protection Plans and must clearly outline a plan to transfer project results to other small public water systems with similar source water protection issues. Competitive proposals will clearly document a direct link to significant small systems' source water protection issues.

IV. Small Public Water System Security and Natural Disaster Response, Funding, Reimbursement Procedures, and Mutual Aid Agreements

Proposals for innovative demonstration/pilot, training and/or technology transfer projects that enhance small public water system emergency responses to and security from purposeful contamination or jeopardy through acts of terror and/or vandalism, and natural disasters are requested (i.e., emergency preparedness plans, risk communication plans, and emergency funding/insurance). Disaster preparedness education/training materials and projects should be developed and delivered based on EPA Region IV's templates, which may be customized for particular states. These proposals should enhance and/or expand emerging national and state efforts in this area. Applicants must provide a literature review of existing small public water system emergency response and security tools and programs to show that their proposed project will not duplicate any existing program. Security training projects must identify the source of proposed training materials/tools. Proposals must ensure that they are consistent with EPA's Small Drinking Water System Emergency Response Plan guidelines (www.epa.gov/ogwdw/security/index.html). Applications should focus on systems with 3,300 or fewer customers unless they are preparing tools or training for a particular rule that clearly identifies small systems as serving 10,000 or fewer customers.

V. Distribution System Operation and Maintenance

Many small systems lack resources to address aging

distribution systems. In particular, older systems require more attention to operation and maintenance programs. Proposals to improve potable water delivered by distribution system are requested. Projects that support improved water loss/accountability, valve excising, flushing programs, and mapping/

modeling are of particular value. Proposals to develop a comprehensive energy conservation program that demonstrates how leak detection saves money by conserving water and electricity, economizing on chemicals, and saving wear and tear on pumps and motors are also of interest.

SE-TAC Grants

Subject to receiving annual EPA funding, SE-TAC's activities center on a regional competitive grants program. SE-TAC grants are intended to support projects which address regional small public water system priority issues identified by SE-TAC's Advisory Board. The board annually reviews and updates our funding priorities to emphasize current and emerging small water system issues. Organizations represented on the advisory board may submit proposals in response to the RFP. Board members may not evaluate their own proposals nor proposals from other organizations within their state.

2005 – 2007 Project Funding				
Project	Organization	SE-TAC	Match	Total
Disinfection By-Product Stage 2 Regulation Training for Small Water System Operators	Alabama Rural Water Association	\$44,000	\$19,260	\$63,260
Comprehensive Operations and Management Evaluation Demonstration Project	Mississippi Rural Water Association	\$41,567	\$59,435	\$101,002
Utility Board Trainings on Innovative Retention and Recognition Practices for their Water Operators	UNC – Environmental Finance Center	\$43,786	\$5,970	\$49,756
Training for Small Water Systems on How to Develop a Comprehensive Water Conservation Program	Texas Rural Water Association	\$49,699	\$43,575	\$93,274
Small Water System Disinfection By-Products/ Simultaneous Compliance Assistance	Florida Rural Water Association	\$50,000	\$80,000	\$130,000
Management Training Program for Officials and Operators of Public Utilities	Community Resource Group	\$26,443	\$23,336	\$49,779
Bacteriological Sampling, Monitoring, and Reporting	Tennessee Association of Utility Districts	\$40,506	\$3,602	\$44,108
Total Value of Projects		\$296,001	\$235,178	\$531,179

2005–2007 Projects

The RFP for the 2005 – 2007 cycle was released on July 1, 2005 and closed on October 3, 2005. A total of 14 proposals were received from state rural water associations, other technical assistance provider organizations, and university research and outreach programs from seven of the 11 southeastern states. The selected projects were implemented and completed on or before May 31, 2007.

Disinfection Byproduct Stage 2 Regulation Training for Small Water System Operators

Priority Area: Training and Technology Transfer
Five technical training sessions were attended by 252 attendees representing 142 small public water systems. Each session also provided the certified

operators in attendance with five continuing education hours which can be applied towards the renewal of their State of Alabama Water Operator Certification.

A CD-Rom containing the Alabama State specific IDSE Template, 40/30 Certification form and VSS Waiver



request letter for purchase and non-purchase systems was distributed to the approximately 433 small rural water utilities in the State of Alabama, serving a population of 10,000 or less, via the technical training sessions or the U.S. Mail service. The templates will assist small rural water utilities in complying with the U.S. EPA reporting requirements of the Stage 2 DBPR.

As a result of the “Disinfection By-Product Stage 2 Regulation Training for Small Water System Operators” project, 252 attendees representing 142 rural water utilities throughout the state of Alabama attended a 5-hour, one-day technical training session which provided them with information, networking with other utilities and insight on the importance and regulatory requirements of the Stage 2 Disinfection By-Products Rule for their system.

An even greater benefit of the technical training and compliance documentation templates provided through the “Disinfection By-Product Stage 2 Regulation Training for Small Water System Operators” project is that now approximately 1,416,273 customers will be ensured that regulatory-compliant, top-quality water will be provided for their consumption by the rural water utilities throughout the state of Alabama.

Small Water System Disinfection By-Products / Simultaneous Compliance Assistance

Priority Area: Training and Technology Transfer

Florida Rural Water Association’s (FRWA) project assisted small water systems to meet and exceed the SDWA standards and protect public health with particular emphasis on Disinfection Byproducts (DBP) and Simultaneous Compliance (including color, odor, taste, tannins, re-nitrification, and chloramination issues). FRWA has two total trihalomethanes (TTHM) field labs for on-site treatment evaluation and had previously performed an in-depth DBP/nitrification study of two Florida systems. This project enabled the FRWA to expand their technical assistance to other systems based on lessons that they have learned from their initial work with two systems. Sixty-five small- to medium-sized water systems were assisted, all under 50,000 population with DBP Compliance; a majority of systems were under 10,000 population. FRWA provided a mix of technical assistance, training, technology transfer, capacity development, security, and distribution system operation & maintenance. FRWA also produced a Florida-focused Disinfection By-Products / Simultaneous Compliance Best Practices Technical Manual for Medium and Small Water Systems, Operator Training Course and CD-ROM Training Resources.

Training Program for Officials and Operators of Public Utilities

Priority Area: Training and Technology Transfer

Mississippi Community Resource Group (MCRG) conducted four day-long training programs in Mississippi, Alabama, and Arkansas. The MCRG's project was designed to educate and train employees of public utilities in the multi-state area on how to properly operate and manage utilities, in both normal times and in emergencies. Since Hurricanes Katrina and Rita struck the coast lines of Alabama, Mississippi, Louisiana, and Texas, technical assistance providers have witnessed firsthand the need for hands-on training to prepare small systems for dealing with catastrophic events. Various modules and exercises were developed and included in the training to give students the tools to begin to organize and manage their utility to better deal with various emergencies. Practical exercises based on actual events were included to give the students real-life examples of what they may have to cope with as a result of actual emergencies.

Comprehensive Operations and Management Evaluation Demonstration Project

Priority Area: Capacity Development

With this project, Mississippi Rural Water Association (MWRA) provided state-of-the-art support on optimizing drinking water systems by developing comprehensive operations and management evaluations to maximize public health protection and to ensure regulatory compliance. Through the project, four small municipal and/or rural water systems were assisted to optimize their operating efficiency, reduce operating costs, extend equipment life, establish a framework for continuous improvement, and then determine if significant improvements in these areas can be made without major capital expenditures. Onsite assistance was provided to produce a comprehensive operational and management evaluation for each system. Areas addressed included Energy/Water Audits/Leak Detection, Process Optimization, Policies and Procedures, Financial Management, Cost-of-Service and Rate Studies, Project Financing, Management Information Systems (MIS), Customer Service, Organizational Development, Maintenance Management, Facility Master Planning, Security/Disaster Response, Mapping/Line Locations, and Data transfer.

Bacteriological Sampling, Monitoring and Reporting

Priority Area: Training and Technology Transfer

Tennessee Association of Utility Districts (TAUD) developed and conducted a series of 12 two-day performance-based course offerings at multiple locations across Tennessee entitled 'Bacteriological Sampling, Monitoring, and Reporting.' The course curriculum, classroom materials, and course exercises targeted small community water treatment and distribution system operators. With minor modifications, these materials should be easily transferable to other interested states. Through this project, TAUD trained small water system operators in areas such as: developing a bacteriological sampling plan; following proper bacteriological sampling procedures and sample handling protocol; selecting proper sampling locations for bacteriological sampling; maintaining the required records; complying with reporting requirements; and conducting hands-on analysis of bacteriological samples for total and fecal coliform, iron bacteria and slime-producing bacteria. A resource titled "Bacteriological Sampling, Monitoring and Reporting" was developed.

Utility Board Trainings on Innovative Retention and Recognition Practices for their Water Operators

Priority Areas: Capacity Development, Training and Technology Transfer

The University of North Carolina Environmental Finance Center (UNC-EFC) project was aimed at identifying practices that have proven successful in operator retention. High turnover among water operators is a common problem facing small systems. Many small systems claim that as soon as they have an operator trained, that person leaves the position, forcing the system to invest time and money in recruiting and training a new operator. This cycle of operator turnover seriously limits the technical capacity of these facilities and drains already scarce financial resources. The UNC-EFC identified practices that have proven successful in operator retention and considered how to effectively market these "best practices" to small system boards to improve their operator retention. An operator survey was distributed to more than 300 water operators in the state of North Carolina to assist in gauging current operator job satisfaction and solicit from operators practices/arrangements that would improve their job

satisfaction. The project's focus was on North Carolina and Georgia, but the results were formatted to be easily transferable to other states, especially in the Southeastern U.S. A final report of the project has been published and is available through SE-TAC.

Training for Small Water Systems on How to Develop a Comprehensive Water Conservation Program

Priority Area: Training and Technology Transfer

The Texas Rural Water Association (TRWA) created a training program and manual of Best Management Practices (BMPs) and design conservation strategies for implementation by small water utilities. The Texas Water Development Board (TWDB), Texas' water project funding agency, developed a 258-page report entitled "Water Conservation Best Management Practices Guide" (BMP) in 2004 which recommended detailed water conservation measures targeted to large water utilities. However, the guide had no conservation BMPs designed for small water systems.

This project allowed the TRWA to create a training program and manual that contains feasible BMPs and design conservation strategies for small water utilities to consider implementing. Subject matter included in the manual includes:

1. Effective methods to account for water losses with the goals of compliance with the new legislation and improved efficiency of water system operations;
2. Water conservation pricing;
3. Enforcement options against water wasters;
4. Assessing meter accuracy, installation, and sizing issues; and,
5. Encouraging water conservation practices among customers through means such as home low flow devices and water wise landscaping.

With 14 courses offered at locations throughout the state and as an on-line course, the training program was made widely available to small utilities in other states as well. The project resulted in a publication titled "Water Conservation Program Development & Water Loss Report Training for Small Water Systems".

2006-2008 Project Funding				
Project	Organization	SE-TAC	Match	Total
Proactive Approach to Emergency Preparedness for Small Water Utilities	Alabama Rural Water Association	\$47,840	\$21,656	\$69,496
Small Water System Disinfection By-Products, DBPR Stage 2 IDSE and Simultaneous Compliance Assistance	Florida Rural Water Association	\$50,000	\$108,700	\$158,700
Rita Assistance Program (RAP)	Louisiana Rural Water Association	\$49,675	\$30,230	\$79,905
Comprehensive GIS/GPS Conversion Pilot Project	Mississippi Rural Water Association	\$49,281	\$22,264	\$71,545
Disaster Response, Funding, Reimbursement and Mutual Aid Grant for Edisto Beach	SE Rural Community Assistance Project	\$40,000	\$22,000	\$62,000
Stage 2 DBPR Training for Small Water Systems	Tennessee Association of Utility Districts	\$39,949	\$3,602	\$43,551
Enhancing Performance of Small Water Systems Through Shared Management	University of North Carolina Water Resources Research Institute	\$23,255	\$5,220	\$28,475
Total Value of Projects		\$300,000	\$213,672	\$513,672

2006–2008 Projects

The RFP for the 2006 – 2008 cycle was released on July 10, 2006 and closed on October 3, 2006. A total of seven proposals were received from state rural water associations, other technical assistance provider organizations, and university research and outreach programs from seven of the 11 southeastern states. All projects selected for funding during this period are on track to complete their work plans by May 31, 2008.

Proactive Approach to Emergency Preparedness for Small Water Utilities

Priority Area: Training and Technology Transfer

The Alabama Rural Water Association works daily with the public water utilities in the State of Alabama offering technical assistance, training, and additional services. This proposal will allow specialized training to address the needs of Emergency Preparedness. The training will focus on subjects such as Auxiliary Generator Sizing, Emergency Response Plan Updates, Electrical Hook-up Requirements, Alternate Communication Plans and other related subjects. These subject areas have been identified during previous Hurricane Relief response efforts as critical. Through local training held within a 60 mile radius of most systems, it provides an opportunity for water system personnel to receive professional training to guide them in proactively preparing for emergency situations. Each participant will be provided copies of EPA's sample Emergency Response Plan Guidelines as well as other documents already available from EPA and the State Regulatory Agency. For those systems unable to be represented at the training locations, a hard copy and/or CD ROM of the documents will be mailed to each system. As a result of this training activity, small water systems will be able to revisit their current status of emergency preparedness and then recognize the need for a new or in some cases updated approach to emergency recovery efforts should an emergency occur. In addition, on site follow up visits to interested water utility personnel will offer one on one assistance in updating the Emergency Response Plan to include generator sizing and electrical hook up requirements. These efforts should reduce the amount of "down time" involved during their next emergency allowing continuation of a safe supply of drinking water service to their customers.

Small Water System Disinfection By-Products, DBPR Stage 2 IDSE and Simultaneous Compliance Assistance

Priority Areas: Training/Technology Transfer; Capacity Development; Source Water Protection Implementation;

Small Public Water System Security and Natural Disaster Response, Funding, Reimbursement Procedures, and Mutual Aid Agreements; Distribution System Operation and Maintenance

FRWA has a proven track record with meeting and exceeding established goals, objectives and tasks. This program is leveraged by financial support from the Florida Department of Environmental Protection and Florida Rural Water Association to maximize benefits provided for small public systems throughout Florida. FRWA proposes quantifiable and measurable goals to assist at least 48 small water systems during the funding 2007 cycle (4 per month) through technical assistance, training, technology transfer, capacity development, security, and distribution system operation & maintenance. FRWA's engineering staff has extensive experience with water and wastewater utility design, permitting, construction and operational issues – which includes a broad variety of projects in water resources, pre-treatment, treatment, water chemistry, permitting, and distribution projects. FRWA's engineers are on staff to assist water systems with comparison and evaluation of possible DBP treatment and management options to improve water quality and comply with state and federal regulations. Simultaneous compliance issues present a significant challenge for water suppliers. EPA and FDEP Microbial and Disinfection By-Product Rules address two key public health concerns: acute threats from microbial contamination and chronic threats from disinfectant residuals and byproducts of disinfection. Because each of these rules has equivalent stature in the law and requires simultaneous compliance, EPA and FDEP have not been able to set public health priorities – and so the goal of one rule cannot be undermined in favor of another. FRWA proposes to focus on resolving conflicts between some of these regulations; suggesting possible solutions; and recommending approaches to resolve these conflicts.

LRWA Katrina Assistance Program

Priority Areas: Capacity Development; Small Public Water System Security and Natural Disaster Response,

Funding, Reimbursement Procedures, and Mutual Aid Agreements

LRWA worked effectively with US Environmental Protection Agency (EPA), Louisiana Department of Health and Hospitals (LaDHH), and US Public Health officials in conducting system assessments and providing technical assistance in the aftermath of Hurricane Katrina. We continue assisting systems with technical assistance and preventive measures to this date.

The purpose of this project is to provide technical assistance to affected water systems recovering from Hurricane Katrina and aid these systems in the development of long range plans, that include Vulnerability Assessments (VA), Emergency Response Plan(s) (ERP) and an Operations and Maintenance (O & M) Manual for their perspective systems. Such instruments will expedite the water systems efforts in returning to normal operational status in the future. LRWA is proposing to assist systems that are recovering from the impact of Hurricane Katrina and are not eligible for most other federal programs due to being privately owned and operated. This project will employ a technician to provide on-site technical assistance to systems in establishing or redefining their a) Vulnerability Assessments, b) Emergency Response Plans, and/or c) O & M manuals. This technician will also provide technical assistance in regards to the daily operations of the system and also coordinate efforts with the local primacy agencies.

This project will aid systems in complying with the SDWA regulations through the recovery process and help prepare for future disasters. Targeted systems will be determined by the primacy agency as a system that would benefit the most from such assistance.

Disaster Response, Funding, Reimbursement and Mutual Aid Grant for Edisto Beach South Carolina

Priority Areas: Capacity Development

The SE Rural Community Assistance Project is a pilot program in SC to create a detailed natural disaster response and mitigation plan for a small, isolated coastal water system vulnerable to natural disasters and other hazards. The pilot water system is Edisto Beach, Colleton County, SC which has a year round population of 641 but peak summertime population of 5,400. The project will develop a Community Vulnerability Assessment Tool (CVAT) for Edisto Beach SC Water System using parts of the Coastal

Services Center (CSC) of National Oceanic and Atmospheric Administration (NOAA) tools of CVAT and Risk and Vulnerability Assessment Tool (RVAT). The site specific tool will include Hazards Locator, Critical Infrastructure, Mitigation Strategy and Recommendations for Infrastructure Protection and Disaster Response for the water system. The Edisto Beach CVAT Tool will contain maps, charts, photos, etc. that support the response plan and methodology. The project results will be shared with nearby coastal community water systems of Kiawah Island SC Utilities and Seabrook Island SC utility. Southeast RCAP will also propose a strategy to generate required matching funds or loan reserves to fund improved planning and response, and develop a database of all disaster related funding available to small water systems in South Carolina, complete with EPA funding, USDA Rural Development funding, SC state SRF funding, SC Budget & Control Board Funding, county funding and any private funding.

Stage 2 DBPR Training for Small Water Systems

Priority Area: Training

The Tennessee Association of Utility Districts (TAUD) project will develop and conduct a training course to small community water system operators and managers entitled "Stage 2 DBPR Training for Small Water Systems." The training format is a series of 12 two-day course offerings at multiple locations across the state of Tennessee, reaching approximately 180 water system operators. The course will target small community water treatment and distribution system operators and managers and will be directly applicable for use in other states which may choose to adopt this training course without significant modifications. TAUD will train small water system operators and managers: to understand the purpose and objectives of the Stage 2 DBPR and how it applies to their specific system; to identify specific compliance dates that apply to their system; to develop proper applications for VSS Waiver or 40/30 Certification, if applicable; to develop a Standard Monitoring Plan including proper selection of sampling locations and the rationale for their selection; to maintain the required records; to comply with Stage 2 reporting requirements and submittal deadlines; and to develop an Initial Distribution System Evaluation (IDSE) report. Operators who attend this training will gain a better understanding of the purpose and objectives of Stage 2 and will have the specific tools to comply with the Stage 2 DBPR as it applies to their system.

Enhancing Performance of Small Water Systems Through Shared Management

Priority Area: Capacity Development

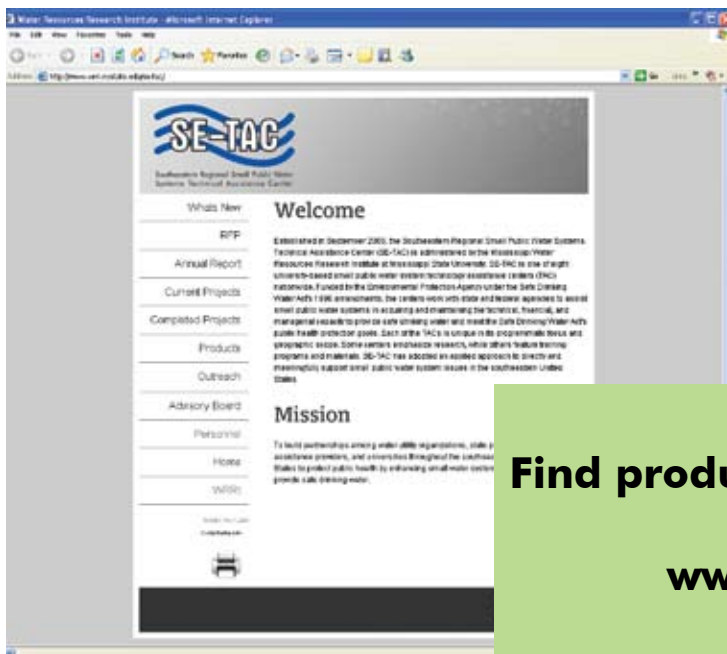
The University of North Carolina Water Resources Research Institute (NCWRI) project will identify opportunities to enhance management capacity for small public water supplies in North Carolina through cooperative arrangements. The project will classify small systems with respect to needed management functions. Geographical clusters of systems with similar management requirements will be identified. Alternative organizational arrangements for shared management of each class of small system will be evaluated as a function of number of systems, sizes, and geographic coverage. A range of incentives that could be adopted to entice individual systems to participate in shared management will be formulated in the context of enabling legislation. The project will produce a white paper and presentation to appropriate decision makers in state and local governments, including North Carolina Department of Environment and Natural Resources, the Environmental Review Commission of the North Carolina General Assembly, and the North Carolina Association of County Commissioners.

converts a water system's current paper maps to digital format. Upon selecting one (1) system to participate in the pilot project, MsRWA will use hand-drawn plans of the water mains, hydrants, valves, meters, tanks, etc. and incorporate the new data into a complete package that is available to water department personnel on the computer or printed out in map format. The GIS will allow management to analyze their system by individual components or comprehensively, depending on their specific needs. By having the most accurate data, GIS/GPS can even be used for more complex problem solving such as hydraulic modeling. The project will prepare a digital map of the entire water system and verify the location of all water services, valves, and water mains with survey-grade GPS equipment. These maps will be highly accurate, as all data will be surveyed to near centimeter accuracy. Handheld GPS equipment will allow operators to read maps, track maintenance records, and get real-time access to archived record maps that are being digitally preserved. The Comprehensive GIS/GPS Conversion Pilot Project will benefit environmental professionals involved in the planning, design, construction, and operation of public water system because the technology allows a water system's geographically referenced data to be determined more precisely.

Comprehensive GIS/GPS Conversion Pilot Project

Priority Area: Technical Assistance

Mississippi Rural Water Association (MsRWA) will utilize GIS/GPS technology to develop a pilot project that



**Find products for your water training needs
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www.wrri.msstate.edu/se-tac**

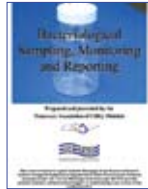
New Products

Training materials, studies and reports, and other resources developed by these and earlier SE-TAC projects are available at www.wrri.msstate.edu/se-tac. The following materials were delivered in 2007:



Utility Board Trainings on Innovative Retention and Recognition Practices for Water Operators. 2007. North Carolina Rural Water Association and the Environmental Finance Center.

Bacteriological Sampling, Monitoring and Reporting. 2007. Tennessee Association of Utility Districts.



Build Your Own Automatic Flushing Valve. 2007. Florida Rural Water Association.



DBP Troubleshooting Guide. 2007. Florida Rural Water Association.

Water Conservation Program Development & Water Loss Report Training for Small Water Systems. 2006. Texas Rural Water Association.

Disinfection By-Products in Florida's Water Systems – Practical Treatment Processes & Techniques for Controlling & Lowering DBPs. 2006. Florida Rural Water Association.

Meetings

Annual SE-TAC Advisory Board meeting
April 17 – 18, 2007. New Orleans, LA.

EPA National Capacity Development Workshop
October 23 – 25, 2007. Denver, CO.

EPA Annual TACnet Planning Meeting
January 30-31, 2007, Washington, DC.

Exhibits

Schmidt, A.M. SE-TAC Exhibit. EPA Capacity National Development Workshop
October 23 – 25, 2007. Denver, CO.

Pote, J.W. and J.A. Ballweber. SE-TAC Exhibit.
EPA TACnet Open House
January 29, 2007, Washington, DC.

Presentations

Ballweber, J.A. TACnet: Leveraging Federal Funding. EPA National Capacity Development Workshop
October 23 – 25, 2007. Denver, CO.

Publications

SE-TAC 6 Year Report, Spring 2007

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For more information on SE-TAC and other technical assistance center programs, visit the EPA Technical Assistance Center Network (TACNet) web site at: <http://water.montana.edu/tacnet>



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