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TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

February 2, 2022

Mr. Jonathan Reynolds, Life Scientist
Drinking Water Section (WD-DD)
US EPA Region 6
1201 Elm Street
Dallas, Texas 75270

Subject: Revised Texas Commission on Environmental Quality's Capacity Development Strategy

Dear Mr. Reynolds:

Enclosed is the revised Texas Commission on Environment Quality's Capacity Development Strategy.

If you have questions or need further information, please contact Dorothy Young at (512) 239- 6064 or Dorothy.young@tceq.texas.gov

Sincerely,

A handwritten signature in black ink, appearing to read "Brittney Wortham-Teakell".

Brittney Wortham-Teakell, Section Manager
Emergency Preparedness and Response Section
Water Supply Division

BWT/DAY

Enclosure

cc: Mr. Javier Balli, EPA, Region 6

Texas Capacity Development Strategy: Building Financial, Managerial and Technical Capacity for Public Water Systems

*Water Supply Division
Texas Commission on Environmental Quality*

Updated January 2022

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Executive Summary

The Texas Commission on Environmental Quality (TCEQ) is the primary state agency authorized to enforce the federal 1996 Amendments to the Safe Drinking Water Act (SDWA). The TCEQ enforces the SDWA through the implementation of state and federal rules and regulations for public water systems.

One of the primary goals of the 1996 Amendments to the SDWA was to focus the country's drinking water programs on protecting public health by preventing problems in drinking water systems. One of the centerpieces was the provision for a Capacity Development Program. The Capacity Development Program requires states to develop a strategy to ensure that all public water systems acquire and/or maintain the financial, managerial and technical (FMT) abilities needed to properly operate, manage, and finance their systems.

The 1996 SDWA Amendments require that each state develop and implement a strategy to help public water systems improve their capacities. Specifically, SDWA §1420(c)(2) requires the State of Texas to consider, solicit public comment on, and include as appropriate the five capacity strategy elements outlined in the SDWA:

- §1420(c)(2)(A): The methods or criteria that the State of Texas will use to identify and prioritize the public water systems most in need of improving FMT capacity.
- §1420(c)(2)(B): A description of the institutional, regulatory, financial, tax, or legal factors at the federal, state, or local level that encourage or impair capacity development.
- §1420(c)(2)(C): A description of how the State of Texas will use the authorities and resources of this title or other means to assist public water systems in complying with national primary drinking water regulations, encourage the development of partnerships between public water systems to enhance the FMT capacity of the systems, and assist public water systems in the training and certification of operators.
- §1420(c)(2)(D): A description of how the State of Texas will establish a baseline and measure improvements in capacity with respect to National Primary Drinking Water Regulations and state drinking water laws.
- §1420(c)(2)(E): An identification of the persons that have an interest in and are involved in the development and implementation of the capacity development strategy (including all appropriate agencies of federal, state, and local governments, private and nonprofit public water systems, and public water system customers).

In addition, America's Water Infrastructure Act of 2018 (AWIA) amended this section of the SDWA to include:

- §1420(c)(2)(F): A description of how the state will, as appropriate, encourage the development by public water systems of asset management plans that include best practices for asset management; and assist, including through the provision of technical assistance, public water systems in training operators or other relevant and appropriate persons in implementing such asset management plans.

Background

The 1996 Amendments to the SDWA made significant contributions to the national drinking water agenda. One of these was the introduction of capacity development programs that recognized the importance of creating and maintaining viable public water systems.

Implementation of capacity development programs provided a framework for both states and federal governments to work with public water systems to ensure they acquire and maintain necessary financial, managerial, and technical “capacity.”

This capacity can provide public water systems with the knowledge and resources to meet the public health goals of the SDWA, while providing customers with reliable and affordable water service. As part of the amendments to the SDWA, states were required to submit capacity development strategies to the United States Environmental Protection Agency (EPA). These strategies explain how the states addressed FMT issues for new and existing public water systems.

The EPA approved the TCEQ’s Capacity Development Strategy for new and existing water systems on July 16, 1999 and July 6, 2000, respectively. This approval made Texas eligible for the SDWA’s Drinking Water State Revolving Fund (DWSRF) grant funds. The DWSRF grant program provides loan funds for water system improvements through the Texas Water Development Board (TWDB). Set-asides from the DWSRF grant help support the Texas drinking water program at TCEQ, which includes capacity development. To meet the requirements of SDWA Section 1420(a), TCEQ must document that it has implemented a functional Capacity Development Program for new systems. This program must include:

- A basis of authority;
- Control points for the execution of authority; and
- A plan or strategy for program implementation and evaluation.

Basis of Authority and Control Points

The EPA grants the TCEQ authority as the state primacy agency for drinking water quality through state laws, regulations, and policies. The TCEQ exercises its authority to ensure public water systems have adequate capacity are through control points. These control points include facility plan review, operator certification, construction requirements, source water protection plans, and system planning requirements.

In 2013, the Texas legislature passed House Bill (HB) 1600, which transferred the water and wastewater utility regulatory program from the TCEQ to the Public Utility Commission (PUC), effective September 1, 2014. The TCEQ kept primacy of the public drinking water programs, including capacity development.

Until 2014, the TCEQ used two sets of control points: one was through the public drinking water program, and the other was through the water utility rates and services program.

Since 2014, the PUC and TCEQ have continued to coordinate the work on the two control point reviews. Using a Memorandum of Understanding as guidance, the two agencies meet monthly and communicate frequently. The TCEQ oversees control points for new public water systems and the PUC has oversight of control points over new water and wastewater utilities.

The goal of the control points for new systems is to prevent non-viable systems from coming into existence and to assure that new systems are developed so that they have the capacities to operate successfully.

In addition to submitting plans and specifications, the TCEQ's control points include requiring new public water systems to:

- Apply for service from adjacent public water systems and provide written documentation of those applications and responses; and
- Submit a business plan that documents the financial ability to construct the system according to TCEQ requirements.

More specifically, all new public water systems must evaluate the feasibility of regionalization before submitting plans, specifications, and a business plan to the TCEQ. The TCEQ's policy is that regionalization is feasible unless one of these three exceptions applies:

- There are no public water systems within ½ mile.
- Service has been requested from a neighboring utility and the request has been denied.
- If the nearby system approved the request for service, a proposed public water system must successfully demonstrate that an exception based on costs, affordable rates, and financial, managerial, and technical capabilities of the proposed system should be granted. The exception must be approved prior to submitting plans, specifications, and the business plan.

To receive an exception to the requirement to obtain service from a neighboring utility within ½ mile, the water system's licensed professional engineer prepares a report with cost estimates comparing the cost of constructing and operating a new standalone water system versus connecting to an existing water service provider. As part of the cost comparison, annual operating and purchased water expenses are evaluated over a five-year time frame and are reviewed by TCEQ when a proposed privately-owned public water system does not want to connect to an existing retail provider within ½ mile that is willing to extend service.

The requirement in 30 TAC §290.39(f) for the submission of Business Plans applies to new public water systems and the financial assurance is provided by the information required to be within the business plan. Business plans for new community public water systems must include:

- an operations and maintenance plan
- assurances that the commitments and resources needed for proper operation and maintenance of the system are, and will continue to be, available.

For retail public utilities as defined by Texas Water Code (TWC) §13.002, there are requirements for projected rate revenue and pro forma income, expense, and cash flow statements and the identification of any appropriate financial assurance.

Another control point for a certain type of new public water systems is the District Creation Process. The legislature, TCEQ, and county commissioners' courts can create various types of water districts. A creation application for a water district submitted to TCEQ includes, but is not limited to, a preliminary engineering report which includes a plat; a land use plan; and effects on land elevation, subsidence, groundwater levels and recharge, natural drainage, and water quality; and a market study with population, cost, and tax projections. After a district creation application is approved by TCEQ, the district must hold a confirmation election. Water districts must also obtain all required permits, authorizations, and licenses needed to operate their water, wastewater, and drainage systems. Following the completion of a successful confirmation election, a district will typically begin construction of infrastructure and improvements.

The PUC's control points include requiring water and wastewater utilities that are seeking approval to obtain a new or amend an existing water or sewer Certificates of Convenience and Necessity (CCN), or to acquire a utility, to submit FMT information for review and approval. This review is to confirm that the utility has the FMT capacities to provide continuous and adequate service to the requested area and ensures mapping and notice requirements are met.

The TCEQ and PUC coordinate data, submittal information, application, and approval status of new systems and new CCN applications monthly at coordination meetings between the two agencies. Staff in the two agencies also works together as needed outside of the monthly meetings, to track new systems and help prevent low-capacity systems from being developed.

The State of Texas evaluates the implementation and effectiveness of the new system strategies by analyzing the compliance status of new systems that were approved for construction and/or granted a CCN. Compliance data on new public water systems are included in the annual TCEQ capacity development reports.

New system data is also used to provide outreach and compliance assistance to these systems. Newly formed or discovered water system owners are sent letters by TCEQ offering FMT assistance on how to properly run the system and are provided information on relevant rules and regulations, where to find information and resources, and to help determine if any additional assistance would benefit the system. Assignments for this assistance are made through the FMT contract on a routine basis. This is another method to help track new systems and ensure they build a solid foundation for maintaining compliance.

At the time of the writing of this updated strategy, TCEQ regulates approximately 7,054 public water systems that provide drinking water to 29,634,875 customers. Of these customers, approximately:

- 4,633 community water systems provide service to 28,832,321 customers;

- 874 non-transient non-community water systems serve 502,603 customers; and
- 1,547 transient non-community water systems serve 299,951 customers.

FY 2021 Public Water System Classifications and Populations Served

EPA Classification	Population Range	Number of Public Water Systems	Population Served
Very Small	25 - 500	4,213	678,574
Small	501 - 3,300	1,757	2,588,644
Medium	3,301 - 10,000	716	4,068,311
Large	10,001 - 100,000	326	8,224,332
Very Large	Over 100,000	42	14,075,014
Total		7,054	29,634,875

To meet the requirements of the SDWA, Section 1420, TCEQ provides documentation showing the on-going implementation of the TCEQ’s Capacity Development Strategy on an annual basis to the EPA and through the triennial Governor’s Report on Capacity Development.

Capacity Development Strategy

The TCEQ’s Capacity Development Strategy (CDS) is designed to promote the viability of public water systems by developing public water systems’ FMT capacity to meet both federal and state drinking water rules and regulations. The CDS is based on the key components in the SDWA and the programs and activities to support those components. TCEQ is dedicated to making continuous improvements to existing programs and activities to support public water systems and development of new programs and activities as needed.

The four main objectives of the TCEQ’s Capacity Development Program are:

- Ensuring that new systems have adequate FMT capacity prior to commencing operations;
- Assessing the FMT capacity of existing systems;
- Improving the FMT capacity of existing systems; and
- Assisting systems with inadequate FMT capacity, or any other interested systems in restructuring.

These objectives encompass the program elements listed in §1420(c)(2)(A-F) and provide the key components of capacity development programs and activities. To implement the objectives to assess, assist, and restructure through a variety of activities, the TCEQ currently:

- Oversees the production, treatment, and quality of drinking water for the public by implementation of the SDWA;
- Provides free on-site assistance and training to water systems both through the
 - Texas Optimization Program (TOP), which provides advanced technical assistance, operator training, and treatment plant optimization strategies for public water systems, and
 - FMT Assistance Contract;
- Oversees monitoring and compliance determinations for chemical and microbiological drinking water standards for the protection of public health;
- Provides third-party sample collection to help ensure accurate data for determining compliance;
- Reviews engineering plans and specifications for public water system improvements including the approval of facilities to treat drinking water, and evaluates innovative and non-standard drinking water treatment technologies;
- Identifies and assists public water systems that need restructuring, funding, and other assistance;
- Assesses source water vulnerability of drinking water sources and provides support to help public water systems protect source waters;
- Supports the DWSRF grant set-aside programs by ranking proposed projects and preparing reports on capacity of applicants applying for Texas Water Development Board (TWDB) funding;
- Assists public water systems with Homeland Security activities and training to effectively respond to and recover from disasters or other types of events that could potentially impact the safety of the water supply;
- Reviews Emergency Preparedness Plans to increase public water system resiliency;
- Administers the Cross-Connection Control Program which assists public water systems with protecting drinking water supplies from contamination;
- Maintains the Texas Drinking Water Watch database to provide information to the public about the quality of local drinking water and ensures public water systems deliver a Consumer Confidence Report, also known as an annual drinking water quality report, to customers;
- Reviews applications for district creation and district bond issues;
- Hosts the annual Public Drinking Water Conference and quarterly Drinking Water Advisory Workgroup (DWAAG) meetings for training, guidance, and stakeholder input concerning drinking water issues;

- Conducts Comprehensive Compliance Investigations (CCI) and complaint investigations to assess facilities and operations;
- Coordinates with state and federal funding, regulatory and assistance providers to assist water systems find funding and other assistance; and
- Develops operation training materials, manages the operator licensing program, and works to address workforce issues.

TCEQ routinely identifies people who have an interest in and are involved in the development of the CDS. This includes all appropriate agencies of federal, state, and local governments, private and nonprofit public water systems, and public water system customers as required by §1420(c)(2)(E): Groups that have an interest in and are involved in capacity development include:

- Public water system owners, boards of directors, managers, operators, consultants, and customers;
- EPA;
- PUC;
- TWDB;
- Other state and federal funding agencies including North American Development Bank (NADB), United States Department of Agriculture Rural Development (USDA RD), Texas Department of Agriculture (TDA), General Land Office (GLO);
- FMT assistance providers including TRWA, CU, Texas AWWA, and the EFCN and affiliate members such as the SWEFC;
- Trade organizations including Texas AWWA, TRWA, Texas Water Utilities Association (TWUA), Texas Water Conservation Association (TWCA), and the Independent Water and Sewer Companies of Texas (IWSCOT);
- Operator training providers including Texas A & M Engineering Extension Service, TWUA, and TRWA;
- Stakeholder and workgroups such as the TCEQ Drinking Water Advisory Workgroup DWAAG and the Texas Water Infrastructure Coordination Committee (TWICC);
- University programs such as the University of Texas Bureau of Economic Geology and the Texas A & M Water Research Institute;
- Emergency response groups such as Texas Department of Emergency Management (TDEM), Texas Water/Wastewater Agency Response Network (TXWARN) and the Texas Natural Disaster Operational Workgroup (NDOW); and
- Legal aid, environmental and advocacy organizations.

Asset Management in Texas

The 2018 America's Water Infrastructure Act (AWIA), Section 2012, requires state drinking water programs to consider, and include as appropriate, asset management into their state capacity development strategies. Asset management is a best practice for public water systems to improve service and long-term sustainability and compliance. Including asset management in the CDS enhances the scope of the strategy and encompasses activities that promote the FMT capacities of water systems.

The asset management framework, which consists of five core questions, guides public water systems through the process of developing an asset management plan. The core questions encourage public water systems to follow asset management best practices which are designed to improve utility operations. They are a good starting point for both large and small systems. They walk public water systems through all major activities that are associated with asset management and implementation can be tailored to the system. The five core questions are:

- What is the current state of the utility's assets?
- What is the utility's required "sustainable" level-of-service?
- Which assets are critical to sustained performance?
- What are the utility's best "minimum life-cycle cost" capital improvement plan and operations and maintenance strategies?
- What is the utility's best long-term financing strategy?

Public water systems can use the five elements of asset management to improve current operations and to plan for funding, operational, and infrastructure needs in the future. The state will use the five core questions to emphasize the comprehensive approach of asset management and how these questions walk a system through logical and effective planning and implementation steps. The process of addressing and answering each core question provides a water system a solid foundation to increase their FMT capabilities.

The core component that is often the most difficult, particularly for small systems, is the determination of the "minimum life-cycle cost" for the capital improvement plan and development of robust operations and maintenance strategies. Increased promotion of asset management training, outreach and implementation, and additional management and financial training for decision makers and planners will strengthen this component.

Texas promotes the practice of asset management and the development and use of asset management plans through outreach, training, assistance, and implementation by state and federal regulatory and funding agencies, assistance providers, trade organizations and operator training providers. Activities include:

- Free on-site technical assistance and training to develop and implement asset management plans including TCEQ's FMT Assistance contractors, TCEQ's Small Business

and Local Government Assistance (SBLGA) program, and other assistance providers like Communities Unlimited (CU) and Southwest Environmental Finance Center (SWEFC);

- The TWDB Asset Management Program for Small Systems (AMPSS) which contracts with engineering firms and others to provide in-depth asset management assistance and develops asset management plans for small systems;
- Promotion of asset management plan development by funding agencies, like TWDB and USDA, who encourage asset management to be included as part of proposed projects;
- Giving priority ranking of projects for entities with existing asset management plans by funding agencies including the TWDB;
- Free in-person and webinar-based workshops and presentations on asset management at conferences and seminars including the annual TCEQ Public Drinking Water Conference and workshops by the Environmental Finance Center Network (EFCN) and affiliates, Rural Community Assistance Partnership (RCAP), EPA and TCEQ's SBLGA.;
- Pilot projects by assistance providers like CU and Texas Rural Water Association (TRWA) promoting asset management through mentor programs and system-to-system training to expand outreach and trainers; and
- Developing and providing free templates, outlines, and other asset management planning tools and resources for water systems like the SBLGA asset management worksheet and spreadsheet templates and on-line videos of workshops.

These revisions to the CDS update the previous version of the strategy to comply with AWIA requirements. By including the new asset management requirements into the State of Texas's CDS, there will be a clear recognition of the importance of asset management in current and future planning and activities as well as information on asset management initiatives around the State. In addition, asset management activities will be addressed in future Governor's Reports on Capacity Development.

The State of Texas encourages the development by public water systems of asset management plans that include best practices for asset management, and assist, including through the provision of technical assistance, public water systems in training operators or other relevant appropriate persons in implementing such asset management plans as required by §1420(c)(2)(F). Activities used to encourage asset management include providing training and workshops on asset management, developing and disseminating asset management materials including templates, workbooks, and other tools; making presentation on asset management at workshops and conferences and incorporating asset management into assistance and assessment assignments and infrastructure projects.

In addition to TCEQ's asset management work, partner organizations and stakeholders offer additional asset management opportunities and resources that water systems in Texas can use. These include asset management training and technical assistance under the EPA-funded small systems training and technical assistance grants currently funded for TRWA, CU, and the SWEFC; training and technical assistance by EFCN, EPA, and RCAP; the Asset Management Switchboard (swefcamswitchboard.unm.edu/); and virtual trainings on asset management from a variety of providers.

Barriers to adopting asset management activities currently or in the future may include limited resources to adequately reach all systems needing assistance. However, Texas will continue to work together with partner agencies and organizations as well as the regulated community, to increase outreach, resources, and implementation.

Stakeholder Input

The original CDS process included stakeholder meetings to receive input from various members of the drinking water community to establish the documents approved in 1999 and 2000 in conjunction with §1420(c)(2)(E) to identify people that have an interest in and are involved in the CDS. As part of the process to make updates to the CDS strategy, specifically to include state-wide asset management activities, TCEQ held a stakeholder meeting on April 6, 2021 as recommended by EPA. The stakeholder meeting focused on addressing the inclusion of asset management activities in the CDS as required by AWIA.

The meeting was facilitated by staff from the Southwest Environmental Finance Center (SWEFC). Participants included EPA Region 6, Texas Section of American Water Works Association (Texas AWWA), TRWA, TCEQ's SBLGA and WSD, TDA, TWDB, Texas A & M, CU, USDA RD, NADB, and Lone Star Legal Aid.

Small group breakout discussions centered around:

- Identifying and prioritizing systems in need of assistance;
- How to measure capacity improvement;
- Barriers in implementing asset management assistance and its five core components; and
- Activities that different organizations are doing to:
 - Provide assistance with regulatory compliance;
 - Promote and implement asset management;
 - Encourage and implement partnership and regionalization; and
 - Address workforce issues including operator training and certification.

Stakeholder input was used to increase the awareness and utilization of existing and new activities that promote asset management which informed the language of the revised strategy. Stakeholder input was also valuable to get insight into what other agencies and organizations see as strengths and weaknesses in implementation of asset management along with other capacity development activities. Stakeholder input has been incorporated into these revisions.

The group concurred that asset management is a very effective tool for water systems. Asset management lays the foundation for water systems to use more informed decision making. This decision making includes analyzing inventory and useful life data to plan and pay for future repairs and replacements. Asset management walks a system through steps to increase and maintain resiliency and sustainability. The group also agreed it can be challenging,

particularly for small, struggling systems to find the impetus and resources to start the process of asset management planning. The group concurred on the need for continued outreach and hands-on assistance by new and existing partners to get more public water systems informed of, and participating in, asset management practices in their communities.

Program Elements and TCEQ Activities

TCEQ uses a wide variety of activities to identify and prioritize public water systems most in need of improving FMT activities as required by §1420(c)(2)(A)¹. TCEQ recognizes that there are a myriad of different issues that can impact a system's FMT capabilities. Issues can range from naturally occurring water quality challenges to finding and retaining qualified staff, to responding to emergencies and keeping up with new rules and regulations. Consequently, TCEQ uses diverse methods to identify and prioritize systems including:

- Identifying, monitoring, and tracking systems with water quality concerns including violations or other enforcement actions;
- Tracking systems in enforcement to see if they are complying with their technical requirements to achieve compliance with a TCEQ Order;
- Assessing DWSRF applicants by assigning contractors to conduct on-site FMT assessments, reviewing their compliance history and current status, and confirming the effectiveness of their proposed projects to address their compliance issues;
- Monitoring and tracking systems that meet various regulatory triggers including those related to the review of Surface Water Monthly Operating Reports (SWMORs), Revised Total Coliform Rule (RCTR), Mandatory Compliance Performance Evaluations (MCPE), lead and copper rule, and boil water notices;
- Identifying systems that lack basic FMT capabilities like licensed operators, adequate treatment facilities, and appropriate sampling/monitoring methods, all of which in turn impact day-to-day operations, compliance, and long-term viability;
- Monitoring and tracking systems that make direct requests to TCEQ for FMT assistance or are referred by other agencies or entities to determine if those systems need further assistance;
- Analyzing and compiling the names of systems that will be affected by new or upcoming rules and regulations and providing outreach and regulatory guidance to those systems;
- Identifying and tracking systems that are vulnerable to water quality or water quantity issues, including emerging contaminants of concern due to their location and/or circumstances; and
- Frequent communication with systems impacted by man-made or natural disasters, including tracking those systems for continued monitoring and assistance.

¹ The text of 1420(C)(2) can be found on page 1.

The following list includes institutional, regulatory, financial, tax, or legal factors at the federal, state or local level that encourage or impair capacity development as required by §1420(c)(2)(B).

- Factors that encourage capacity development include:
 - Providing free on-site FMT assistance and consolidation assessments and training by TCEQ staff and contractors as well as other assistance providers and trade organizations;
 - Increased on-site focused assistance by highly trained TCEQ TOP staff that includes follow up visits and training as needed, as well as providing TOP-developed training modules and regulatory guidance to address new areas of concern;
 - Outreach, education, and input from the drinking water community through on-going stakeholder groups like the Drinking Water Advisory Workgroup, the Cross-Connection Control Subcommittee and the Water Utility Operator Licensing Committee;
 - Availability of funding from various agencies and organizations for planning and infrastructure in the forms of both grants and loans, some funding is specifically targeted to small, disadvantaged communities struggling with compliance issues;
 - Increased emphasis on the importance of asset management through the expansion of resources and activities to implement asset management plans, including workshops, on-site assistance and free templates;
 - Increased availability of guidance documents and other regulatory information for operators and managers targeted to specific issues and new rules and regulations; and
 - Increased accessibility for operators to receive initial training, continuing education, testing, and certification through expanded availability of related resources in Spanish, through virtual platforms, expanded technology, and the amount and location of in-person classes.
- Factors that impair capacity development include:
 - Increased regulatory requirements that can be challenging for all water systems, but particularly small ones;
 - Competing priorities for water system managers and operators who may also be managing other programs like roads and law enforcement;
 - Lack of small loans and grants for operations and maintenance and other needs outside of infrastructure projects;
 - Inadequate understanding of the importance of implementation of asset management practices to plan and pay for resiliency, particularly at small systems;
 - Insufficient knowledge by managers and customers of the value of water and the necessary financial support required to adequately treat and deliver safe drinking water;
 - Challenges providing adequate water quality and quantity, including naturally occurring and man-made contamination, droughts, floods, and other emergencies;

- Lack of workforce capacity as operators reach retirement and/or movement to competing industries that lure operators away with higher salaries; and
- Changes in demographics, extreme growth in some areas which strains existing infrastructure and capacity and loss of population in other areas, which results in increased water age and resulting issues as well as reduced revenue.

The State of Texas uses authorities and resources in §1420(c)(2)(C) and other means to assist public systems in complying with NPDWR by:

- Using public health and compliance factors, including national primary drinking water standards for priority ranking of DWSRF loan applicants to target the systems with most serious water quality issues, as well as critical physical deficiencies like lack of disinfection, outages, inadequate capacity, and low pressure;
- Implementing compliance initiatives like the National Compliance Initiatives and the pre-enforcement tracking and assistance program to monitor and assist systems in violation of federal drinking water standards;
- Providing information to funding agencies regarding systems with MCL violations and other compliance issues to help direct financial assistance to those systems;
- Providing information to assistance providers regarding systems with MCL violations and other compliance issues to help the assistance providers direct training and assistance for those systems;
- Adapting and changing DWSRF funding programs to target systems with particular challenges like MCL violations, small size, and the need to implement new regulations like Emergency Preparedness Plans (EPP); and
- Providing outreach, regulatory guidance, on-site assistance, and training for water systems with violations.

The State of Texas encourages the development of partnerships between public water systems to enhance the FMT capacity of systems as required by §1420(c)(2)(C) by:

- Encouraging implementation of regional projects by assigning additional points for various levels of consolidations in the ranking of DWSRF projects for funding;
- Requiring entities considering development of a new public water system to assess and apply for service from existing providers;
- Recommending regionalization and other partnerships to systems looking at options to restructure, address compliance issues, develop resiliency and prepare emergency response plans;
- Providing free on-site consolidation assessments through the FMT Assistance Contract to help systems investigate opportunities for regionalization, new ownership, restructuring, or other partnerships;
- Encouraging participation in mutual aid programs like TXWARN to develop critical partnerships for assistance with staff, operations, and equipment during natural disasters and other emergencies;
- Acknowledging partnerships between water systems through the Water Partners: Water Systems Helping Water System Award Program;

- Facilitating meetings between water systems and potential partners who can provide assistance with funding; and
- Promoting partnerships between public water systems through workshops, presentations, and on-site assistance that can include consolidation assessments, community meetings, and help with regulatory questions.

The State of Texas assists public water systems in the training and certification of operators as required by §1420(c)(2)(C) by:

- Providing training, conferences, and workshops for operators by TCEQ and trade organizations, specialized training providers, and assistance providers;
- Increasing the accessibility of operator training and testing through expanded technology, languages, providers, and availability;
- Developing and implementing new training programs as new rules and regulations are promulgated and new issues and challenges are identified;
- Partnering with high schools and colleges to include water operator training in their curriculum;
- Increasing the provision of train-the-trainer events to enhance effectiveness of training providers and provide the most up-to-date information in their operator training;
- Working with partners such as funding agencies, training providers, trade organizations, and assistance providers to develop pilot and innovative workforce programs;
- Conducting specialized optimization programs, including voluntary and mandatory performance evaluations, to enhance operators' knowledge and abilities;
- Consulting as frequently as necessary with public water system operators and managers on topics including public notices, sampling, treatment, backflow issues, and rule implementation;
- Implementing pre-enforcement and compliance initiative efforts to help operators stay in compliance and receive targeted on-site assistance as needed;
- Providing education and outreach on emergency planning requirements and implementation, the importance of mutual aid partnerships, and response and resiliency best practices;
- Monitoring and assisting public water systems affected by hurricanes, drought, power outages, and other emergencies;
- Increasing focus on data integrity and process control and training for distribution system operations to help operators better understand the importance of accurate data and how to use it to diagnose issues; and
- Making presentations at operator trade organization meetings and conferences, increasing the number of hands-on workshops for operators, and including training with operator credit at conferences and workshops.

Water System Assistance and Optimization

Texas has long understood the importance of providing many levels of FMT assistance for water systems. TCEQ has been innovative in identifying needs and addressing issues that face water systems on a daily basis and during emergencies. TCEQ uses a variety of methods and programs to provide assistance and optimization from daily outreach and assistance by staff to managing contracts assisting in sample collection, provide source water assessments, and free on-site assistance. TCEQ also has nationally recognized optimization and engineering staff that conduct in-depth assistance directly with water systems.

Financial, Managerial, and Technical Assistance Contract

For a number of years, TCEQ has contracted with the TRWA to provide free on-site assistance, assessment, and training for public water systems in Texas. The contract staff have backgrounds in water system operations and various specialties, including operator training, surface water plant assessment, financial planning, and asset management. This contract provides systems a vital resource to help them assess and improve their FMT capacities and help systems restructure through management or ownership changes or regional projects as needed. Referrals for FMT assistance come from TCEQ staff, systems themselves, and other agencies.

The FMT Assistance Contract works to improve the FMT capabilities of public water and wastewater systems through five primary objectives:

- FMT Capacity Assessments;
- Consolidation Assessments;
- FMT On-Site Assistance;
- Drinking Water Operator Training (DWOT); and
- Special Assistance.

FMT Capacity Assessments are required for water systems applying for DWSRF funding from the TWDB. The assessment outlines a public water system's strengths and identifies areas in need of improvement. The FMT Assistance contractor meets with the public water system's staff to evaluate the FMT capabilities of the system. Free on-site assistance is offered following this assessment to help the system meet or maintain regulatory compliance.

Consolidation Assessments provide a resource for struggling systems to solve long-running problems through restructuring. The assessments can include examining options to consolidate with a neighboring system, looking for a buyer, or turning the system over to the customers and helping them form a water supply corporation.

FMT On-site Assistance provides free, one-on-one, on-site support and education on a wide variety of topics to improve public drinking water and wastewater systems. If a system is

experiencing operational difficulties, for example, assistance could help to avoid regulatory compliance violations.

Drinking Water Operator Trainings (DWOT), including Directed Assistance Modules (DAMs), are training materials designed to enhance public water system operators' knowledge on highly technical topics. Water Supply Division staff train FMT Assistance contractors on how to deliver this training to public water system staff.

Special Assistance assignments do not fall into one of the previous four types of assistance. For example, TCEQ staff may issue a special assignment to help coordinate a meeting between a troubled water system, the community it serves, and TCEQ staff. Special Assignments are also used to facilitate training workshops.

On-Site Assistance and Optimization

The TOP team was established to improve the performance of water treatment plants to minimize the risk of waterborne disease outbreaks. The TOP team is designed to assist public water systems as they implement effective corrective actions to address performance limiting factors and to create and provide basic, intermediate, and advanced-level training.

TOP has developed advanced tools, processes, and training to assist troubled public water systems (PWSs) with issues relating to design, operation, treatment, and administrative capabilities of drinking water plants and distribution systems.

The TOP team provides extensive on-site assistance to public water systems facing water outages, backflow events, and other serious issues. The TOP team has made important contributions to the capacity development of many public water systems by improving their ability to produce and distribute safe drinking water. One of the ways this is accomplished is through Comprehensive Performance Evaluations and Special Performance Evaluations.

A Comprehensive Performance Evaluation (CPE) is an in-depth investigation, including special scientific studies of the design, operations, maintenance, and administrative factors that limit the performance of a surface water treatment plant to remove potential pathogens during the process of treating surface water for potable use. A Corrective Action Plan (CAP) is developed as part of this process to address the limiting factors. A Special Performance Evaluation (SPE) is an investigation of the design, operation, maintenance, and administrative components of a surface water treatment plant that affect the removal of potential pathogens during the process of treating surface water to produce potable water. An SPE does not include identification of performance-limiting factors nor the development of a CAP.

Cross-Connection Control

TCEQ Water Supply Division staff members assist public water systems with protecting their potable water supply by providing guidance on complying with the TCEQ's backflow prevention regulations. Staff activities include:

- Technical presentations on cross-connection control and backflow prevention;
- Assistance to water systems during backflow events;
- Training for water system staff on establishing and managing an effective cross-connection control program;
- Providing presentations and technical assistance at the annual TCEQ Public Drinking Water Conference;
- Participation in TCEQ public water system investigator training events;
- Updating regulatory guidance documents; and
- Facilitation of the TCEQ's Cross-Connection Control Subcommittee.

Regionalization and Restructuring: At-Risk Systems, Receiverships, and Temporary Management

The TCEQ identifies, assists, and helps restructure at-risk or failing public water systems to help them return to compliance and provide customers with reliable water service. Restructuring assistance can include a FMT contractor consolidation assessment and assistance, staff outreach, and coordination with various programs and entities to identify short-term and long-term solutions. This can include coordinating discussions with TCEQ plan review staff, and state and federal regulatory and funding agencies. Staff provide assistance by advising entities on possible regional options as well as other restructuring options such as customers forming a water supply corporation, finding a new owner, or merging with a neighboring entity. Staff and contractors organize and participate in community meetings and include other relevant parties such as funding agencies and assistance providers. Criteria that determine when a system is considered “at-risk” include one or more of the following:

- Frequent outages and low-pressure events;
- Lack of disinfection or disinfection equipment;
- Non-payment of electricity bills that threaten water system operations;
- Other public health threats - e.g., contamination events;
- Abandonment by the owner or board of directors resulting in no one managing day-to-day operations;
- Multiple compliance issues that remain unresolved and pose public health threats;
- Dwindling or loss of water source; and/or
- Gross mismanagement that results in lack of staff and/or service continuity.

Receiverships and Temporary Management

Voluntary restructuring is always the preferred method to get an at-risk or non-compliant system under new management. However, sometimes the situations of the at-risk systems are grave enough that traditional assistance such as a consolidation assessment does not work. In those cases, more formal restructuring through enforcement and the appointment of temporary managers or receivers is required. When immediate management is necessary to

restore service, TCEQ has the authority to appoint a temporary manager for short-term relief (TWC Sections 5.507 and 13.4132). The system can also be referred to the Office of Attorney General for the appointment of a receiver (TWC Section 13.412).

TCEQ and PUC work closely together on these types of issues and cases. Temporary management and receivership are used as a last resort action to prevent water outages or other threats to public.

Baseline Water Quality Measures

The State of Texas establishes a baseline and measures improvement in capacity with respect to NPDWR and state drinking water regulations as required by §1420(c)(2)(D) by tracking water systems using the following parameters:

- At-risk status;
- Requests for assistance;
- Regulatory triggers;
- Comprehensive Compliance Investigations;
- Complaint investigations;
- Enforcement status;
- On-site assessments;
- Responses to emergencies; and
- Referrals from other agencies and organizations.

This information is used to analyze trends in compliance, provide data in various reports required by EPA, respond to information requests and to target assistance.

- Texas measures improvements in systems by determining:
 - The percent of the Texas population served by public water systems that meet drinking water standards;
 - The number of public drinking water systems that meet primary drinking water standards;
 - Increases in the number of systems in compliance with both state and federal rules and regulations;
 - The number of systems meeting monitoring, and reporting requirements;
 - The number of systems that don't become at-risk and remain financially and managerially stable;
 - The number of systems that are part of optimization, source water protection, and recognition programs; and
 - The number of systems removed from receivership, temporary managership or the at-risk list through restructuring, funding, assistance, or regionalization.

Some baselines, successes, and improvements are hard to measure. It is difficult to quantify the number of new public water systems that did not come into existence because they applied for service from a neighboring provider instead of starting their own, potentially non-compliant system. Likewise, it is hard to determine the number of systems that did not become noncompliant because they received FMT assistance. Therefore, the positive measures above are used to demonstrate success.

Challenges in Drinking Water

Small System Challenges

All public water systems face challenges, but these challenges can be particularly daunting for small systems. Small systems often have trouble supplying water of adequate quality and quantity because of the difficulty for them to develop or access the FMT resources needed to comply with the increasing number and complexity of regulations as well as rising customer expectations. A small customer base and the lack of expertise often make it more challenging to effectively operate and maintain their systems. The problems are compounded by the fact that the customers of these systems are often on low or fixed incomes and cannot afford to collectively contribute to the projects needed to improve service.

Texas continues to see challenges for all public water systems, their customers, and the agencies that regulate and assist them. These challenges include:

- Planning for and implementing resiliency strategies;
- Identifying and training operators who need increased expertise to operate new treatment technologies;
- Educating water systems on emerging water quality issues;
- Assisting with identifying affordable funding for projects other than infrastructure;
- Assisting water systems with new rules and regulations;
- Educating water system decision-makers on:
 - Their roles and responsibilities;
 - How to assess the true cost of water;
 - The benefits of regionalization and other partnerships;
 - The need for adequate rates and financial management;
 - The importance of hiring, retaining, paying, and training competent operators; and
 - The importance of asset management for viability and resiliency.
- Addressing workforce issues including finding, training, and retaining operators;
- Planning for, responding to, and recovering from emergencies; and
- Monitoring and restructuring at-risk systems facing FMT obstacles.

Drinking Water State Revolving Fund

The TCEQ and the TWDB both have programs associated with the DWSRF. TWDB administers the DWSRF loan program. The objectives of the loan program are to address public health priorities, achieve compliance with the SDWA, assist systems in providing affordable drinking water, and maintain the long-term viability of the fund.

To support the loan program, TCEQ works closely with TWDB on DWSRF projects by ranking the projects based on certain criteria used to determine the system's needs, promoting and educating entities about the DWSRF program, researching and writing applicant FMT reports, attending pre-application meetings, reviewing plans and exception requests, planning and conducting needs assessments, participating in monthly coordination meetings, and administering set-asides. The Drinking Water Infrastructure Needs Survey and Assessment, conducted every four years, requires extensive staff time between the two agencies and is essential in providing data to EPA and Congress to substantiate Texas funding needs.

DWSRF Set-Asides

The DWSRF set-aside program is outlined in Section 1452 of the SDWA, which authorizes states to use a portion of the Federal Capitalization Grant to set-aside funds to support various drinking water programs. As much as 31% of a State's Federal Capitalization Grant can be used for a combination of Administrative Activities (4%), Technical Assistance (2%), State Program Management (10%), and Local Assistance (15%). The set-asides provide important funding for capacity development activities.

Training and Coordination

Annual Public Drinking Water Conference

Every August since 2003, TCEQ has held an Annual Public Drinking Water Conference. This popular, free conference has grown to reach more than 1,000 attendees a year. Participants include water system operators and managers, TCEQ staff, other state and federal agencies, exhibitors, speakers, laboratory professionals, and engineers from across the state. Each year the focus is different, but routinely there are updates on rules and regulations and presentations and workshops on pertinent topics such as the RTRC, lead and copper rule, chloramines, cross-connection control, corrosivity, asset management, optimization, funding, and source water protection. Operators can get continuing education credits for attending the conference which encourages participation and reduces the operators' training costs.

Drinking Water Advisory Workgroup (DWAAG)

The purpose of the Drinking Water Advisory Workgroup (DWAAG) is to promote transparency by sharing information with PWSS program stakeholders and to ensure that stakeholders are an integral part of the planning and evaluation of TCEQ's rule and business processes. The

DWA WG provides a mechanism to allow stakeholders to aid in TCEQ's efforts to work through different drinking water topics or issues as well as provide a forum for TCEQ to identify updates affecting the PWSS program.

TCEQ's Water Supply Division hosts quarterly DWA WG meetings to promote communication between TCEQ and the drinking water community and provide updates on new rules, regulations, and resources to help water systems improve their FMT capabilities. DWA WG meetings also serves as an on-going opportunity for stakeholder input and a chance to exchange information and concerns. Participation in DWA WG is open to the public and there are no pre-requisites for attending the quarterly meetings. Regular DWA WG participants include members of the regulated community, TCEQ and other state agencies, assistance providers, and trade organizations. Each meeting includes updates from different sections in the Water Supply Division and other areas of the TCEQ including operator licensing and the Office of Compliance and Enforcement. The Water Supply Division also occasionally hosts a DWA WG special advisory workgroup for laboratory stakeholders to address microbial monitoring and analysis roles and responsibilities, operator and laboratory requirements, and electronic reporting

Texas Water Infrastructure Coordination Committee (TWICC)

TWICC provides a "one-stop-shop" for funding and other assistance for water and wastewater providers. TWICC members include representatives from TDA, USDA RD, Texas AWWA, NADB, CU, GLO, TDEM, FEMA and TRWA. TWICC holds meetings every other month with members taking turns hosting. Entities seeking funding and other types of assistance are encouraged to attend TWICC meetings as guests either in person or by telephone. Guests are provided information about funding opportunities as well as additional support including on-site assistance, operator and board training, and regional projects and other partnerships.

The TWICC website (twicc.org) provides information on financial and technical assistance available to water and wastewater systems as well as contact information for member agencies. Entities can fill out a project information form available on the website and submit it to TWICC for information specific to the entity's project and eligibility.

Stakeholder and Advisory Workgroups

TCEQ routinely holds a variety of stakeholder and advisory workgroups to share regulatory updates, get feedback and promote communication between TCEQ and the drinking water community. These stakeholder and advisory workgroups cover areas such as drinking water, water rights, cross-connection programs, water operator and licensing, and drinking water laboratories. Special stakeholder meetings and workgroups are held as needed for pertinent issues and emergency response input.

Capacity Development Workshops and Workgroups

TCEQ staff participate in national workgroups, workshops, webinars, and conferences that focus on capacity development activities. Staff have attended events where topics include regionalization and other forms of partnerships, funding, asset management, resiliency, CDS development, DWSRF uses, small and disadvantaged system issues and sharing resources developed for public water systems. These events provide an excellent forum to share experiences, best management practices, and innovative approaches to capacity development activities and funding. TCEQ has the opportunity to adopt or adapt approaches from other states that can help build capacity or implement asset management. This coordination can be a cost-effective, highly efficient way of expanding the program.

Emergency Response

TCEQ assists and supports public water systems in emergency response through many parts of the agency including the Office of Compliance and Enforcement, the Critical Infrastructure Division, and the Water Supply Division. The agency also partners with the Texas Water/Wastewater Agency Response Network (TXWARN) and Texas Department of Emergency Management's Public Works Response Team (PWRT). Staff provide support, including extensive assistance to public water systems in person and over the phone, during and after emergencies.

To prepare for these activities, staff attend emergency response training and conferences, including those relating to hurricane response, disaster and emergency management, and terrorism awareness. Staff develop and implement pre-disaster and post-disaster resiliency materials, workshops, and on-site assistance. Guidance documents include information on how to provide drinking water-related continuity of operations, preparing for an extended operator absence, how to issue and rescind boil water notices, how to obtain chemical supplies if shortages occur, and how to obtain emergency approvals for plans and specifications.

Field Inspections and Complaint Investigations

Public water system investigators work out of the TCEQ's Office of Compliance and Enforcement (OCE) Regional Offices. Investigators work closely with the public water systems in their regions and conduct CCIs, respond to emergencies and complaints, and provide technical assistance.

The investigators and other staff in the regional offices use the information from these investigations to help systems get further capacity development assistance on issues like restructuring, funding, technical and managerial issues, and operator training.

Operator Certification and Workforce Issues

Public water system operators who perform duties in drinking water production or distribution, as well as companies that operate public water systems on a contractual basis, must be licensed

with the TCEQ unless exempt, and must comply with the requirements in Chapter 290 related to Public Drinking Water.

The TCEQ's Occupational Licensing Program issues occupational licenses and registrations for public drinking water operators; reviews and updates licensing exams, approves training courses, and qualifies instructors for all licensing programs; and maintains license and registration records.

Workforce shortages and the need for operators with enough training and experience to operate current and new facilities remain a significant challenge for water systems. To help water systems increase their FMT capacities, TCEQ is working to make the operator certification program more accessible, including making more exams available in Spanish and expanded computer-based testing (CBT).

TCEQ is also supporting the efforts of high schools interested in offering water operator vocational training. The goal is to encourage students to pursue careers in the drinking water field and increase the number of qualified water operators available to support water systems in Texas.

TCEQ is also exploring opportunities to provide additional assistance to water systems that have historically had difficulty attracting and retaining qualified operators. This could include implementing on-site or local training programs for operators, managers, board members, and council members, and potentially instituting a training certification program for managers and boards. In addition, funding could be set aside to promote "peer-to-peer" operator assistance and training across the state between more experienced operators of larger systems and newer operators of smaller systems. This could help smaller systems develop local talent rather than trying to compete with larger systems for qualified operators.

APPENDIX A

Funding Changes Affecting TCEQ's Capacity Development Program in 2021

TCEQ utilizes a third-party contractor to collect all chemical compliance samples for approximately 7,100 public water systems. This practice has been integral to fulfilling TCEQ's mission to protect human health and the environment as well as its capacity development program. The collection of chemical samples allows Texas to have a 99.9% sample collection rate, sample collection error rejections of less than 1%, and expedient data flows to EPA and the public. During 2021, EPA determined this usage of Public Water Supply Supervision (PWSS) funding for this practice was no longer eligible after approving these funds for routine sample collection for over 20 years. Although the dispute was settled and TCEQ agreed to no longer use PWSS funding for compliance sampling/monitoring activities beyond August 31, 2021, TCEQ continues to disagree with EPA's analysis that third-party compliance sample collection does not assist public water systems in acquiring and maintaining FMT capacity. This data allows public water systems and TCEQ to efficiently implement the National Primary Drinking Water Regulations (NPDWR) and accurately identify health-based concerns and enforce violations as intended through Texas' primacy requirements.

Chemical compliance data are used by TCEQ to determine where additional assistance may be required. Through TCEQ's FMT Assistance program, contractors are assigned to assist water systems with deficiencies as identified through notices of violation. In a proactive response to public water systems scheduled to receive a violation, the FMT Assistance program makes assignments to have a contractor provide on-site assistance in an effort to resolve the violation and help the system improve their financial, managerial, and/or technical capacity.

Additionally, chemical compliance data are used to identify systems that would benefit from more advanced technical assistance from the TCEQ's TOP, such as assistance to reduce disinfection by-product (DBP) formation. DBPs may form at a system's treatment plant, in its distribution system, or in both locations. Many operators need detailed assistance for identifying the cause of their DBP compliance issues, and benefit from technical assistance which teaches the operators how to make changes to their operational practices to reduce the formation of DBPs, developing and supporting their technical capacity.

Accurate compliance data also influence the selection of systems that apply for DWSRF money available for improvement projects through ranking for the Intended Use Plan (IUP). The IUP ranking process provides a priority ranking of DWSRF applicants. The ranking is compiled based on the system's proposed project information and TCEQ's information on public drinking water compliance. The ranking is a sum of a physical deficiency factors and a health and compliance (HC) factor. The HC factor captures chemical violations based on the compliance sample collection conducted by TCEQ's contractor. TCEQ's current system provides consistent, quality data for the IUP ranking and provides validity to a competitive process that has become an important source of funding for addressing chemical violations in small systems, supporting their financial capacity.

Many vulnerable communities in Texas have limited resources and struggle to operate their public water systems. Using third-party sample collection provides data to TCEQ so accurate information is available to help determine which systems and customers are at the greatest risk of failing to have their health protected. Many such communities do not have the resources to maintain a licensed operator, much less ensure chemical compliance samples are properly collected.

In Texas, 85% of all water systems are classified as small or very small. The third-party sampling contract increases the financial capacity of these systems by allowing resources to be concentrated on day-to-day operations, maintenance, and compliance instead of specialized sample collection which may occur only once every one to nine years. Texas systems are still required to collect samples such as chlorine residuals, coliform samples, and process control samples which are required on a regular and routine basis.

In line with enhancing a system's capacity development, the TCEQ's practice of collecting routine compliance samples has been instrumental in identifying and reducing the health-based violations of community systems to meet the goals of the National Compliance Initiative (NCI). In the first quarter of FY2018, EPA set a NCI goal to decrease the number of community water systems in violation of health-based drinking water standards by 25%. In the fourth quarter of FY2020, TCEQ had reduced the number of health-based violations by 29.3%, exceeding the EPA goal. Texas became the first state in Region 6 to meet this goal and was recognized by Region 6 in the EPA's PWSS End of Year Report for 2020.

Having accurate and timely reported water quality data allowed TCEQ to correctly identify health-based violators and to direct targeted technical assistance efforts and/or enforce on non-compliant systems in a timely manner to protect public health. TCEQ prioritized and focused agency oversight resources and technical assistance on troubled systems. TCEQ designed specific financial, managerial, and technical assistance for each of the violating systems which included on-site education on strategies to address and prevent MCL and compliance violations, new source evaluations including interconnection, source water, and alternate source evaluations, and funding information and sources. This focused assistance and outreach has led to resolution of health-based violations through new sources with water quality that meets NPDWRs, interconnections to compliant wholesale systems, installation of approved treatment, changes in operations and maintenance to meet treatment technique and MCL requirements, and completion of assessments, evaluations and studies to fulfill treatment technique requirements.

TCEQ is committed to ensuring safe drinking water for the citizens of Texas through oversight of the drinking water primacy program. The ability to have consistent and reliable drinking water data to safeguard human health and to develop the technical capability of Texas public water systems is a significant part of that effort. Although TCEQ will continue collecting routine chemical compliance samples, finding additional state funding for this practice has strained Texas' drinking water program. TCEQ encourages EPA to further evaluate the benefits of this practice for systems nationally and reconsider the use PWSS program Performance Partnership Grant (PPG) funds for this purpose in the future.