

Capacity Development Report to the Governor

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**Prepared by the
Tennessee Department of Environment
and Conservation**

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Executive Summary

Tennessee's Capacity Development Strategy requires potential public water systems and existing water systems in significant noncompliance to develop plans showing that sufficient revenue is available to enable the water system to have adequate management and technical capability to operate in compliance with the Safe Drinking Water Act. The development of capacity has prevented marginally funded water systems from starting operations, accelerated the compliance of existing systems in significant noncompliance and encouraged potentially significant noncompliers to make extra efforts to achieve a satisfactory compliance status. The strategy has encouraged regional approaches to supply water to potential customers and encourages system operators to take advantage of economy of scale, provided by systems serving a larger number of customers.

This report to the Governor provides an evaluative assessment on the success and effectiveness of the state's Capacity Development Strategy and the state's initial efforts to ensure capacity development of public water systems in Tennessee.

The federal Safe Drinking Water Act (SDWA), Section 1420(c)(3), requires that states assess the effectiveness of their strategy to ensure that public water providers have the technical, managerial and financial capacity to operate a public water system. These reports are first due two years after a capacity development strategy is adopted, with subsequent reports to be submitted every three years. Tennessee adopted its strategy in July 2001.

The Need for a Capacity Development Strategy

The 1974 Safe Drinking Water Act (SDWA) requires that all states ensure that providers of drinking water meet minimum national standards. Initially, it was envisioned by the U.S. Environmental Protection Agency (EPA) that public notification requirements, coupled with citizen pressure and potential litigation would make enforcement of the provisions of the act "largely unnecessary." In the years that followed the initial act, the EPA has come to recognize that states must assume primary enforcement responsibility for compliance with the act. Further, the EPA and the states have come to realize that full compliance can only be achieved through capacity development, that is, the improved financial, technical and managerial ability of a water system to comply with ever-changing and increasing complex regulations.

To address the capacity development needs of public water systems, the federal Safe Drinking Water Act Amendments of 1996 mandate that states ensure that all new community water systems and all new nontransient, noncommunity water systems

demonstrate capacity to implement each drinking water regulation in effect. The generally accepted notion was that a community water system and certain noncommunity systems should not be created or allowed to be established if they did not have the ability or “capacity” to comply with Safe Drinking Water regulations.

In addition, the 1996 amendments require states to prepare a “capacity development strategy” to identify and prioritize water systems lacking capacity to comply consistently with regulations. Although states may have undertaken efforts prior to 1996 to improve the viability of public water systems to comply with SDWA provisions, states must now focus on the issue of system capacity and formally develop plans with initiatives designed to improve water system compliance.

To help determine the effectiveness of Tennessee’s Capacity Development Strategy, the Division of Water Supply compared a list of public water systems with a history of significant noncompliance in 1997 to those on the list in 2000. The results reflected an improved capacity of many water systems to comply with SDWA requirements. The sections that follow summarize Tennessee’s Capacity Development Strategy, implementation of the strategy, and an evaluation of the strategy, including an identification of the barriers that may hamper the strategy’s effectiveness.

State Objectives and Strategy

In order to identify the technical, managerial, and financial factors in Tennessee which contribute to drinking water noncompliance, the Division of Water Supply (DWS) sought input from a Capacity Development Committee, composed of technical assistance providers, public water systems, consulting engineers and certified water treatment operators. With these insights and suggestions, the Division of Water Supply developed a strategy.

The Capacity Development Strategy takes several approaches and uses several tools to focus attention on existing public water system needs, including loan assistance, review and revision of water rates, enforcement, technical assistance and training of system personnel. In several important instances, as in the Utility Management Review Board, mechanisms designed to improve system capacity were already in place in Tennessee. The benefit of the Capacity Development Strategy was that it required the state to view its efforts in a more comprehensive way and to identify gaps and areas of weakness. The Capacity Development Committee, recognizing Tennessee’s previous efforts and its strengths, determined that the driving mechanism of the state’s strategy would be its enforcement capability. Existing water systems identified as “significant non-compliers” would be targeted and directed to further develop and improve their technical, managerial and financial abilities to operate a public water system. Through the enforcement process, Tennessee has been able to bring considerable attention to systems needing to address and correct violations. This intense attention typically includes technical assistance if

appropriate and directives that require a corresponding action to address the system's specific capacity development needs. The enforcement process compels noncompliant systems to address capacity issues or face continuing and escalating enforcement action.

As part of this effort, the Division of Water Supply requires existing water systems that have become significant noncompliers and those who have the potential for being significant noncompliers to submit a water system capacity development plan identifying specific actions leading to the development of capacity. The plan must document and/or address all compliance issues faced by the system, including a current organizational structure and chart, emergency operations plan, microbiological sampling plan, source protection or wellhead protection plan, cross connection policy and program, business plan, a record keeping plan, and certified operator. The Division uses the Capacity Development Plan Guidance Document (Attachment 7) and the Capacity Development—Business Plan (Financial Self-Assessment Manual) to assure capacity development compliance from noncommunity public water systems.

As mentioned earlier, many capacity development tools were already in place prior to the development of Tennessee's strategy. The Division's Sanitary Survey Manual, the Utility Management Review Board review function, the Water and Wastewater Finance Board and Fleming Training Center operator training workshops have been in existence and very effective for many years. Similarly, other mechanisms have been identified and resources have been created. These include the board and commission member training programs established by the Tennessee Association of Utility Districts and the University of Tennessee's Municipal Technical Advisory Service. It is believed these partnerships with stakeholders will prove to be very beneficial in assisting systems to achieve and sustain capacity requirements in the future. Other resources that have emerged within the past year include several "distance learning" programs for operators and a renewed emphasis on evaluating and updating utility rates.

In summary, Tennessee's capacity development strategy targets community and noncommunity systems in noncompliance with whatever appropriate tool is needed to obtain compliance. All public water systems receive enforcement and/or technical assistance where appropriate and necessary.

Implementation of the Strategy

From 1997 to 2001, approximately 266 public water systems were created in Tennessee. Of this number, there were 175 community water systems, most of which are apartment complexes, and 91 noncommunity water systems. Most of the apartment complex systems pre-date their classification as "regulated" public water systems in that the systems existed before management began the submetering of their water. The second largest group of "new" systems actually consists of existing noncommunity systems discovered by DWS staff. In a few instances, staff was able to discuss public water system requirements with

apartment complex managers prior to the installation of meters, avoiding the creation of new systems. In other instances, many new community water systems and nontransient, noncommunity water systems have not been created because of the requirement to demonstrate capacity prior to operational start-up. Instead, many potential new systems elected to construct lines from existing water systems to serve those businesses and residents where there was a need for water. Finally, even though the overall number of public water systems increased during the period, the increase was offset to a degree by the number of community water systems that consolidated to take advantage of increased economies of scale.

Also, water systems receiving a Drinking Water State Revolving Fund loan are required to demonstrate that they have or will have the financial, managerial, and technical capacity to comply with Safe Drinking Water requirements as a result of the loan or before final approval of the loan application.

The state's Capacity Development Strategy, through emphasizing the enforcement of rules that would improve system capacity, has effectively prevented the creation of many nonviable public water systems.

Evaluation of the State's Capacity Development Strategy

In order to identify water system needs as well as potentially effective compliance mechanisms, the state has established a water system baseline as required by the SDWA 1420(c)(2)(D) to measure improvements in system capacity. The baseline uses the initial list of community water systems and nontransient, noncommunity water systems with a history of noncompliance, which was sent to EPA on August 1, 1997 (see Attachment 1, "Systems with a History of Significant Noncompliance in Tennessee, FY1994 – FY1996"). The state will adjust the baseline to incorporate any additional systems when new rules are promulgated. Periodic assessments of this list will be used to guide any changes in the state's capacity development strategy.

In 2001, the DWS updated its Section 1420(c)(2)(D) list, "PWSs with a History of Significant Noncompliance in Tennessee, Compliance Status" (Attachment 2). This list provides an effective measure of capacity development by public water systems with a history of noncompliance. In addition, Attachment 2 also provides information as to the means whereby compliance was achieved for those systems on the 1997 list of public water systems with a history of significant noncompliance. Attachment 2 clearly shows that enforcement through the issuance of an administrative order (Commissioner's Orders and Director's Orders) has been effective. Twenty-six of the 37 systems were issued 30 administrative orders. In six instances, enforcement resulted in the system connecting to another system or closing down and thereby becoming deactivated. In at least 19 situations, enforcement resulted in giving the system sufficient time to obtain an engineer, obtain funding, construct and ultimately comply with a newly adopted rule. In at least two

cases, the DWS and Division of Community Assistance provided technical assistance, and compliance was obtained.

Twelve public water systems have had a history of significant noncompliance between 1997 and 2000 (shown in Table 3, “Systems with a History of Significant Noncompliance in Tennessee, FY1997 – FY2000”). To address noncompliance, 11 administrative orders have been issued to eight systems. Three of the 11 systems issued orders were existing apartment complexes that became regulated water systems after they began to submeter water obtained from another regulated public water system. One of the 12 water systems identified between 1997 and 2000 is no longer in existence.

Enforcement actions have directed noncompliant water systems to make needed facility improvements, acquire and retain certified operators, and improve financial positions. With some situations, the enforcement action was initiated by the Division of Water Supply (DWS); in other situations compliance with a financial, managerial or technical capacity requirement involved an action by another agency or board of the state.

For community water systems, the Division of Municipal Audit (DMA) in the Office of the State Comptroller, Department of Treasury, examines annually the financial statements of all municipally owned and utility district owned public community water systems. Local government water systems and utility districts found to be “financially distressed” are referred to one of two regulatory boards, depending upon the type of system. Financially distressed municipal (governmental) systems are referred to the Water and Wastewater Financing Board; utility districts are referred to the Utility Management Review Board. Both boards are administratively attached to the Tennessee Department of Environment and Conservation (TDEC).

The Utility Management Review Board advises and assists financially distressed utility districts in the area of utility management, and it has the authority to prescribe a user rate structure that will allow the utility to be self-sufficient. In addition, the board must review the creation of a utility district, and the board may undertake a study leading to the consolidation of a utility district with another to achieve compliance. Similarly, the Water and Wastewater Financing Board reviews user rates necessary for water systems to be self-sufficient in their operation. Such reviews may also consider the consolidation of systems. There are three attachments to this report that provide a list of systems receiving loans as well as benefiting from state managerial-financial oversight. These attachments are the “Community Assistance Loans in Tennessee” (Attachment 4), “Water and Wastewater Systems Currently Under Review by the Water and Wastewater Financing Board” (Attachment 5) and “Utility Districts Currently Under the Jurisdiction of the Utility Management Review Board” (Attachment 6).

The Utility Management Review Board and the Water and Wastewater Financing Board have reviewed many water systems, and it is believed many of these systems have avoided becoming significant noncompliers.

Unlike community water systems, the financial condition of noncommunity water systems is not addressed by these review boards. To address the financial situation of noncommunity water systems, the DWS with assistance from the Division of Community Assistance developed a “Financial Self-Assessment Manual.” The purpose of the manual is to help noncommunity water systems understand the financial obligations of operating a viable water system. To comply with the financial requirements of the state’s Capacity Development Strategy, a noncommunity water system must show revenues sufficient to cover anticipated and realistic water system costs.

Foreseeable Challenges and Barriers

There are still many challenges to the effectiveness of Tennessee’s Capacity Development Strategy. Perhaps the greatest challenge to the state’s ability to carry out its program responsibilities effectively is the potential for changes in state laws that could interfere in the regulation of public water systems as defined by federal law and incorporated by EPA in rule. For example, several bills have been introduced in recent legislative sessions to further exempt apartment complex systems from regulation.

Apartment complexes that meet the definition of public water systems are currently exempt from federal and state regulations if they meet specific criteria established by federal law. One of these provisions is that they must not sell water. Therefore, apartment complexes that submeter and re-sell water are *not* excluded from federal and state regulations and must comply with safe drinking water rules. If a bill were passed by the Tennessee General Assembly to remove submetered systems from regulation under the Tennessee Safe Drinking Water Act, it most likely will affect the state’s ability to maintain delegated authority to administer the Safe Drinking Water Program and curtail or eliminate the state’s drinking water supervision program. Other states that have excluded submetered apartment complexes have had federal funding and rule revisions held up until state laws were amended to remove the exemption. There are many complicated issues involving submetering which make it difficult to address at the local level. Tennessee should continue to push for action at the federal level so that this complex issue can be addressed uniformly at the state and federal levels.

Another barrier to carrying out an effective Capacity Development Strategy has been the state’s limited available financial resources. Over the past few years, extremely limited state general revenues have restricted the availability of state general funds that must be provided as the state’s matching share to obtain available federal funds. Although the state’s drinking water program is primarily funded by facility maintenance fees and EPA monies, the loss of the relatively small amount of state general funds used to match fees paid by the regulated community and EPA funds, in effect, could shut down a health-related program. The continuing loss of staff positions in the drinking water program and the tremendous increase in new federal regulations have hampered the division’s ability to

provide essential technical support to assist public water systems in complying with new federal rules. Salaries for technical staff are 20 percent less than the average salary of technical staff of surrounding states, and the state continues to have problems in recruiting and retaining knowledgeable, experienced technical staff. It is essential that highly trained drinking water professionals be compensated in a comparable manner with the industry.

Another challenge to carrying out an effective Capacity Development Strategy involves the compliance of very small water systems. Certain categories of small water systems are difficult to regulate and thereby obtain full compliance. Many of the systems are rural churches, open to the public only one day a week and do not have a certified operator. Maintaining a water system is not their primary purpose, nor are church members trained in sampling techniques. Often, financial resources to obtain these services are limited.

Another challenge in the foreseeable future will be assisting small community water systems in addressing identified security issues and developing regulatory language which will adequately address those issues. Again, limited funding compounds addressing many of the issues adequately.

Report Availability

This report is available on the Tennessee Department of Environment and Conservation's (TDEC) website at www.tdec.net/dws. In addition, notices of the availability of this report will be sent to the 525 community water systems regulated by the Division of Water Supply requesting they give notice to their customers of the availability of the report in their water bills. Finally, copies of the report will be made available to the public in each of TDEC's eight Environmental Assistance Centers (EACs).

Attachments:

- 1 – PWSs with a History of Significant Non-Compliance in Tennessee, Systems Meeting Definition of SNC During FY1994 – FY1996
- 2 – PWSs with a History of Significant Non-Compliance in Tennessee, Compliance Status
- 3 – PWSs with a History of Significant Non-Compliance in Tennessee, FY1997-2000
- 4 – Community Assistance Loans in Tennessee
- 5 – Water and Wastewater Systems Currently Under Review by the Water and Wastewater Financing Board
- 6 – Utility Districts Currently Under the Jurisdiction of the Utility Management Review Board
- 7 – Capacity Development Plan, Guidance Document
- 8 – Capacity Development – Business Plan (Financial Self-Assessment Manual)

Glossary:

Community water systems are public water systems which serve at least fifteen (15) service connections used by year-round residents or regularly serve at least twenty-five (25) round-round residents.

Noncommunity water systems are public water systems that are not community water systems.

Nontransient, noncommunity water systems are non-community water systems that regularly serve at least twenty-five (25) of the same persons over six (6) months per year.

Transient, noncommunity water systems are noncommunity water systems that serve transient populations such as hotels, restaurants, camps, service stations, and churches.