

# **Report on North Carolina's Capacity Development Strategy Implementation**

**August 2001**

**Public Water Supply Section**

North Carolina Department of Environment and Natural Resources

## 1.0 Introduction

Section 1420(b)(2) of the 1996 Amendments to the Safe Drinking Water Act (SDWA) requires that a report be submitted to EPA describing the State's implementation of its Capacity Development Strategy. Specifically, the report must discuss the success of enforcement mechanisms and initial capacity development efforts in assisting public water systems to improve technical, managerial and financial capacity. This report is a follow-up to the "North Carolina's Capacity Development Strategy for Existing Public Water Systems, August 2000" report (Capacity Development Strategy), which provided a complete and comprehensive overview of the Capacity Development program. Therefore, a copy of the August 2000 Capacity Development Strategy report is both referenced and attached to this report (Attachment 1), with both documents making up the 2001 report. North Carolina's capacity development program includes requirements for public water systems to complete self-evaluations of technical managerial and financial capacity. Also the program includes checkpoints for the Public Water Supply Section (PWS) to raise questions and identify concerns that will increase a water system's viability. Therein lies the uniqueness of North Carolina's program.

## 2.0 Capacity Development Program Implementation Progress

- Engineer's Report
- Water System Management Plan
- Operation and Maintenance Plan
- Emergency Management Plan
- Engineer's and Owner's Certification

The above-listed items are tools to enable a system to remain viable while doing business. Additional resources to assist and help systems further enhance their capacity include:

- Wellhead Protection Program
- Source Water Assessment Program
- Area Wide Optimization Program
- Conservation Policy for High Filter Rated Facilities
- Technical Assistance from PWS Section and/or NCRWA
- Field Notice of Violation
- On-line Data for Compliance and Plan Review Tracking

Expanding and new systems are complying with the Capacity Development requirements

because of PWS's hands-on assistance during the project approval process. For systems that will essentially remain unchanged without any expansion or alteration, Capacity Development is introduced during periodic inspections (sanitary survey, annually for surface water, every 5 years for other systems). As part of its enforcement and capacity development strategy, PWS may allow systems to develop and submit a complete Water System Management Plan in lieu of paying an administrative penalty.

By sharing the workload among its staff, PWS is successfully implementing the capacity development program. Office assistants in the Central Office log in and send the engineering reports to regional offices and generate and mail "Authorization to Construct" letters as appropriate. Plan review engineers are now reviewing both the engineering reports and water system management plans. These capacity development documents are reviewed for completeness. PWS field personnel are providing on-site technical assistance to help systems meet capacity development requirements.

All the plan review engineers, loan and grant engineers, and the capacity development engineer (central office Technical Services Branch and others) will be cross trained so that the entire Technical Services staff will be able to review plans and specifications and the capacity development documents. Training will include presentations by our sister agencies, consulting engineers, system managers and operators about their responsibilities. By integrating capacity development with other programs and cross training, PWS can more easily meet the new challenges of not only the Capacity Development program but all of its other programs as well.

The capacity development program has already identified some major problems for systems involving local agreements and ownership responsibilities. In one case, the requirement for a Water System Management Plan to include copies of "contracts for management or operation of the water system by persons or agencies other than the system owner" exposed a contractual dispute between two public entities regarding control of a water system. The managerial and financial capacity of the water system would have been in jeopardy if this dispute had not been resolved before expansion approval by PWS. In another case, a town received a grant intended to pay for the expansion of a county system to provide additional water service to the town. During the project review process the town considered the option of purchasing water from the county and becoming the owner and operator of a new water system. After considering the requirements for completion of a Water System Management Plan and related capacity development requirements, the town realized that it did not have the managerial capacity to become a viable public water system and decided not to pursue the creation of a new water system. In another incident, a developer and a homeowner association's responsibilities were not appropriately defined and the water system management plan was the tool that was used to clarify them.

### 3.0 Significant Noncompliance (SNC)

Although SNCs are not the specific emphasis of the Capacity Development Program, North Carolina's program addresses the root causes for significant noncompliance, from monitoring requirements to operation and maintenance needs to emergency management plans. The Engineer's Report, Water System Management Plan, Operation and Maintenance Plan, Emergency Management Plan and Owners Certification are mechanisms that provide critical self-evaluation of key technical, managerial and financial considerations for a water system. The capacity development program includes checkpoints for PWS to question and identify concerns designed to increase a water system's viability. As previously noted, only one full-time person has been assigned specific capacity development duties, yet all of PWS is involved in the capacity development process.

Since the previous strategy report in 2000 and the implementation of the capacity development program, the capacity development engineering position has been vacant (due to hiring procedures, legislative freeze on positions because of state budget woes). Even though our program has not had the chance to mature, significant noncompliers have decreased from 6450 in 1997 to 4689 in 2000. This decrease may not have been the result of recent capacity development initiatives; however, PWS is confident that the overall trend of reducing significant noncompliers will continue throughout program implementation.

For those situations where noncompliance is identified, water system officials are issued "notices of deficiencies" and "notices of violations." In many cases our field staff provides onsite technical assistance as a result of these notices, or the system officials may contact our central office at their discretion for assistance. In cases where noncompliance continues, the central office compliance staff prepares and issues formal enforcements. The administrative order is used for situations where the water system owner is cooperating with our requests and needs a planned "pathway" usually with reportable milestones to achieve compliance. The administrative penalty is issued for continuing violations where there is lack of cooperation or effort on the part of the system owner to achieve compliance. For example, an administrative order may be used to identify steps an owner must take to eliminate contamination detected during routine sampling; however, an administrative penalty would be issued to a system owner who continued to fail to sample properly after being notified repeatedly of the problem. If a penalty is not resolved within 30 days, it is referred to the Attorney General for further legal action. The Attorney General will take unresolved cases to civil or criminal court where appropriate.

4.0 Monitoring Improvements in Capacity

The table summaries for measures identified for monitoring in the 2000 Capacity Development Strategy report for community (Table I) and non-transient non-community (Table II) water systems are as shown below. Also, PWS's web site address for tracking the status of water system management plans and plan and specification approvals is: [www.deh.enr.state.nc.us/pws/index.htm](http://www.deh.enr.state.nc.us/pws/index.htm)

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Table I  
KEY CAPACITY DEVELOPMENT MEASURES  
FOR COMMUNITY WATER SYSTEMS

| 10/1/99 Through | Plans Submitted <sup>1</sup> |      | Plans Approved <sup>2</sup> |      | WSMP Complete <sup>3</sup> |      | Engineer's Certification <sup>4</sup> |     | Owner's Certification <sup>5</sup> |     |
|-----------------|------------------------------|------|-----------------------------|------|----------------------------|------|---------------------------------------|-----|------------------------------------|-----|
|                 | #                            | %    | #                           | %    | #                          | %    | #                                     | %   | #                                  | %   |
| June 30, 2000   | 415                          | 18.6 | 279                         | 12.5 | 230                        | 10.3 | 45                                    | 2.0 | 6                                  | 0.3 |
| June 30, 2001   | 641                          | 28.7 | 486                         | 21.8 | 434                        | 19.4 | 195                                   | 8.7 | 54                                 | 2.4 |

Table II  
KEY CAPACITY DEVELOPMENT MEASURES  
FOR NON-TRANSIENT NON-COMMUNITY WATER SYSTEMS

| 10/1/99 Through | Plans Submitted <sup>1</sup> |     | Plans Approved <sup>2</sup> |     | WSMP Complete <sup>3</sup> |     | Engineer's Certification <sup>4</sup> |     | Owner's Certification <sup>5</sup> |     |
|-----------------|------------------------------|-----|-----------------------------|-----|----------------------------|-----|---------------------------------------|-----|------------------------------------|-----|
|                 | #                            | %   | #                           | %   | #                          | %   | #                                     | %   | #                                  | %   |
| June 30, 2000   | 23                           | 3.8 | 4                           | 0.7 | 14                         | 2.3 | 1                                     | 0.2 | 0                                  | 0   |
| June 30, 2001   | 56                           | 9.1 | 18                          | 2.9 | 33                         | 5.4 | 6                                     | 1.0 | 4                                  | 0.7 |

<sup>1</sup>“Plans Submitted” refers to the number of systems with at least one set of engineering plans and specifications submitted for review during the indicated period and provides a base line of systems exposure to capacity development.

<sup>2</sup>“Plans Approved” refers to the number of systems with at least one set of engineering plans and specifications reviewed and approved during the indicated period and provides a measure of the systems that have demonstrated technical capacity

<sup>3</sup>“WSMP Complete” refers to the number of systems with at least one water system management plan completed during the indicated period and provides a measure of systems having assessed their managerial and financial capacity.

<sup>4</sup>“Engineer's Certification” refers to the number of systems having at least one engineer's certification during the indicated period for which plans were submitted on or after 10/1/99 and was constructed according to the approved plans and specifications and provides a measure of construction completion for approved projects.

<sup>5</sup>“Owner's Certification” refers to the number of systems having at least one owner's certification during the indicated period for a project for which plans were submitted on or after 10/1/99 certifying they have an operation and maintenance plan, an emergency management plan and a certified operator.

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As projects take time to design, approve, construct and place into operation, the resulting data will reflect the expected time for project completion. In subsequent years, while plans submitted should stay constant, other measures will increase as systems and projects progress through the process. Nearly 20 percent of community water systems and over 5 percent of non-transient non-community water systems have assessed managerial and financial capacity under the Capacity Development Program. For the first time PWS has documentation that about 3 percent of the community and non-transient non-community water systems in North Carolina have an operation and maintenance plan and an emergency management plan.