

State of New Jersey  
Department of Environmental Protection  
Division of Water Supply  
Bureau of Safe Drinking Water Technical Assistance

# Status Report On the Implementation of New Jersey's Capacity Development Program

September 2008

Jon S. Corzine  
Governor

Lisa P. Jackson  
Commissioner

September 30, 2008

Dear Governor:

I am pleased to issue this report entitled "Status Report on the Implementation of New Jersey's Capacity Development Program" prepared by the New Jersey Department of Environmental Protection (NJDEP) in accordance with the requirements of the Federal Safe Drinking Water Act Amendments of 1996. The report provides an overview of the efficacy and progress of the NJDEP's Capacity Development Program towards improving the technical, managerial, and financial capacity of public water systems in the State. Furthermore, the report demonstrates that progress has been made in reducing the number of systems with a history of noncompliance with the Federal and State Safe Drinking Water Act Regulations since the Capacity Development Program began in October 1999.

The information in this report describes the NJDEP's continuing efforts, whether technical assistance and guidance or enforcement actions, to promote compliance and improve drinking water quality in New Jersey during the 3-year period 2005 through 2007. In addition, the NJDEP has established partnerships with Rutgers University, New Jersey Water Association, and the American Water Works Association to sponsor continuing education seminars and workshops to assist public water systems in achieving and maintaining compliance.

At the NJDEP, we are delivering on our commitment to ensuring that public water systems of the State provide a safe and plentiful supply of drinking water.

Sincerely yours,

Lisa P. Jackson  
Commissioner

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## **SECTION I**

### **Capacity Development Program Goals**

The goals of the Capacity Development Program are as follows:

- reduce or eliminate the number of existing public water systems in significant non-compliance with the Federal and State Safe Drinking Water Act Regulations;
- ensure that public water systems have adequate technical, managerial, and financial capacity to achieve and maintain compliance with the Federal and State Safe Drinking Water Act Regulations;
- prevent the formation and operation of any new water system (community and non-transient, non-community water systems) that may be non-viable; and
- provide public water systems with accurate, timely, and appropriate information in a straightforward manner to promote their compliance with the Federal and State Safe Drinking Water Act Regulations.

### **Introduction**

In accordance with Section 1420(c)(3) of the Federal Safe Drinking Water Act Amendments of 1996, States must submit a report to the Governor on the efficacy of the State's Capacity Development Strategy and progress made towards improving the technical, managerial and financial capacity of public water systems. Under the Act, the report is due two years after the State first adopts its Capacity Development Strategy (September 2000) and every three years thereafter. The report must also be made available to the public.

The New Jersey Department of Environmental Protection (NJDEP) submitted its initial report to the Governor on September 27, 2002 and a subsequent report on September 2005. This Report of September 2008 is the NJDEP's third submission to the Governor regarding an evaluation of the efficacy of the State's Capacity Development Strategy during the 3-year period 2005 through 2007.

Please note that any support document referenced in this report is available upon request by contacting the NJDEP's Bureau of Safe Drinking Water Technical Assistance at 609-292-5550. Refer to Appendix A for a glossary of terms used in this report regarding the Capacity Development Program.

This Report evaluates the extent to which the Capacity Development Program has been formulated and implemented consistent with the specific requirements and overall objectives of the Safe Drinking Water Act. This Report also evaluates how the NJDEP is

integrating the Capacity Development Program together with other Safe Drinking Water Act initiatives and drinking water programs. These initiatives include the participation of the County Environmental Health Act Agencies, the NJDEP's Enforcement Program's Zero Tolerance Policy and the Drinking Water State Revolving Fund – Small Water System Technical Assistance Program.

## **Background**

The 1996 Amendments to the Federal Safe Drinking Water Act created a focus on enhancing and ensuring the technical, managerial, and financial capacity of public water systems to comply with the National Primary Drinking Water Regulations.

In accordance with Section 1420(a) of the Federal Safe Drinking Water Act, each state is required to have the legal authority to ensure that all new public community water systems and all new public non-transient, non-community water systems demonstrate adequate technical, managerial, and financial capacity. In New Jersey, Assembly Bill No. 2615, signed into law on August 2, 1999 (P.L.1999 Chapter 176), amended the New Jersey Safe Drinking Water Act (N.J.S.A. 58:12A) to give New Jersey explicit legal authority to require new community and new non-transient, non-community water systems to demonstrate capacity. Consequently, New Jersey adopted regulations on July 31, 2000, effective August 21, 2000, at N.J.A.C. 7:10-13 that establish the requirement to assure that all new public community and all new non-transient, non-community water systems have adequate capacity. The regulations of N.J.A.C. 7:10-13 can be viewed at [www.state.nj.us/dep/watersupply/capdevprog.htm](http://www.state.nj.us/dep/watersupply/capdevprog.htm). Prior to the effective date of these regulations, the NJDEP adopted an interim policy, effective October 1, 1999, to implement capacity requirements for new water systems.

In accordance with Section 1420(c) of the Federal Safe Drinking Water Act, each state is required to develop and implement a strategy to assist existing systems in acquiring and maintaining capacity. The United States Environmental Protection Agency (USEPA) approved New Jersey's Capacity Development Strategy on September 28, 2000. Since its approval, New Jersey has been implementing its capacity development strategy. This strategy can be viewed at [www.state.nj.us/dep/watersupply/capdevprog.htm](http://www.state.nj.us/dep/watersupply/capdevprog.htm).

The Drinking Water State Revolving Fund (DWSRF) serves as the primary source of funding for implementing the NJDEP's capacity development strategy. The NJDEP is allowed to set aside up to 10% of each capitalization grant for State program management activities, which includes funding the Capacity Development Program. In addition, the NJDEP is allowed to set aside 2% of each capitalization grant for small water system technical assistance and 15% of each capitalization grant for activities to assist development and/or implementation of source water protection, well head protection, and capacity development. Although the DWSRF provides the NJDEP with financial support to establish and implement capacity development programs, the

USEPA can withhold funds for not meeting required deadlines, as described below and in Section II of this report.

States failing to comply with any provision of Section 1420 of the Federal Safe Drinking Water Act are subject to lose up to 10% of the DWSRF monies in fiscal year 2001, 15% in fiscal year 2002, and 20% in each fiscal year thereafter. The failure to issue the Capacity Development Program Report to the Governor by September 30, 2008, as required by Section 1420(c)(3) of the Federal Safe Drinking Water Act, would result in a 20% withholding from the State's annual DWSRF allotment.

To date, the USEPA has not withheld any DWSRF monies and has routinely approved NJDEP's annual workplans and budgets regarding the intended use of funding. Also, the USEPA has formally established, as part of the grant award process, that the NJDEP continue to implement a fully functional New Systems Capacity Program and Capacity Development Strategy as demonstrated and set forth in various reporting requirements, such as the Intended Use Plan and ongoing implementation reports.

## **SECTION II**

### **Implementation – Description of Activities**

This section will review the activities conducted to date in implementing the Capacity Development Program.

- a. Section 1420(b)(1) of the Federal Safe Drinking Water Act requires that the NJDEP periodically (every 3 years) submit to the USEPA a report of community water systems and non-transient, non-community water systems with a history of significant non-compliance (SNC). The first report was due by August 6, 1997. The following is a summary of this ongoing effort:
  - July 30, 1997, the NJDEP submitted the first report containing 55 community water systems and 92 non-community water systems for a total of 147 systems with a history of significant non-compliance.
  - August 1, 2000, the NJDEP submitted the second report containing 43 community and 67 non-community water systems for a total of 110 systems with a history of significant non-compliance.
  - July 30, 2003, the NJDEP submitted the third report containing 7 community and 21 non-community water systems for a total of 28 systems with a history of significant non-compliance.
  - June 23, 2006, the NJDEP submitted the fourth report containing 27 community and 23 noncommunity water systems for a total of 50 systems with a history of significant noncompliance.

Please refer to Section III, item b, for a comparison of the History of Significant Non-Compliance Reports.

- b. Section 1420(a) of the Federal Safe Drinking Water Act requires the NJDEP to obtain the legal authority to ensure that all new water systems demonstrate adequate capacity.

On August 2, 1999, the New Jersey Safe Drinking Water Act was amended at N.J.S.A. 58:12A-4c(5)(b) to give the NJDEP explicit authority to require new systems to demonstrate adequate technical, managerial, and financial capacity.

On September 20, 1999, the NJDEP submitted a plan to the USEPA for ensuring that new community and new non-transient, non-community water systems demonstrate adequate capacity. As part of the plan, New Jersey promulgated rules that were adopted on July 31, 2000 requiring technical, managerial, and financial capacity for new systems. These rules (N.J.A.C. 7:10-13) became effective on August 21, 2000.

- c. Section 1420(c) of the Federal Safe Drinking Water Act requires that the NJDEP establish a Capacity Development Strategy for all existing public water systems by October 2000.

On August 3, 2000, the NJDEP submitted to the USEPA the State's Capacity Development Strategy. The Strategy was approved by the USEPA on September 28, 2000.

- d. Section 1420(b)(2) of the Federal Safe Drinking Water Act requires the NJDEP to submit a report to the USEPA by August 6, 2001 that details the success of enforcement mechanisms and initial capacity development efforts in helping public water systems improve their technical, managerial, and financial capacity.

On August 2, 2001 the NJDEP submitted to the USEPA a report entitled "The Success of Enforcement Mechanisms and Initial Capacity Development Efforts in Helping Water Systems Having a History of Significant Non-Compliance." This report satisfied the requirements of Section 1420(b)(2) of the Federal Safe Drinking Water Act.

- e. In accordance with the approved Capacity Development Strategy, the NJDEP committed to preparing periodic Strategy Lists that identify those public water systems requiring capacity development. The criteria used to identify and prioritize public water systems includes the following: population served, type of public water system, significant non-compliance status, maximum contaminant level violations, monitoring and reporting violations, formal enforcement actions, and inspection deficiencies. Using the aforementioned criteria, systems were

ranked as low, medium, or high. Systems ranked “high” were recognized as not having adequate capacity and consequently, require capacity development.

- December 2001 – NJDEP prepared the first Strategy List entitled “Report on Strategy List of Public Water Systems” using data from the 18 month period of January 2000 through June 2001. The Strategy List identified 15 community water systems and 19 non-community water systems for a total of 34 systems requiring capacity development. Refer to Appendix B for a summary status of systems appearing on the 2001 Strategy List.
- February 2004 – NJDEP prepared the second Strategy List entitled “Report on Strategy List of Public Water Systems” using data from the 18 month period of January 2002 through June 2003. This Strategy List identified 6 community water systems and 11 non-community water systems for a total of 17 systems requiring capacity development. Refer to Appendix B for a summary status of systems appearing on the 2004 Strategy List.
- August 2007 - NJDEP prepared the 2007 Capacity Development Annual Report which presented the Interim 2007 Strategy List. This Interim 2007 Strategy List included the water systems from the 2001 and 2004 Strategy Lists with unresolved issues, and additional water systems identified as having Significant Non-Compliance or other needs requiring capacity development assistance based on the knowledge and experience of program staff. This Strategy List identified 19 community water systems and 20 non-community water systems for a total of 39 water systems requiring capacity development. The 2007 Capacity Development Annual Report indicated that the NJDEP would develop a Final 2007 Strategy List and that revisions were anticipated to the strategy list development process.
- August 2008 - NJDEP prepared the 2008 Capacity Development Annual Report which presented the Final 2007 Strategy List. Based on review performed in State Fiscal Year 2008, the NJDEP adopted the 2007 Interim Strategy List without revision as the Final 2007 Strategy list. Refer to Appendix B for a summary status of systems appearing on the 2007 Strategy list.

Please refer to Section III, item b, for a comparison of the Strategy Lists.

- f. In accordance with the approved Capacity Development Strategy, the NJDEP performs capacity evaluations and provides technical assistance to promote the capacity of water systems ranked “high” on the Strategy List.

The water systems ranked “high” on the Strategy Lists (refer to Section II, item e) receive a comprehensive capacity evaluation. Upon completion of their evaluation, each public water system receives a written report stating the



findings and appropriate actions and/or recommendations necessary to achieve and maintain compliance. The appropriate technical assistance is provided to each public water system throughout the process of capacity development. In addition, the availability of low interest loans and/or grant monies is identified as a resource to promote their compliance.

On March 5, 2004, the NJDEP executed a contract and "Notice to Proceed" with the New Jersey Water Association (a non-profit organization) to support the capacity evaluation and technical assistance processes for water systems ranked "high" on the Strategy List. This contract streamlined the capacity development process for existing systems by having the capacity evaluation performed and technical assistance provided by the same entity. In addition, this approach has helped to overcome resistance by some water systems to a State regulatory agency offering assistance. The NJDEP continues to provide coordination and assistance to both the New Jersey Water Association and to the water system, as needed.

The maximum obligation of this contract was \$100,000. This contract, which was extended from August 2006 to February 2008, had a maximum monetary obligation of \$100,000 for activities related to the Capacity Development Program and \$69,485 was dispersed for services rendered in previous fiscal years. Although continued activities were projected in the work plan, the NJDEP did not use the services in SFY2008 and did not extend the contract. As a result, no on-site capacity evaluations or technical assistance site visits were conducted by NJWA and no contract management or coordination activities were provided by the NJDEP in SFY2008.

Instead, the NJDEP applied its resources to re-evaluate its Strategy and consider alternative approaches for this aspect of the Program. At the same time, the NJDEP provided direct, on-site capacity evaluations and technical assistance to a limited number of targeted systems to ensure continued implementation of the Strategy in SFY2008. De-obligating the remaining \$30,515 from the previous contract, revising the existing Strategy, drafting a contract for an independent analysis of the Program, and drafting language for a new contract for services designed to provide more effective Technical, Managerial, and Financial Capacity Development assistance are also among the ongoing activities.

These efforts resulted in a decision to enhance/modify the current approach by adding provisions to implement an asset management program consistent with certain national trends for Capacity Development. The application of tools such as USEPA's recently released Check Up Program for Small Systems (CUPSS) to develop asset management plans for targeted systems and the promotion of financial planning tools to ensure necessary funds are available to sustain infrastructure will be added to the Program.

Another component of the contract with New Jersey Water Association involves the provision of providing engineering services (free of charge) for small water systems (serving less than 3,300 persons). The maximum obligation of this portion of the initial contract is \$200,000 which was fully utilized to assist two small water systems. The new contract with New Jersey Water Association effective through August 2009, for \$400,000 to assist small water systems for engineering services is being utilized to assist five (5) small water systems.

A recurring deficiency of the State Safe Drinking Water Act Regulations noted through working with small community water systems, reviews of Standard Compliance Inspection reports, and comments received during NJDEP sponsored regulatory update workshops, was the lack of system-specific Operations Plans. To address this deficiency, the NJDEP developed an Operations Plan template for water systems to use as a model for their preparation of an Operations Plan. The template was made available on the NJDEP's Water Supply web page in January 2005, disseminated during ongoing continuing education workshops for licensed operators/water system owners, and utilized by the New Jersey Water Association as part of their technical assistance efforts.

- g. In accordance with the approved Capacity Development Strategy, the NJDEP provides public water systems with accurate, timely, and appropriate information to promote their compliance with the Safe Drinking Water Act Regulations.

In calendar year 1999, the NJDEP initiated a notable technical assistance effort to help public water systems comply with Federal and State Safe Drinking Water Act Regulations by preparing system specific monitoring schedules.

The monitoring schedules are complicated and vary among water systems based on population, source of water, and past compliance with schedules.

The following is a summary of this effort:

- Calendar years 1999, 2000, and 2001 - monitoring schedules were completed each year for approximately 600 community water systems.
- Calendar year 2002 and 2003 - monitoring schedules were extended to include, for the first time, non-transient, non-community water systems (approximately 900 additional systems). Eighty percent (80%) of approximately 1500 total monitoring schedules were completed for 2002; Ninety (90) % for 2003.
- Calendar years 2004, 2005, 2006 and 2007- One hundred percent (100%) of approximately 1500 total monitoring schedules were completed for community and non-transient, non-community water systems. In addition,

the NJDEP posted monitoring schedules on the Division of Water Supply's web site in 2007 and 2008.

Since implementation of the program activity for issuing system specific monitoring schedules, the NJDEP has received many written and verbal notes of appreciation from various community and non-transient, non-community water systems. Water systems have recognized that this effort has assisted them in complying with the monitoring and reporting requirements of the Federal and State Safe Drinking Water Act Regulations, and has helped the water systems avoid violations. The NJDEP views this activity of establishing system specific monitoring requirements as an essential task in promoting the compliance of public water systems.

In January 2003, the NJDEP initiated another notable technical assistance effort to promote compliance with the nitrate requirements of 40 CFR 141.23 (increased monitoring, and/or public notifications due to elevated concentrations of nitrate in the water supply). All incoming nitrate results for non-community water systems are reviewed by designated staff who in turn issue appropriate guidance to the water system in a timely manner. Written correspondence regarding maximum contaminant level violations, which include public notification requirements and increased monitoring requirements, and reduced monitoring requirements, are now issued on a regular basis to non-community water systems and to their contract laboratory. This ongoing effort has resulted in a marked decline in nitrate monitoring and reporting violations, and an increase in timely public notifications.

Similarly, in Fall 2005, the NJDEP initiated a technical assistance effort to promote compliance with the arsenic requirements, as New Jersey maintains a standard more stringent than the Federal requirements. This ongoing effort provides guidance to affected water systems.

- h. In accordance with the approved Capacity Development Strategy, the NJDEP conducts presentations on the goals and processes of the Capacity Development Program.

The goals and process of the Capacity Development Program are thoroughly covered as part of continuing education seminars offered through Rutgers University and the New Jersey Water Association. Rutgers University has provided an annual two-day workshop each year to licensed operators and water system owners/managers since calendar year 2000.

In addition, similar presentations are periodically provided at courses sponsored by the New Jersey Water Association. The Capacity Development Program has also sponsored several workshops with county health agencies to review the

requirements of the Capacity Development Program as they apply to new non-transient water systems. The continuing education seminars and workshops will continue to be provided.

- i. In accordance with the approved Capacity Development Strategy, the NJDEP prepared a baseline report to be used for measuring improvements in public water system capacity over time.

The report entitled "Report on Baseline Assessment of Public Water Systems for Calendar Year 1998" was prepared by the NJDEP in July 2001. Calendar year 1998 was selected to represent the baseline of systems since this timeframe preceded capacity development efforts.

- j. In accordance with the approved Capacity Development Strategy, the NJDEP prepares periodic assessment reports to be used as benchmarks for comparison and measuring improvements in public water system capacity.

- September 2002 – NJDEP prepared the report entitled "Report on Assessment of Public Water Systems for Calendar Year 2001." Calendar year 2001 was selected because it represented a full compliance year for comparison with the 1998 Baseline Report referenced above that was addressed in the first report to the Governor due September 30, 2002.
- August 2005 – NJDEP prepared the report entitled "Report on Assessment of Public Water Systems for Calendar Year 2004." Calendar year 2004 was selected because it represented a full compliance year for comparison with the 1998 Baseline Report and the Assessment Report for 2001. A comparison of all three reports is addressed as part of Section III of this report.
- August 2008- NJDEP prepared the report entitled "Report on Assessment of Public Water Systems for Calendar Year 2007." Calendar year 2007 was selected because it represented a full compliance year for comparison with the 1998 Baseline Report, the 2001 Assessment Report and the 2004 Assessment Report.

Please refer to Section III, item b, for a comparison of the baseline report to the subsequent Assessment Reports.

- k. The NJDEP's Zero Tolerance Policy is another initiative that supports the goals of the Capacity Development Program and has been effective in helping to reduce the number of public water systems in violation of the Safe Drinking Water Act Regulations.

In January 1999 an enforcement initiative referred to as the “Zero Tolerance Policy” was implemented for safe drinking water monitoring and reporting violations. Under this policy, community water systems with any confirmed violations are issued formal enforcement actions with administrative penalties. This initiative has been effective in establishing a commitment from community water systems in meeting the requirements of the Safe Drinking Water Act Regulations.

On July 1, 2000 the Zero Tolerance Policy was expanded to include public non-community water systems in an effort to improve their level of compliance. The County Environmental Health Act (CEHA) agencies implement this enforcement effort on the county level and take mandatory enforcement actions and penalty assessments against any non-community water system with confirmed monitoring and reporting violations occurring after July 1, 2000.

The Zero Tolerance Policy has affirmed to public water systems their responsibility to comply with the Federal and State Safe Drinking Water Act Regulations. In addition, it establishes that their failure to comply with the Regulations results in mandatory enforcement actions and penalties by CEHA agencies and the NJDEP. With the adoption of the Zero Tolerance Policy, public water systems recognize the benefit of entering into a cooperative relationship with the NJDEP to improve their capacity and avoid formal enforcement actions and/or penalties.

The NJDEP continues to enforce the Zero Tolerance Policy.

- I. Three other NJDEP initiatives that support the goals of the Capacity Development Program are Violation Evaluation, Small Water System Technical Assistance Program, and the Operator Certification Program.

#### Violation Evaluation

- In January 2000, the NJDEP implemented a process to timely and individually evaluate monitoring and reporting violations generated by the NJDEP's automated compliance determination system. Monitoring and reporting violations were routinely evaluated through the combined efforts of the drinking water program, the enforcement program, and the delegated CEHA agencies.

The process involved a comprehensive review of system inventory and data verification for all public water systems to ascertain the accuracy and status of violations. In some instances, violations were deleted due to data error. Data error can result from systems that have undergone a classification change that altered their monitoring requirements, or have become inactive due to going out of business or connecting to another public water system.

Through this effort, a more accurate inventory is maintained and water system owners are advised of the violation(s) in a timelier manner so that corrective measures can be taken by willing owners. This effort has yielded significant reductions in the number of public water systems listed as being in significant non-compliance as evidenced in Section III of this Report.

In June 2004, the NJDEP initiated the use of its automated compliance determination system to the Federal Safe Drinking Water Information System (SDWIS) software program. The SDWIS program was developed by the USEPA for data management and violation reporting regarding public water systems in each state. The SDWIS program tracks sample results and enables a more timely response to water quality issues (such as exceeded maximum contaminant levels and/or elevated contaminant concentrations) than with prior drinking water data management systems.

The SDWIS program makes data available in real-time, rather than waiting on weekly updates, as performed by the previous data management system. Maximum contaminant level violations are generated nightly and compliance reports for monitoring and reporting violations are prepared quarterly (with the exception of total coliform monitoring for community water systems, which is generated monthly). Once a compliance report is run, candidate violations (whether maximum contaminant level or monitoring and reporting) are generated. The candidate violations must then be verified and authenticated. The SDWIS program has greatly improved the NJDEP's violation response time and is expected to further reduce the number of systems with a history of significant non-compliance.

#### Small System Technical Assistance Program

- The 1996 Federal Safe Drinking Water Act Amendments provided the NJDEP with Drinking Water State Revolving Fund monies for small public water system technical assistance. The NJDEP recognizes that small water systems (serving less than 3,300 people) make up a large portion of systems in significant non-compliance. This category of public water systems typically does not have the resources and, more importantly, the expertise of larger systems to comply with the Federal and State Safe Drinking Water Act Regulations.

In July 2000, the NJDEP awarded a small water system technical assistance contract to the New Jersey Water Association. This contract includes training sessions to help small water systems understand Safe Drinking Water Act Regulations, and one-on-one onsite technical assistance for systems with compliance issues. Technical assistance is prioritized to those systems that



are in significant non-compliance status or have persistent monitoring and reporting violations.

The NJDEP did not use the one-on-one onsite assistance component of this contract for much of the reporting period. Instead, the focus of this New Jersey Water Association contract was providing training to small water systems. In the meantime, the NJDEP performed a limited number of on-site technical assistance evaluations, some of which included managerial assistance. One new staff person transferred into the Capacity Development Program of the NJDEP at the end of State Fiscal Year 2007 and was assigned to implement the Capacity Development Strategy for existing systems. During State Fiscal Year 2008, the new staff person participated in a number of on-site technical assistance evaluations. This staff person also received training and performed other Capacity Development activities such as a) evaluating the existing Capacity Development Strategy, b) developing a revised Capacity Development strategy, c) establishing benchmarks for measuring Technical, Managerial and Financial capacity, d) drafting a contract for services and a contract for independent analysis of the Program, and e) providing small system technical assistance. Another staff person was reassigned from the Technical Assistance Section of the Bureau of Safe Drinking Water to conduct on-site technical evaluations for existing non-community systems during the latter portion of State Fiscal Year 2008. The program will continue to provide direct assistance on a limited basis.

#### Operator Certification Program

- N.J.A.C. 7:10A, *Licensing of Water Supply and Wastewater Treatment System Operators*, establishes the rules governing the eligibility, examining, and licensing of persons as operators of Industrial Wastewater Treatment Systems, Public Wastewater Treatment Systems, Public Wastewater Collection Systems, Public Water Treatment Systems, and Public Water Distribution Systems.

October 2, 2000 amendments required all licensees to obtain continuing education for license renewal, and all public community water systems and public non-transient, non-community water systems to be under the direct supervision of a licensed operator who is competent to ensure the operation and maintenance, and overall effectiveness of the water system.

On July 7, 2008, NJDEP published a rule readoption proposal with amendments. These amendments include clarification of continuing education requirements, licensed operator duties, and operation and maintenance procedures.

## SECTION III

### Evaluation – Efficacy of the Capacity Development Program:

This section will review the progress in meeting the objectives of the Capacity Development Program.

#### a. Progress in Reviewing the Capacity of New Water Systems

##### Community Water Systems

To date, the NJDEP has added fifty (50) new community water systems to its inventory of public water systems since the effective dates of the Interim Policy of the Capacity Development Program (October 1, 1999) and the subsequent new Regulations at N.J.A.C. 7:10-13 (August 21, 2000), as described in Section I, Background of this report.

Two (2) systems received a capacity evaluation under the Interim Policy and seven (7) systems received an evaluation under the Regulations. The remaining forty one (41) systems did not meet the definition of a “new system”, meaning that the water systems were not newly constructed or did not require an expansion of their infrastructure to become a community water system and consequently did not require a technical, managerial, and financial review.

Most new community water systems were a reclassification of an existing water system or the identification of a previously unregulated water system in existence prior to the effective date (August 21, 2000) of the Regulations. To date, no new community water system proposals have been denied approval based on technical, managerial, or financial capacity requirements. To date, all new community water systems that were approved under the Capacity Development Program are in good standing and are not in significant non-compliance nor demonstrated any other pattern of non-compliance.

##### Non-Transient, Non-Community Water Systems

To date, the NJDEP has added three hundred six (306) new non-transient, non-community water systems to its inventory of public water systems since the effective dates of the Interim Policy (October 1, 1999) and the subsequent Regulations at N.J.A.C. 7:10-13 (August 21, 2000).

Thirty-seven (37) systems received a capacity evaluation under the Interim Policy and the Regulations. The remaining two hundred sixty nine (269) systems did not meet the definition of a “new system”, meaning that the water systems were not newly constructed or did not require an expansion of their



infrastructure to become a non-transient, non-community water system and consequently did not require a technical, managerial, and financial review.

Most new non-transient, non-community water systems were reclassified from another type of public water system or were identified as a regulated water system, although built prior to the effective date of the regulations. To date, no new non-transient, non-community water system proposals have been denied approval based on technical, managerial, or financial capacity requirements

As reported in the Status Report on the Implementation of New Jersey's Capacity Development Program, dated September 2005, the NJDEP initially had some success in implementing the Regulations for new non-transient, non-community water system through the County Environmental Health Act (CEHA) agencies. However, the NJDEP found the process of performing capacity evaluations varied among the CEHA agencies. Consequently, NJDEP began a concerted effort to improve the overall implementation of the Capacity Development Program and the approval of new non-transient, non-community water systems. This effort was initiated in August 2001 and required staff of the Capacity Development Program to visit each CEHA agency and provide training on the following: 1) performing technical, managerial, and financial evaluations in accordance with N.J.A.C. 7:10-13, and 2) reviewing the applicability of new water systems. NJDEP's success in implementing the requirements of the Capacity Development Program improved substantially during calendar years 2002 and 2003. However, the NJDEP has experienced reductions in available staff resources, and has not been able to continue this training initiative. As of 2008, some CEHA agency representatives are capable of performing applicability determinations, while others do not have sufficient resources to perform Technical, Managerial, and Financial evaluations in accordance with N.J.A.C. 7:10-13. The NJDEP is currently performing Capacity Development determinations for new non-transient non-community water systems as needed.

b. Progress in Improving Capacity of Existing Water Systems

To evaluate and measure improvements with the Technical, Managerial, and Financial Capacity of existing public community and non-transient non-community water systems, the NJDEP compared the findings of the following three Capacity Development Program tasks as detailed in Section II of this Report:

1. History of Significant Non-Compliance Reports (1997, 2000, 2003 and 2006),
2. Strategy Lists (2001, 2004, and 2007), and
3. Baseline Report (1998) and subsequent Assessment Reports (2001, 2004 and 2007).

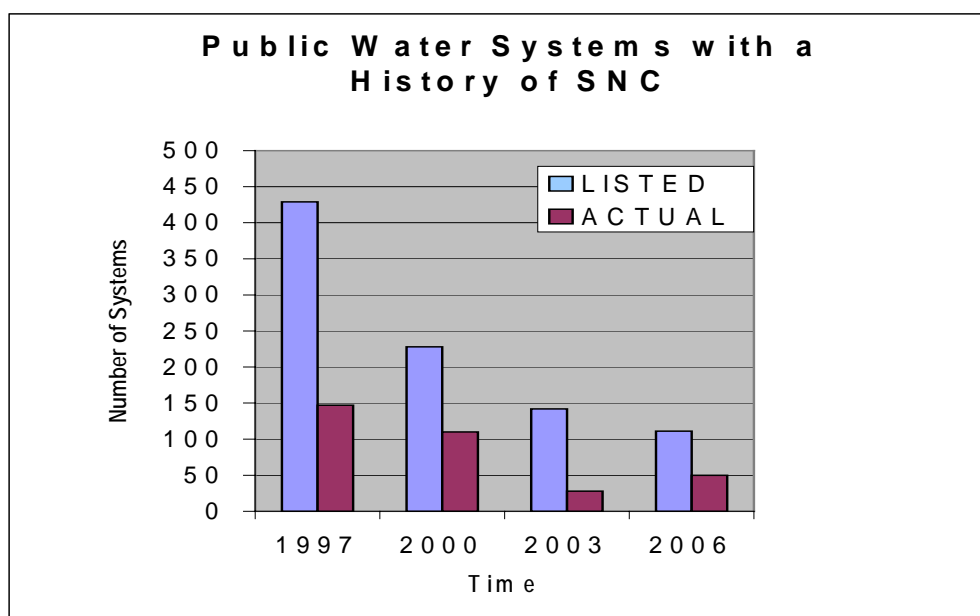
Refer to Section II, items a, e, and j, respectively.

### Comparison of History of Significant Non-Compliance Reports

A noteworthy observation from the comparison of the history of significant non-compliance reports is that there has generally been a reduction in the total number of public water systems with a history of significant non-compliance since the first report of 1997. The number of public water systems with significant non-compliance from 1994-1996 (1997 report) was 147, compared to 110 in 2000, 28 in 2003, and 50 in 2006.

Figure 1 highlights the reduction in the number of public water systems with a history of significant non-compliance cited in the 1997, 2000, 2003 and 2006 reports:

**Figure 1.**



Note: The blue bar depicts the number of systems with potential violations. The red bar represents the number of systems with confirmed violations.

The number of public water systems with a history of significant non-compliance identified in 2006 continues to represent a relatively small percentage of the total number of community water systems and non-transient non-community water systems in New Jersey. Only Community Water Systems and nontransient noncommunity water systems are included on the significant noncompliance list. Out of a total of approximately 1,500 such systems that were operating during 2003-2005, three percent (50 systems) had a confirmed history of SNC during the period compared to nine percent for the 1994-1996 period in the 1997 report. However, it must be noted that there was a large increase in the number

of actual systems in SNC from the 2003 to the 2006 report. This increase may be partly attributed to three new Safe Drinking Water Act rules that went into effect after 2004: the Disinfection Byproduct rule, the Arsenic rule, and the Radiological rule. In addition, New Jersey adopted a maximum contaminant level, or MCL, for arsenic in 2004 that was more stringent than the Federal standard for arsenic. Also, the NJDEP believes that this increase may be the result of the NJDEP's on-going conversion of its data management system to the new Federal system (SDWIS) during this period.

### Comparison of Strategy Lists

Strategy Lists are developed to identify those public water systems most in need of capacity development and to prioritize the Program's resources for performing capacity evaluations and providing assistance. The first strategy list was compiled in December 2001 from a review of the compliance status during the preceding 18-month timeframe from July 2000 – December 2001. The second strategy list was compiled in February 2004 from a review of the compliance status during the 18-month timeframe of January 2002 – July 2003. The third strategy list was compiled in August 2007 as an Interim Strategy List, from a review of the compliance status, and finalized in August 2008.

The status of the water systems on the Strategy List were assessed using the following criteria: population served, type of water system, significant non-compliance status, maximum contaminant level (MCL) violations, monitoring and reporting violations, formal enforcement actions, and infrastructure deficiencies. Applying the listed criteria, systems were ranked as low, medium, or high on the 2001 and 2004 lists. Systems ranked "high" are recognized as not having adequate Technical, Managerial, and Financial Capacity and consequently require Capacity Development.

The 2001 Strategy List indicated that of the 606 public community water systems reviewed, 15 systems were ranked as "high" priority, 53 were ranked as "medium" priority, and 135 were ranked as "low" priority. Of the 3,617 non-community water systems, 19 systems were ranked as "high" priority, 229 were ranked as "medium" priority, and 330 were ranked as "low" priority.

The 2004 Strategy List indicated that of the 608 community water systems reviewed, 6 systems were ranked as "high" priority, 39 were ranked as "medium" priority, and 129 were ranked as "low" priority. Of the 3,442 non-community water systems reviewed, 11 systems were ranked as "high" priority, 170 were ranked as "medium" priority, and 272 were ranked as "low" priority.

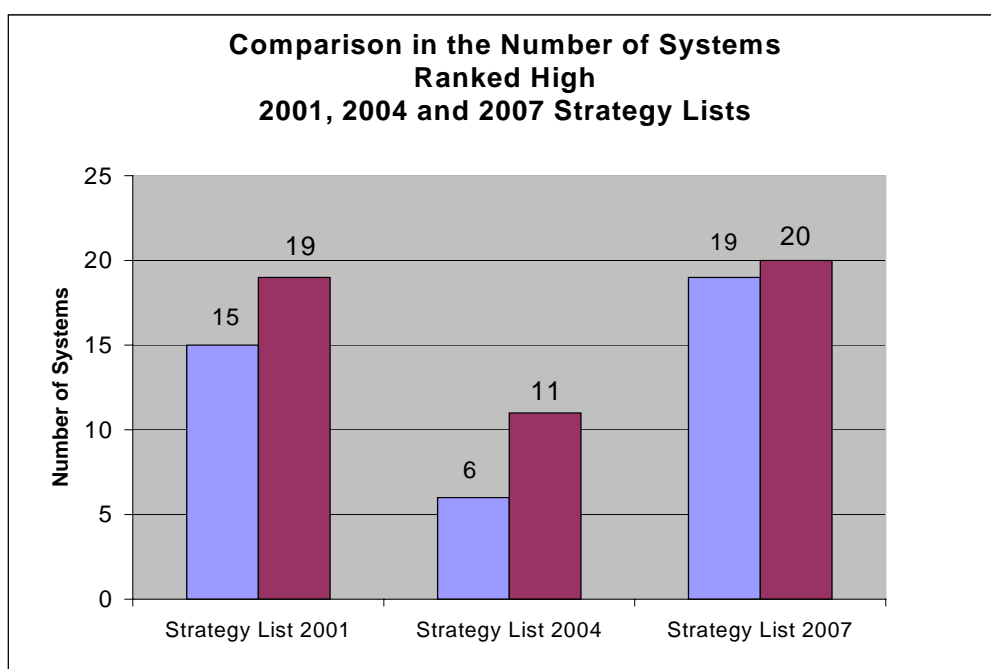
An Interim 2007 Strategy List was developed and included in the August 2007 Capacity Development Annual Report. As stated in the 2008 Capacity

Development Annual Report, this list was adopted without changes and is now the Final 2007 Strategy List. The Final 2007 Strategy List includes high priority systems from the 2001 and 2004 lists that remain unresolved and out of compliance. Additionally several "high" priority water systems, e.g. Sea Village Marina, were added based on staff knowledge of the compliance problems of the water systems. The 2007 Strategy List indicated that of the 617 community water systems, 19 systems were identified as high priority. Of the 3471 non-community water systems, 20 systems were identified as "high" priority.

For 2007, the focus of the Capacity Development Program is on addressing Technical, Managerial, and Financial needs of high priority water systems.

Figure 2 compares the number of systems on the Strategy Lists of 2001, 2004, and 2007 ranked by NJDEP as "high."

Figure 2.



The comparison of the 2001 Strategy List to the 2004 Strategy List shows a marked reduction in the number of community water systems (from 15 to 6) and non-community water systems (from 19 to 11) that ranked "high." It is important to note that the criteria used for preparation of the 2004 Strategy List was modified from the criteria used in 2001 to be more restrictive, specifically maximum contaminant level and monitoring and reporting violations were weighted differently in 2004 than 2001. Also, four (4) of the six (6) community

water systems on the 2004 Strategy List are continuations/carryovers from the 2001 Strategy List.

The comparison of the 2004 Strategy List to the 2007 Strategy List shows an increase in the number of community water systems (from 6 to 19) and noncommunity water systems (from 11 to 20). The 2007 Strategy List shows the combination community and noncommunity water systems ranked "high" from the 2001 and 2004 list, with unresolved issues carried forward, and the recognition of additional water systems with capacity development needs.

Refer to Appendix B for a brief summary of the Strategy Lists for 2001, 2004, and 2007.

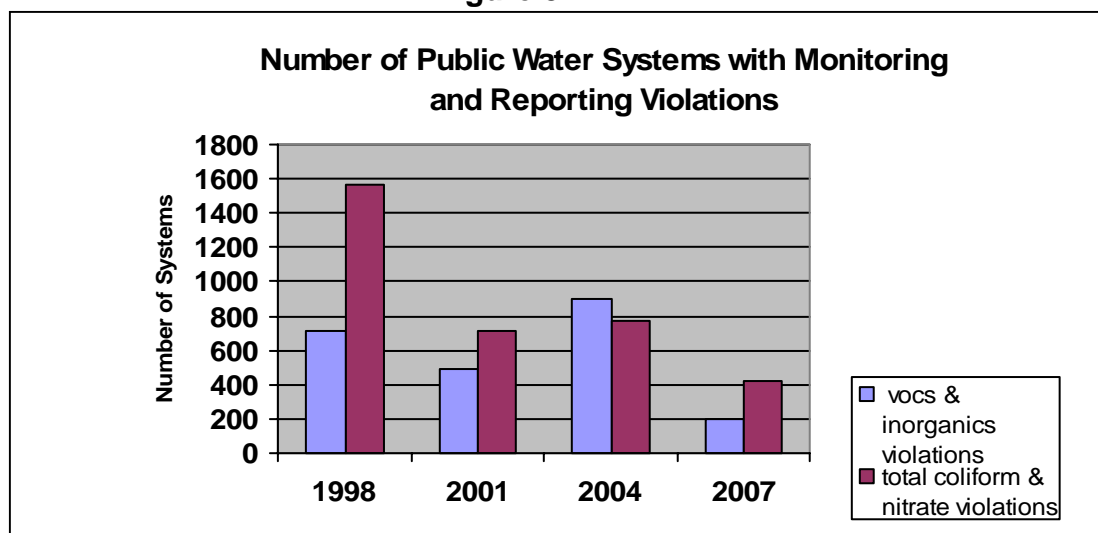
#### Comparison of the 1998 Baseline Report on violations to subsequent Assessment Reports

- Public water systems with monitoring and reporting violations

The comparison of the 1998 Baseline Report with the subsequent assessment reports of 2001, 2004, and 2007 indicates an overall significant reduction in Monitoring and Reporting violations from 1998 to 2007. The capacity development program is progressing because the Division of Water Supply is capturing more information and notifying the systems of Monitoring and Reporting violations in a faster timeframe due to the initialization of the SDWIS State software program in 2004. The number of public water systems with valid monitoring and reporting violations for volatile organic compounds and inorganic contaminants in 1998 was 711, compared to 486 in 2001, compared to 903 in 2004, and compared to 198 in 2007. The number of public water systems with valid monitoring and reporting violations for total coliform and nitrates in 1998 was 1568, compared to 710 in 2001, compared to 776 in 2004, and compared to 422 in 2007.

Figure 3 illustrates the number of public water systems with valid monitoring and reporting violations recorded for calendar years 1998, 2001, 2004 and 2007.

**Figure 3.**



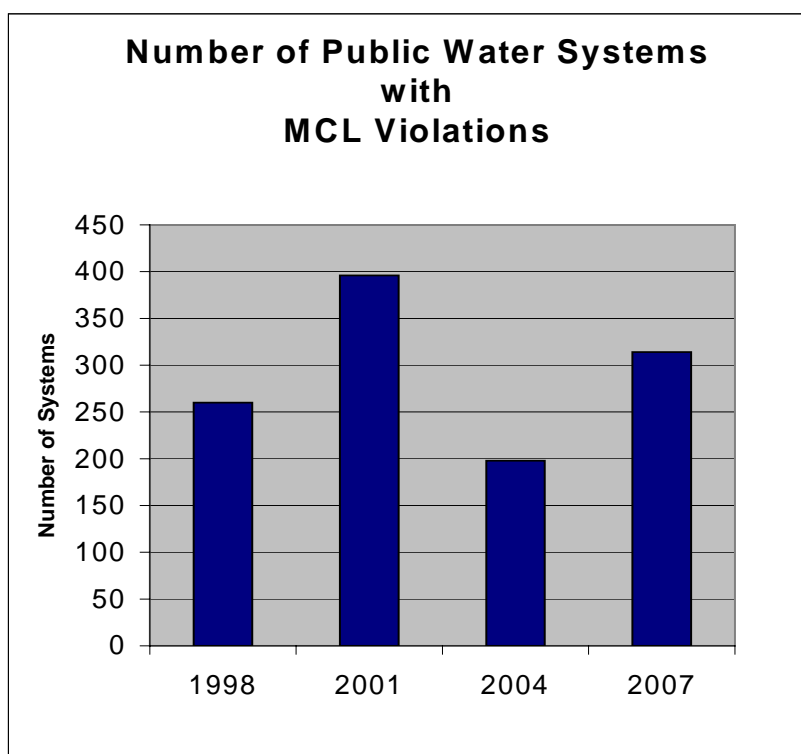
The number of violations depicted for calendar years 1998, 2001, 2004 and 2007 represent valid monitoring and reporting violations for volatile organic compounds and inorganic contaminants (chronic contaminants) are in blue and total coliform and nitrate violations (acute contaminants) in purple.

- Public water systems with Maximum Contaminant Level (MCL) violations

The comparison of the 1998 Baseline Report with the subsequent assessment reports 2001, 2004, and 2007, indicates a slight increase in MCL violations from 1998 to 2007. However, from 2004 to 2007 the number of systems with maximum contaminant levels violations increased, which can attributed to three new Safe Drinking Water Act rules that went into effect after 2004. These rules include the Disinfection Byproduct rule, Arsenic rule, and Radiological rule. In addition, New Jersey state regulations include criteria for Volatile Organic Chemical, Inorganic Chemical, and Radiological contaminants that are more stringent than federal requirements. The number of public water systems with MCL violations of the Safe Drinking Water Act standards in 1998 was 260, 396 in 2001, 198 in 2004, compared to 314 in 2007.

Figure 4 illustrates the number of public water systems with MCL violations recorded for calendar years 1998, 2001, 2004 and 2007.

**Figure 4.**



The number of violations depicted for calendar years 1998, 2001, 2004 and 2007 represents valid MCL violations for the following parameters: total coliform, nitrate, inorganics, volatile organic compounds, synthetic organic compounds, and radionuclides as the NJDEP's current data management system is fully functional and accurate for this information.

A public water system which incurs a MCL violation can still return to compliance with the regulations as long as the violation is addressed within one year of the violation date, in accordance with New Jersey's Safe Drinking Water Act Regulations, N.J.A.C. 7:10-5.7. Typically a public water system addresses a MCL violation by providing treatment to remove the contaminant. Other approved corrective actions include: connecting to another public water system, replacing the existing source of water with a new source which meets all drinking water standards, or demonstrating with analytical results that their current source of water no longer exceeds the MCL.

## SUMMARY

The NJDEP attributes the observed improvement in public water system compliance, as demonstrated in Section III of this Report, in part to the successful implementation of the efforts and mechanisms established under Safe Drinking Water Program, including the Capacity Development Program and the coordination of activities under the NJDEP's Enforcement Program, Small Water System Technical Assistance Program, and Operator Certification Program.

The NJDEP's Capacity Development Program is making progress in addressing non-compliance and promoting the Technical, Managerial, and Financial Capacity of public water systems in the State by focusing on the 2007 Strategy List. The NJDEP anticipates that the collective efforts detailed in this Report will continue promote compliance with the Federal and State Safe Drinking Water Act Regulations and reduce the number of public water systems with violations.

The significant elements that have brought about a higher level of compliance with the drinking water standards are:

- Small System Technical Assistance
  - contracted services (New Jersey Water Association)
  - by the NJDEP (Capacity Development and Small Water System Assistance Programs)
- Zero Tolerance Policy for safe drinking water monitoring and reporting violations
- Violation Evaluation
  - improved data management

- maintenance of an accurate inventory of systems and the status of violations.
- Monitoring Schedules issued each year
- Implementing the activities of the Capacity Development Strategy
- Operator Certification Program (extended to small community water systems and non-transient, non-community water systems)

The NJDEP will continue to implement its Capacity Development Program to address systems with chronic violations. Some considerations for improving the managerial and financial aspects of the Capacity Development Program continue to be:

1. Provide additional training to system owners/operators on asset management, operating a water system, and other managerial and financial aspects;
2. Establish services with certified public accountants to conduct financial evaluations and develop water system budgets and financial plans; and
3. Establish services with appropriate entities to perform asset evaluations at water systems and develop ongoing asset management plans.

In addition, the Capacity Development Program will undertake a more direct approach to promoting the compliance of transient water systems. In this regard, the Program will sponsor additional workshops specifically targeting the owners/operators of transient water systems. It is anticipated that this training/educational opportunity will help to reduce the higher incidence of monitoring and reporting violations among transient water systems.





## APPENDIX A

### Glossary of Terms

#### **Capacity Development Terms**

**Capacity:** is the ability to plan for, achieve, and maintain compliance with the Federal and State Safe Drinking Water Act Regulations and the ability to reliably produce and deliver water meeting all applicable drinking water standards. Capacity is measured by evaluating the technical, managerial, and financial capabilities of the water system.

**Technical Capacity:** refers to the adequacy, operation, and maintenance of a water system's infrastructure (infrastructure includes the source water, treatment, storage and distribution network of the water system). Technical Capacity also refers to the ability of qualified personnel to properly operate and maintain the system.

**Managerial Capacity:** refers to the expertise required of the personnel who administer the overall water system operations. This type of capacity also refers to the system's demonstration of clear ownership, proper organized staffing, and effective interaction with regulators and customers.

**Financial Capacity:** refers to the monetary resources available to a public water system to support the cost of operating, maintaining, and improving the water system. This type of capacity also refers to the demonstration of sufficient revenues, credit worthiness and fiscal management controls.

**Capacity Development:** is the process directed by the NJDEP through which water systems can improve their technical, managerial, and financial capacity to ensure compliance with current and future Safe Drinking Water Act Regulations.

**New Water System:** includes both community water and non-transient, non-community water systems being newly constructed, as well as systems which do not currently meet the definition of a public water system but expand their infrastructure (new sources of water, additional buildings) to become a community or a non-transient, non-community water system.

## **System Classification Terms**

**Public Water System:** is a system for the provision to the public of water for human consumption through pipes or other constructed conveyances, if such system has at least 15 service connections or regularly serves an average of at least 25 individuals daily at least 60 days out of the year. A public water system is either a community water system or a non-community water system. Non-community water systems are classified as either a non-transient or transient water systems.

**Community Water System:** is a public water system that serves at least 15 service connections used by year-round residents or regularly serves at least 25 year-round residents.

**Non-Transient, Non-Community Water System:** is a public water system that regularly serves at least 25 of the same persons per day more than six months in any given calendar year. Examples are schools, factories, offices, industrial parks, and major shopping centers.

**Transient, Non-Community Water System:** is a public water systems that serves at least 25 transient persons for at least 60 days in any given calendar year. Examples are restaurants, campgrounds, and hotels.

**Nonpublic Water System:** is a water system that regularly serves fewer than 15 service connections or 25 individuals.

**Significant Non-Compliance:** is a term used to define a water system that has violated one or more National Primary Drinking Water Act Regulations over an extended period of more than one monitoring period.

**History of Significant Non-Compliance:** is a term used to define a system that has been in significant non-compliance status for 3 or more quarters during a 3-year period.

## APPENDIX B

### CAPACITY DEVELOPMENT PROGRAM

#### Strategy List 2001 - Summary Status

##### Community Water Systems

Fifteen (15) community water systems ranked “high” on the 2001 Strategy List. Of these, ten (10) systems required a technical, managerial, and financial (TMF) evaluation, five (5) of which subsequently acquired TMF capacity and achieved full compliance, and five (5) of which have not achieved full compliance and are receiving ongoing assistance. Three (3) systems were returned to compliance as a result of the violation validation process and have since maintained compliance. Two (2) systems underwent a change in ownership; one (1) system acquired TMF capacity and achieved compliance, and one (1) system has not achieved full compliance and is receiving ongoing assistance.

To date, nine (9) of the fifteen (15) community water systems that ranked “high” on the 2001 Strategy List, or 60%, have achieved full compliance with the Safe Drinking Water Act Regulations. The remaining water systems are receiving ongoing assistance to promote their compliance.

##### Non-Community Water Systems

Nineteen (19) non-community water systems ranked “high” on the 2001 Strategy List. Of these, six (6) systems were deactivated due to connecting to community water systems and discontinuing use of their water supply, or due to a reclassification as a non-public water system and no longer being subject to the Safe Drinking Water Act Regulations. Eight (8) systems were returned to compliance as a result of the violation validation process and have since maintained compliance. Three (3) systems required a full TMF evaluation and subsequently acquired TMF capacity and achieved compliance. The two (2) remaining systems did not participate in the Capacity Development Program. One of the two systems was referred to the Camden County Health Department for enforcement actions and subsequently returned to compliance; the other recalcitrant system was referred to the Northern Bureau of Enforcement for enforcement actions to establish compliance.

To date, twelve (12) of the thirteen (13) active non-community water systems that ranked “high” on the 2001 Strategy List, or 92%, are in full compliance with the Federal and State Safe Drinking Water Act Regulations.

This summary demonstrates that the Capacity Development Program has been an effective tool in assisting public water systems in achieving compliance with the Safe Drinking Water Act Regulations. The Program clearly serves as an additional resource for water systems to utilize to receive the assistance and one-on-one attention not afforded by other NJDEP programs.

## Strategy List 2004 - Summary Status

### Community Water Systems

Six (6) community water systems ranked "high" on the 2004 Strategy List. Of these, four (4) systems are carryovers (reoccurring) from the 2001 Strategy List, one (1) of which has since acquired TMF capacity and achieved full compliance, and three (3) of which have not achieved full compliance and continue to receive ongoing assistance. Two (2) systems are new to the 2004 Strategy List, one of which is undergoing acquisition under the NJ Small Water System Takeover Act and the other which is under contract to connect to another community water system. TMF evaluations of these two systems are pending based on the status of their takeover/acquisition.

Eleven (11) non-community water systems ranked "high" on the 2004 Strategy List. Of these, one (1) system is expected to connect to a community water system as a result of offsite contamination impacts on their source water quality. Two (2) systems addressed historical violations, returned to compliance, and have since maintained compliance. The remaining eight (8) systems have ongoing TMF evaluations/technical assistance to be provided under contract with New Jersey Water Association.

## Strategy List 2007 - Summary Status

The 2007 Strategy List includes the water systems from the 2001 and 2004 Strategy Lists, which have unresolved issues, and additional water systems identified as "high" priority. This Strategy List identified 19 community water systems and 20 non-community water systems for a total of 39 water systems requiring capacity development.

The NJDEP has assisted these Public Community water systems : Sea Village Marina, Ridgewood Water Dept., Colonial Estates Mobile Home Community and Bloomsbury Water Department.

The NJDEP has assisted these public noncommunity water systems: Buck Tavern, American Cabinetry, Somerset hills Country Club, Tabatchnick Fine Foods, and Otto Kaufman Community Center.