

State of Connecticut  
Department of Public Health  
Drinking Water Section

Governor's Capacity Development Strategy Report  
for the period  
July 1, 2005 – June 30, 2008



Keeping Connecticut Healthy

September 2008

## Executive Summary

The Connecticut Department of Public Health (DPH) is the primacy agency for implementing and enforcing the Federal Safe Drinking Water Act (SDWA). The 1996 SDWA Amendments require primacy states to develop a Capacity Development Strategy that addresses the technical, managerial and financial (TMF) needs of public water systems (PWS). The Capacity Development provisions provide a framework for the State of Connecticut and the PWSs to work together to ensure that adequate capacity to comply with drinking water regulatory requirements is acquired and maintained. Capacity Development is an important component of Connecticut's focus on prevention and early detection of problems.

Connecticut has, for many years, recognized that certain various program components were necessary for a strong Capacity Development Strategy. Connecticut had already established into law the core of its Capacity Development Strategy well before the SDWA Amendments of 1996. Connecticut has a large number of PWSs: 579 community water systems (CWS) which serve a residential population; 606 non-transient non-community systems (NTNC), and 1,525 transient non-community systems (TNC), which serve non-residential populations. Since Connecticut is a relatively small State, it is obvious a strong Capacity Development Strategy is critical to address this disproportionate number of PWSs.

The first step in Connecticut's approach to capacity development is prioritizing systems. Systems are categorized by type, i.e., CWSs and non-community (NC) systems. Not all CWSs require assistance from the State in developing TMF capacity. The systems that lack capacity in one or more of the TMF areas are identified through a prioritization process using "triggers" that are recognized as indicators of concern. Some of these indicators are: systems listed on the annual non-compliance list, systems with monitoring and/or reporting violations, systems lacking certified operators, and systems with water quality violations. Historically, smaller systems are more apt to be "non-viable" since they lack the capital of larger systems, may lack technical, financial, and/or managerial expertise, and are often isolated and unable to physically interconnect or be consolidated.

This process serves to retain existing viable systems that operate in sound technical, managerial and financial manners, eliminate non-viable systems and prevent the creation of non-viable new PWSs. Restructuring of existing, non-viable systems can occur by direct acquisition or by contracting out services to such systems under receivership, or by some other alternative acceptable to the Connecticut DPH, and the Connecticut Department of Public Utility Control (DPUC). The Certificate of Public Convenience and Necessity (CPCN), also administered jointly, restricts the creation of new small systems by encouraging feasible interconnections with existing utilities and by regulating new system design and management. This is assisted by the Water Utility Coordinating Committee (WUCC) process that identifies water supply service area plans. Outreach activities are also an essential part of our Strategy and include educating municipalities and local health officials on drinking water elements, as well as the PWSs themselves.

The Drinking Water Section's Capacity Development Strategy is currently under revision and it is anticipated that the new Strategy will be submitted to US Environmental Protection Agency (EPA) for approval by December 31, 2008. The next Governor's Capacity Development Strategy Report for the period July 1, 2008 through June 30, 2009 will provide information on the modifications that were made.

## Acronyms

|        |                                                 |
|--------|-------------------------------------------------|
| CGS:   | Connecticut General Statutes                    |
| CPCN:  | Certificate of Public Convenience and Necessity |
| CWS:   | Community Water System                          |
| DPH:   | Department of Public Health                     |
| DPUC:  | Department of Public Utility Commission         |
| DWS:   | Drinking Water Section                          |
| DWSRF: | Drinking Water State Revolving Fund             |
| EDI:   | Electronic Data Interchange                     |
| EPA:   | Environmental Protection Agency                 |
| ESA:   | Exclusive Service Area                          |
| MCL:   | Maximum Contaminant Level                       |
| NC:    | Non-Community                                   |
| NTNC:  | Non-Transient Non-community                     |
| PWS:   | Public Water System                             |
| SDWA:  | Safe Drinking Water Act                         |
| SDWIS: | Safe Drinking Water Information System          |
| SNC:   | Significant Non-Complier                        |
| TMF:   | Technical, Managerial and Financial             |
| TNC:   | Transient Non-Community                         |
| WPC:   | Water Planning Council                          |
| WUCC:  | Water Utility Coordinating Committee            |

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## INTRODUCTION

The Connecticut Department of Public Health (DPH), as the primacy agency for implementing and enforcing the Federal SDWA, and the 1996 SDWA Amendments, is required to develop a Capacity Development Strategy that addresses the technical, managerial and financial (TMF) needs of public water systems (PWS). Technical capacity aspects of maintaining a PWS include source water adequacy, infrastructure adequacy and technical knowledge. Financial aspects include sufficient revenues, financial ability to maintain/operate systems, credit worthiness and satisfactory fiscal management and control. Managerial aspects include ownership accountability, adequate staff/organization, adequate planning and understanding of regulatory responsibilities.

Connecticut submitted its Strategy to the US Environmental Protection Agency (EPA) on August 4, 2000, and it was accepted on December 1, 2000. Connecticut was the first State in US EPA Region 1 to have its Strategy accepted. The SDWA further required Connecticut to adopt and implement its approved Capacity Development Strategy and, every 3 years, submit a report to the Governor on the efficacy of the Strategy and progress made since August 2000, toward improving the TMF capacity of its PWSs. The Federally approved Capacity Development Strategy for Connecticut has served to consolidate all programmatic activities within the Drinking Water Section (DWS) into a more cohesive, consistent effort. In establishing a directive to support viable systems and eliminate those systems unable to sustain acceptable levels of capacity, the Capacity Development Strategy has defined the direction toward which the DWS's resources can be applied effectively. It has also identified an intricate weave of program activities critical to its implementation.

- ❖ Emphasis on outreach activities due to its demonstrated, positive contribution to local health departments, municipal officials and the general public.
- ❖ Emphasis on outreach, compliance and technical assistance to all regulated PWSs.
- ❖ Emphasis on operator certification activities as supportive of professionalizing operators capable of addressing our new national infrastructure security concerns.
- ❖ Emphasis on data management/data entry procedures and processes critical to efficiently processing compliance determinations and supporting enforcement efforts.
- ❖ Emphasis on providing technical assistance to the Water Planning Council's technical review in the areas of the WUCC, the Certificate of Public Convenience and Necessity (CPCN) process and Water Supply Planning.
- ❖ Investigation of options to streamline loan process for small PWSs.

Connecticut's strategic approach to drinking water regulation has always been unique and progressive. The Capacity Development elements presented in this report are the tools used by the DWS that together form the strategy which is the basis of our program to maintain the viability of Connecticut's PWSs. The DWS has improved its Capacity Development Strategy and is currently making revisions to the initial document submitted in August 2000. The revision will be sent to EPA for approval by December 31, 2008.

This report to the Governor discusses each program initiative, presents its accomplishments and analyzes the successes. The DWS conducted the following activities in accordance with Section 1420(C) of the Safe Drinking Water Act and Amendments during the period July 1, 2005 – June 30, 2008.

## ***CAPACITY DEVELOPMENT PROGRAM INITIATIVES***

### **Planning Unit**

The planning process, which includes the WUCC, is designed to provide a forum that brings together water utility representatives, local officials, and other parties to discuss long-range water supply planning issues, establish exclusive service areas (ESA), and produce a coordinated water supply plan in each of 7 management areas statewide. Through this process, PWSs are encouraged to develop the capacity to provide appropriate regional drinking water service and thereby executing their responsibilities.

The “Connecticut Plan” is the water supply planning process that was promulgated by the legislature in 1986, and currently administered by the Planning Unit of the DWS. The Connecticut Plan addresses regional water supply needs under the individual water supply plan and regional long-term planning processes. DPH approval of each individual water supply plan and completion of each WUCC tries to ensure that issues surrounding quality and quantity of drinking water will be addressed at the local level.

The planning process is designed to bring water utility representatives and local officials together to discuss long-range water supply issues and to develop a coordinated water supply plan for addressing these issues in each management area. These coordinated plans are to be built upon individual water supply plans from each utility required to prepare such plans pursuant to CGS 25-32d and modified by regional requirements. The modifications, or the “area wide supplement”, must include an assessment of water supply problems and conditions within the management area, exclusive service area designations, and integration of individual water utility plans into a cohesive area wide plan, which emphasizes cooperation and coordination between PWSs.

The types of problems PWSs are faced with that lend themselves to area-wide analysis and solutions include:

- competition between PWSs for expansion of service areas
- increasing regulatory requirements
- aging and substandard infrastructure
- inadequate source protection
- difficulty in developing new water sources
- inadequate financing
- poor management
- uncoordinated planning among PWSs

**Planning Unit- Accomplishments:** WUCCs have been established in four of the seven regional management areas to date: the Housatonic (convened June 11, 1986), Upper Connecticut River (convened March 24, 1987), South Central (convened November 4, 1987), and the Southeast (convened August 5, 1998). The Housatonic, Upper Connecticut River, South Central, and the Southeast completed their plans in September 1988, March 1989, April 1990, and March 2001 respectively. The Southeast WUCC Plan was approved on February 19, 2002.

The Housatonic WUCC held two meetings during the period of July 1, 2005 and June 30, 2008, one on July 7, 2005 and the other on September 9, 2005. The South Central WUCC met on October 31, 2005 and January 19, 2007. The Upper Connecticut River Water Utility Coordinating Committee met on April 12, 2006, April 17, 2007, and April 8, 2008. The DPH also held a meeting on May 9, 2008 with the co-chairs of all four (4) convened WUCC management areas to discuss potential improvements to the current process to promote consistency statewide. It is envisioned that the statewide panel of co-chairs can work closely with DPH as an advisory panel to promote legislative changes that may be necessary to modernize the process.

The remaining WUCCs to be convened are the Northeast, Southwest, and the Northwest Hills. Each WUCC is comprised of representatives from PWSs and regional planning agencies within the area. Because of its

significance, the planning process was one of 11 areas of concern recognized by legislation in 2000 that established the Water Planning Council. The WPC's purpose is to address issues pertaining to Connecticut's water resources and investigate issues, such as the WUCC, that are relevant to PWSs capacities. The WPC submitted its annual report to the legislature in January 2006, 2007, and 2008. The annual reports included findings and implementation strategies. In their recommendations, the WPC included the need to develop a reasonable timeline for completion of the three remaining management areas where WUCCs have not been convened and to continue the planning process in all management areas at least every ten years. In order to accomplish this recommendation, the WPC has recognized the need to review relevant existing legislation and regulations for the purpose of proposing constructive changes in legislation.

**Planning Unit- Analysis:** This program has served as a good tool, formalizing current and future regional water supply activities of the major PWSs within the State. The provision of adequate, safe water resources for growth and economic development has been highlighted by WUCC activities in the Southeast, where issues concerning future development and water system expansions have been a source of local debate. Concerns raised by the Southeast and Housatonic WUCCs in particular, were instrumental in calling for a review and possible modification to the WUCC process in 2000. Local municipal rights and the quality of service provided by PWSs in the regional WUCCs, as well as the process itself, have been cited by critics as requiring a need for review and legislative attention.

Revisions to the WUCC legislation and regulations are still needed in order to streamline the planning process and make it more efficient and effective in accomplishing the original intent of the legislation as outlined in the 1985 *Final Report of the Water Resources Task Force* by addressing comprehensive planning for water supply and water service and quality on a regional basis. Unfortunately, proposed legislation to update this process has been unsuccessful over the past three years. Efforts to change the existing legislation should not be dropped. In order to move the process forward, funding to resume the process in the Northeastern management area must be allocated. A budget option to fund this WUCC has been submitted by the DPH for the 2007-2009 budgets years.

The existing timeline for implementing this planning process in the seven existing management areas, and periodically revisiting each management area, is not practical or reasonable. The process currently involves a two-year commitment in each area. Combined with limited staffing and funding resources, the first round of planning has already taken more than twenty years and has not been completed. Therefore, consolidation of management areas needs to be considered in order to accelerate the process and ensure that planning is done in all areas within reasonable intervals. The procedure to revise the management area boundaries and establish priorities for convening each WUCC should be revised to allow the Department adequate flexibility to manage the process more efficiently.

**Modifications to Strategy:** The DPH believes that municipalities' participation in the WUCC can foster a critical link to municipal land and promote better participation and communications. The DPH is an active participant in the WPC process. Results of the WPC process will be reported to the legislature annually, with the next report due January 2009.

There is a strong short term need for CT to assign Exclusive Water Service Area Boundary (ESAB) providers for the remaining WUCC's. The recent passing of Public Act 07-244 regarding the Certificate of Public Convenience and Necessity (CPCN) process for the creation of new PWSs adds to the urgency to assign ESAB providers for the remaining WUCC's to ensure the orderly creation of public water infrastructure in CT. The CPCN process requires developers to work with ESAB providers, where assigned, when creating new PWSs to ensure the long term reliability and viability of PWSs serving the citizens of CT. DPH intends to hold WUCC meetings in all convened areas, within available staffing resources, to discuss regional plans and solicit member input regarding regional water supply planning and solutions to known problems.

## Sanitary Surveys

Sanitary Surveys provide for the physical on-site presence of regulatory staff at PWSs. Surveys also provide a positive mechanism for evaluating PWSs, since the physical condition of a PWS often reflects its TMF capacities. Sanitary surveys provide the following specific benefits:

- Continuation of operator education
- Documentation of infrastructure condition
- Source protection evaluation
- Technical assistance and training opportunity provision
- Risk evaluation (prioritization)
- Maintaining vital communications
- Sampling plan evaluations
- Identification of impediments to providing adequate safe drinking water
- State/Federal regulation compliance verification
- Records inspection
- Detection of data falsification
- Provision of operational advice
- Evaluation of system capacity for technical assistance purposes
- Security Vulnerability Assessments

Field engineers in the DWS conduct a review of the technical, managerial and financial capacity elements for existing CWS and NTNC water systems as part of the sanitary survey process. A review of each system's water quality results, compliance history, system size, and historical technical infrastructure deficiencies is reviewed prior to the site visit. Triggers of capacity weaknesses or failures include:

- MCL violations
- Monitoring and Reporting Violations
- Water outages
- Consumer Complaints
- Unaddressed infrastructure deficiencies identified in previous sanitary surveys
- Lack of a certified operator

Any identified triggers are discussed with the water system during the sanitary survey to identify the cause of the capacity weakness or failure. Technical assistance is provided, along with additional capacity assistance resources, to systems during the sanitary survey and with the sanitary survey report. Systems are typically given 45 days to send a formal response to DWS addressing their violations and other capacity deficiencies. Compliance meetings are scheduled with systems that fail to respond or fail to provide a sufficient response to their sanitary survey report. Compliance meetings are typically used to determine agreeable compliance dates between DWS and the water system for the preparation of a corrective action plan or consent order. If a corrective action plan or consent order cannot be achieved or the water system does not wish to participate in a compliance meeting, the DWS Enforcement and Certification unit will continue with the formal enforcement process, possibly administrative orders or take over proceedings.

**Sanitary Surveys- Accomplishments:** A standard question set for use during all CWS sanitary survey inspections was developed during 2006 and was being fully utilized during 2007. This question set includes specific financial and managerial capacity questions. Therefore, a financial and managerial evaluation is conducted during all sanitary survey inspections. Presently CWSs are surveyed every 3 years and NTNC and TNC systems every 5 years. Over the 3 year period of July 1, 2005 – June 30, 2008 sanitary surveys were completed at all of the 579 CWS in Connecticut. Over the same period sanitary surveys were completed at 554 of the 606 NTNC systems and 1079 of the 1525 TNC systems in Connecticut.

**Sanitary Surveys- Analysis:** The DWS should continue to use the question sets that were incorporated into the sanitary survey process to determine if systems are adequately employing sustainability concepts. These

question sets include discussions on financial and managerial capacity topics including asset inventories, asset management, capital improvement plans, budgeting and rate setting. These areas of financial and managerial analysis are particularly important when visible infrastructure deficiencies are identified that may be caused from neglect, insufficient revenue/reserve funds or an inadequate sustainability program.

**Modifications to Strategy:** No modification to the current strategy is necessary. However, a refocusing of resources has occurred once more to ensure an ample number of sanitary surveys are being conducted at all PWSs while maintaining a high level of evaluation and analysis of infrastructure conditions, especially CWS and NTNC's.

## **Non-Community Program**

The Non-Community Program has been incorporated into two regional Compliance Section units within DWS. These regional units provide capacity development assistance to CWS, NTNC and TNC systems including sanitary surveys, technical assistance and project reviews remaining consistent with the Strategy.

Capacity Development at Public Schools: The initiative of ensuring Capacity Development at public schools across the state has continued, and many schools have opted to install completely new facilities. Thirty-eight (38) schools were identified as needing completely new water systems. Of these, thirty-seven (37) have completed these projects and the remaining one (1) will be completed in the near future. Seventy (70) schools were identified as needing major improvements, of which sixty-seven (67) schools have completed those improvements and three (3) schools still need to make major improvements. Thirty-five (35) schools have implemented consolidations. Twenty-nine (29) of these schools were consolidated by connecting to larger community PWSs, while six (6) schools were consolidated into two regional campus type systems.

The DWS will continue to work with the remaining three schools that still need to make water system improvements to ensure that the water systems meet all applicable statutes and regulations. This initiative is considered complete, though an evaluation of TMF capacity will continue to be conducted during every sanitary survey inspection.

Local Health Departments: The DWS continues to foster and strengthen its relationship with local health departments on capacity development initiatives with TNC systems. The majority of TNC systems in the CT inventory are food service establishments that are licensed and inspected locally. State and local drinking water requirements for food establishments overlap in some areas including well construction and water quality. The DWS continues to provide periodic training to local health departments to assist them with inspecting these water supply wells during their licensing inspections and addressing any violations that are identified. The DWS also notifies local health departments when MCL violations or M&R violations occur with all TNC systems. Often times, joint food inspections/sanitary surveys are done when MCL violations occur at food establishments so local and State enforcement actions can be coordinated and corrective actions implemented. Food establishment compliance with DPH drinking water regulations has improved tremendously since this strategy was implemented in 2000.

## **Operator Certification**

Connecticut recognizes the need to ensure proper operation of water facilities through properly trained and educated water systems operators. Approval authority for operator qualifications has been in statutes since 1937. Regulations for requiring certification were established in 1965 and in 1974 Connecticut Statutes were revised to require the classification of plants and certification of operators. Specific regulations were promulgated in 1982 and the first formalized examinations were offered in 1983. New, more comprehensive regulations were passed in 2001 to comply with the SDWA Amendments of 1996 requiring states to establish operator certification programs for both community and NC systems. Significant in those requirements is for

NTNC systems to now have certified treatment operators. Connecticut's Operator Certification Program (OCP) was approved by the U.S. EPA in November, 2001.

The Operator Certification work plan includes a DWS training program for operators. It has been long recognized that properly trained and certified water supply professionals improve compliance and reduce enforcement actions. This training curriculum provides small systems operators a broad overview of the compliance requirements and sustainability concepts that small systems need to implement. Operator Certification offers a quarterly basic small system class for small system operators that cover a broad range of topics including monitoring/reporting, public notification, new drinking water rules/regulations, infrastructure design/maintenance, TMF capacity, backflow prevention, and cross connection control. Operator Certification also offers small system operators a regulations course on an annual basis and a course for operators of water systems at schools, also on an annual basis. Staff from all DWS units participate as instructors in this training.

Operator certification problems can be a trigger for the need for capacity development assistance. There can be numerous problems with the certification of PWS operators. Some water systems are without operators. Presently, 597 of the 606 NTNC systems have a certified operator. Some common causes include failure of operators to renew their certification, Conditional (grand fathered) Operators that leave a system, change of system ownership, and termination of contracts with operators. This problem is addressed through technical assistance, followed by progressive enforcement (violation letter, order, civil penalty).

**Operator Certification- Accomplishments:** The passage of the operator certification regulations in 2001 was critical to implementing a program of professionalism for water system operators. Currently there are 961 certified treatment operators in the State of Connecticut, ensuring proper operation of water facilities. As of June 30, 2008, there were 1298 systems required to have certified operators. During the period July 1, 2005 to June 30, 2008 approximately 265 of these systems were without a certified operator for a period of time and violation letters were issued to 254 systems. In addition, 100 letters were sent to systems notifying them of the requirement to have a certified operator.

**Operator Certification- Analysis:** The Operator Certification program has been incorporated into the Enforcement and Certification Unit and is no longer functioning as a sole unit. Educational assistance to potential certified operators has been beneficial in improving the knowledge and skills in the drinking water industry and will be continued. It has become evident that properly trained and certified water supply professionals reduce noncompliance and enforcement actions.

**Modifications to Strategy:** The current directive of emphasizing the importance of operator certification is being maintained. The DPH intends to follow the operator certification strategy per EPA's approved program.

## **Cross Connection Control**

A cross connection is defined as any connection, actual or potential, between a potable (drinking) water source and a non-potable water source, which could cause contamination of the public water supply, by backflow on back-siphonage. The DPH, since 1976, has had an active cross connection program that has primarily required larger (greater than 1,000 consumers) PWSs to conduct inspections for cross connections and tests of backflow prevention devices. The premise of a PWS Cross Connection Program is to prevent contamination of drinking water by identifying improper connections to the drinking water distribution system and by testing devices that prevent backflow of contaminants into the drinking water system. A PWS that is unable to affect such a program demonstrates a lack of capacity to ensure safe drinking water.

**Cross Connection Control- Accomplishments:** The operator certification regulations package passed in 2001 also contained regulations governing backflow personnel (Testers or Tester/Inspectors). The OCP approves and participates in training for Backflow Prevention Device Testers and Cross Connection Survey Inspectors. The program administers the issuance and renewal of certificates for backflow personnel. Currently, there are over 690 individuals who have active DPH certificates as Testers or Tester/Inspectors. The Drinking Water Section activities regarding cross connection control since 2002 has included: outreach via mailings, newsletter articles, participation at seminars, operator training, evaluation of PWS Cross Connection Survey Reports and response

to phone calls to make systems aware of the new cross connection control requirements. The DPH conducted 37 cross connection control program surveys during the period of July 1, 2005 through June 30, 2008.

**Cross Connection Control- Analysis:** The cross connection control program has been successful in educating PWSs about the importance of having an active cross connection control program towards preventing contamination of drinking water. This program takes on more emphasis with the additional, elevated need since 9/11/01 to ensure security and safety of public drinking water systems from intentional threats. Currently there are 691 individuals who have an active DPH certificate as a Tester or Tester/Inspector. Given current security concerns and the nature of contaminations, increasing the number and educational level of professionals involved in cross connection activities is a goal of the program.

**Modifications to Strategy:** No modification to the current strategy is necessary.

## Source Water Protection

### Watershed Protection

A PWS using surface water as an active source of supply must perform a sanitary survey of the watershed to the intake at least annually. Surface water supplies are obligated to maintain an active watershed inspection program as part of the multi-barrier approach to ensuring safe drinking water. Satisfactory maintenance of a watershed program is also an indicator of the PWS capacity to conduct source protection programs that effectively reduce the potential of contamination to surface water supplies. A system's ability to maintain such a program helps measure satisfactory TMF capacity.

**Watershed Protection- Accomplishments:** DPH staff reviewed fifty-one watershed inspection reports in the year 2007, covering approximately 166 individual reservoirs. Reviews ensure that PWSs focus on resolving water quality issues on their watersheds, thereby providing a multi-barrier form of drinking water protection.

In May 2006, Public Act No. 06-53 of the CT General Statutes was signed by the Governor. The PA requires that within seven days of filing, all applicants before a municipal Zoning Commission, Planning and Zoning Commission, Zoning Board of Appeals or Inland Wetlands Commission for any project located within a public water supply aquifer or watershed area notify the Commissioner of Public Health and the project area Water Company of the proposed project. The DWS developed a "Watershed or Aquifer Area Project Notification Form" online that must be filled out in order to provide the required information stated in PA 06-53.

**Watershed Protection- Analysis:** An enhanced level of communication has been achieved over the past 10 years between the Department's DWS, local health departments and PWSs enabling the watershed issues to be addressed more quickly and efficiently. Watershed Protection activity continues to be an integral process for maintaining a protective barrier for sources of drinking water and is linked logically to current SWAP grant activities. Local health departments have been instrumental in addressing local compliance issues. Continuation of this activity is also heightened by security concerns.

**Modifications to Strategy:** No modification to the strategy is currently necessary. The 5-year strategic plan for Source Water Protection will be continuously updated and enhanced.

### Water Company-Owned Land

These regulations are unique to Connecticut and are not federally prescribed. In the late 1970's, shortly after the implementation of the SDWA, Connecticut's many large public water supplies were contemplating large land sales to raise capital for making improvements necessary to meet the water quality requirements of the SDWA. This control, although primarily applied to watersheds for reservoirs, is also utilized for water systems having identified ground water recharge areas. Oversight of water company owned land is also provided to

DPH in legislative authority to permit “changes of use” on water company owned lands. The DPH also has authority to permit or deny recreational activities on such lands. Maintaining an orderly oversight of water company land sales, changes in use and permitted activities is, in effect, a control in maintaining capacity to protect sensitive land areas.

**Water Company Owned Land- Accomplishments:** Initiated redevelopment of standard operating procedures for both water company land reviews and recreational land use permitting. Began a process of reviewing the requirements under existing state statutes and regulations concerning change of use of water company land and recreational use permitting in order to institute a structured and simplified approach. Initiated discussions to link the water company lands laws to public water supply land use management plans. During the period of July 1, 2005 through June 30, 2008, twenty-seven (27) recreation permits, ninety-seven (97) Water Company Land permits- Change of Use and Sale, and Class III land verifications were reviewed and issued.

**Water Company Owned Land- Analysis:** This program continues to be valuable in assuring that protective measures are being maintained in matters relating to changes in use as well as sale, or recreational use activities on water company owned lands.

**Modifications to Strategy:** Additional source water protection areas will be discussed in that segment in the Strategy revision due December 31, 2008.

## **SDWA – Water Quality Regulations – Compliance**

On-going surveillance of water quality data provides an important tool that is used to indicate capacity. PWSs are required to submit water quality data on a regular basis. Failure to properly monitor and/or report water quality data can lead to violations that may trigger enforcement actions. The severity and the frequency of violations often identify critical capacity deficiencies within PWSs. PWSs that chronically fail to achieve compliance in this area may become targets for “takeover” as identified in the Connecticut General Statutes Section 16-262. The takeover process has been effective in dealing with smaller (less than 1,000 population) community PWSs.

**SDWA- Water Quality Regulations- Compliance- Accomplishments:** The Safe Drinking Water Information System (SDWIS), which maintains drinking water quality data, was installed in 1999 and is in the process of being upgraded. It should be ready to test in October 2008. The DPH initiated an electronic data interchange (EDI) program to accept water quality data electronically from labs. All PWSs were required to submit drinking water quality data electronically to the DWS starting January 1, 2006. The DWS provided the PWSs ample preparation time prior to the effective date. There is currently full compliance with this requirement.

**SDWA- Water Quality Regulations Compliance- Analysis:** In calendar year 2007, the DWS issued 289 violations to 143 PWS for Maximum Contaminant Level (MCL) exceedances. Fifty-five (55) CWS's and 186 NC PWS incurred MCL violations for this period. During the same time period, the DWS also issued 3070 violations to 419 PWS for failure to monitor and report water quality test results, and also issued 102 formal enforcement actions to PWS.

These results are indicative of our focus of using water quality violations to assess capacity.

**Modifications to Strategy:** No modification to the current strategy is necessary.

## **Drinking Water State Revolving Fund (DWSRF)**

The EPA offers states capitalization grants to create the DWSRF Programs. This program allows States to provide low interest loans to PWSs for infrastructure improvement projects. The DWSRF also provides set-aside funding for administration and augmentation of the program, assistance to small water systems and local

health department administration activities. The primary purpose of the program is to provide loans. By combining the DWSRF Capitalization Grants and Connecticut's Leveraging Program, Connecticut has executed \$91.6 in loans to PWSs.

The DPH is currently using DWSRF funds for drinking water projects (69%) and set-aside activities (31%). The percentage of funds allocated toward the set-aside activities is the maximum allowed. The set-aside categories are as followed:

Small System Technical Assistance (2%) – Providing technical assistance to small (less than 10,000 population) water systems. The Technical Assistance set-aside has been primarily dedicated to outreach activities and in the last few years included security measures.

Administration (4%) – Funding used toward the administration of the DWSRF Program. Staff supported by this set-aside includes programmatic and financial staff at the DPH, Department of Environmental Protection and the Office of the Treasurer. Additional staff that works in this program and not supported by this set-aside are from the Office of Policy and Management and the Department of Public Utility Control.

Program Management (10%) – Assists in the administration of the State's Public Water Supply Supervision Program.

Local Assistance and Other State Programs 15% - Provides assistance to PWS as part of the capacity development strategy as well as the Source Water Protection Program.

**DWSRF- Accomplishments:** The accomplishments by programs funded by DWSRF Set-Asides have ranged from outreach to trainings to attending stake-holders meetings and other forms of technical assistance.

**DWSRF – Analysis (Projects):** The DWSRF successfully provided low interest loans for drinking water projects. The DWSRF has provided 29 loans to 18 different PWSs, totaling \$91,689,226 for proactive infrastructure upgrades, source protection, distribution system protection, and water quantity and water quality issues. Projects were assigned the highest points that were designed to bring the PWS into compliance with the Connecticut Public Health Code. The DWS intends to increase funding and enhancement of the process of fund dispersal to low cost projects for small PWSs. It was determined, through our program, that the current DWSRF funding mechanisms were too costly to be an effective tool for small systems.

**Modifications to Program Strategy:** The DWS continues to investigate easier ways to provide low interest loans to small systems, allowing these smaller PWSs to take advantage of the DWSRF. If possible, changes may be incorporated it into our strategy to increase our ability to provide attractive financial assistance opportunities to small systems through the DWSRF. No modification to the current strategy is necessary at this time.

## **Certificate of Public Convenience and Necessity and “Take-Overs”**

The DPH and the DPUC jointly administer the CPCN process under authority of Connecticut General Statutes (CGS) Section 16-262m. New proposed PWSs and existing PWSs undergoing expansion are required to apply for a CPCN. This is commonly referred to as the “certificate process.” The process restricts the creation of new small water systems by requiring interconnections with existing PWSs whenever feasible and by establishing a set of regulations for approval of the proposed water system's design and management if an applicant cannot interconnect with an existing utility.

The entire CPCN application is separated into three phases: Phase I-A, Phase I-B, & Phase II. The Phase I-A application requirements are for review of the proposed sources of supply to serve the proposed project (i.e. well site locations).

The Phase I-B requirements are for review of the developed sources of supply. This part of the process reviews the well construction, well water yield, and water quality. All sources must have satisfactory water quality and be able to supply a sufficient amount of water to meet the system requirements.

The Phase II requirements are for review of the design of the water distribution system. This part of the process includes review of the water storage, pumping facilities, distribution piping, and if necessary, treatment facilities.

Part of the certificate process also reviews and evaluates whether the applicant for the proposed project understands the responsibility and requirements involved with owning and operating a PWS. That is, whether the applicant has the ‘capacity’ to develop and maintain a viable PWS that will remain in compliance with all applicable regulations once the water system is operational. Overall capacity is separated into three categories – technical, managerial, and financial. These three categories are interrelated in the overall operation of a water system through short- and long-term planning, assurance of sufficient supply and infrastructure for the future, and meeting regulatory responsibilities in order to provide safe and adequate drinking water.

The failure of an existing PWS to comply with either DPUC and/or DPH regulations could require joint hearings to determine the systems economic viability. If it is determined that the water system is not viable, the DPUC, with DPH’s consultation, may order the acquisition of the water system by the most suitable or private entity. This process is often referred to as the “takeover” procedure.

#### **Certificate of Public Convenience and Necessity and “Take-Overs” - Accomplishments:**

The CPCN process has limited the proliferation of new PWSs. The continued success of this process, coupled with other program elements, is indicated by the generally reduced number of PWSs. During the time period 7/1/05 – 6/30/08, 53 Phase I-A CPCN projects were received, including both community residential projects (14) and non-community projects (39).

Twelve (12) of these projects have been completed and are active operating PWSs. Thirty-one (31) projects are at varying steps of the review process. The remaining 10 projects are either on hold or have withdrawn.

Capacity assessments, which review the technical, managerial and financial capability of the proposed water system owner, were completed on 37 of these projects. Capacity assessments for 15 of the remaining 16 projects were not necessary due to project withdrawal or the proposed owner was an existing water company. The assessment for one project has not been completed due to a need for additional information.

Eighty-five (85) development projects were screened to determine if the project would result in the creation of a new water company. Thirty-six (36) were directed to go through the CPCN process, as discussed above. Forty-five (45) were determined to not be creating a new water company. Feasible interconnections were available for 4 projects and were instructed to contact the existing water company.

Changes were made to the Connecticut General Statutes (CGS) Section 16-262m and became effective October 1, 2007. These changes separated the statute into sections to specifically address proposed community and non-community PWS. The changes distinguish agency review responsibilities for non-residential and residential PWS classifications and provide the DPH the sole authority to evaluate the technical, managerial, and financial capacity of proposed non-community PWS.

**Certificate of Public Convenience and Necessity and “Take-Overs”- Analysis:** The certificate projects and “takeovers” have resulted in more viable systems. Non-viable PWSs tend to chronically fail to achieve compliance in areas such as monitoring for contamination issues, difficulty meeting the more comprehensive treatment requirements, infrastructure deficiencies and financial constraints due to the smaller customer base. The process has proven to help prevent system failure, water service interruption, lack of monitoring and/or reporting, etc. Elimination of non-viable systems has had positive impacts on application of resources, risk reduction and compliance success. The Compliance Section has turned over, through the viability review and hearing process, three (3) troubled CWSs to the ownership and management of viable large PWSs during the

period of July 1, 2005 through June 30, 2008.

**Modifications to Strategy:** The Certificate process is generally extremely useful in preventing the creation of non-viable systems. Revisions made to the CPCN process will more effectively and efficiently review proposed water system's design and management and will be reflected in the revised Strategy.

## Enforcement

Protection of the public health is the fundamental purpose for all of our regulatory requirements and is the major criteria used in establishing priorities for implementation of enforcement actions. The population at risk is also considered in the prioritization of enforcement actions. Consideration of population at risk allows the DPH to maximize public health protection by placing higher priority for enforcement actions on larger public and risk-sensitive small populations, (e.g., nursing homes, day care centers, and schools). A PWS's inability to provide potable water to its customers may potentially result in the initiation of acquisition or takeover proceedings against the failing system. Formal enforcement actions may be used to bring CWSs into compliance with regulatory requirements.

**Enforcement - Accomplishments:** The DPH's enforcement strategy will be revised and submitted to EPA Region I by 4/1/2009. The DPH enforcement strategy incorporates the TNC enforcement procedures and both are consistent with our Capacity Development Strategy. This revised enforcement strategy will outline the criteria and steps to be followed in the enforcement of applicable Connecticut State statutes and regulations. This strategy has proven to be beneficial in improving compliance with recalcitrant PWSs. The DWS issued 102 formal enforcement actions in calendar year 2007. The majority of these actions were Notice's of Violation with Civil Penalty issued to systems for failure to monitor and report water quality test results and \$28, 915 in penalties were imposed. The DWS prepares and issues an annual PWSs violations report which is submitted to US EPA by July 1<sup>st</sup> each year and made available to the public on the DWS website. Quarterly conference calls with EPA Enforcement staff have also been implemented to evaluate the success of enforcement efforts against unaddressed significant non-complier (SNC) water systems.

**Enforcement Analysis:** Enforcement has been effective in promoting and improving compliance. Enforcement actions have proven to be a valuable tool and an incentive for a PWS to take necessary long-term corrective actions.

**Modifications to Strategy:** No modification to the current strategy is necessary.

## Public Outreach

This Programmatic element serves as a primary resource for informational, technical and educational support for the DPH including developing and disseminating press releases, publications, (fact sheets, brochures, pamphlets), public and private partnerships, external and internal training, and electronic public information services (i.e. email, Internet, DPH Health Alert Network). Public Outreach involves coordinating with PWSs, businesses, trade associations, etc. to provide speakers and/or to initiate conferences and workshops. The DPH has utilized various public education techniques, e.g. contracted activities, as well as in-house efforts to develop seminars that encourage public, as well as stakeholder, participation.

**Public Outreach- Accomplishments:** The DWS provided two training events for local health departments and local town planners in September and October of 2006 to make them aware of the statutory and regulatory requirements for new water companies. An additional two training sessions were provided for local health departments in February and March of 2007. During these training sessions local officials were given presentations on the Certificate of Public Convenience and Necessity (CPCN) process (CGS Section 16-262m) for creating new water companies. They were also reminded of the provisions of CGS Section 8-25a whereby no local planning and zoning agency may approve a development project proposed by a water company until a CPCN has been issued jointly by the DPUC and the DPH. These training events have resulted in improved State and local coordination of new system applications particularly for new NTNC and TNC systems.

Various outreach mechanisms have been utilized during the period of July 1, 2005 through June 30, 2008. They include:

- EPA capacity development handbooks on capacity and asset management subject matters have been provided to systems along with technical assistance to try to provide systems a pathway to long-term sustainability.
- The DWS has been visiting small PWSs and training them to use a tool the EPA created to help water systems keep all aspects of asset management in order. It's called the Check Up Program for Small Systems (CUPSS).
- The *Connecticut H<sub>2</sub>Operator*, which was initiated in mid-2005, now has thirteen issues completed. Each issue is posted on the DWS webpage and contains capacity and asset management articles in each issue.
- Capacity and asset management training continues to be offered in operator certification classes and at the Annual Technical Convention and Vendor Exposition.
- Development and completion of a survey of existing CWSs to determine which systems are employing advanced asset management concepts. The findings of the survey will be evaluated and summarized to determine advanced asset management training needs by the 12/31/08 deadline.

### **Public Water System Assistance**

To assist the PWSs in sustaining their compliance and enhancing their capacity, we have developed numerous forms and technical sheets that were made available to all PWSs in several methods, such as regular mail to each system, posting on the DWS Web page, on-site meetings, phone calls, and during routine sanitary survey visits.

These technical sheets and forms are designed to:

- 1) Assist PWSs in reporting contact and emergency information
- 2) Guide PWSs in understanding the annual monitoring requirements
- 3) Summarize the annual testing requirements into a simple easy to read schedule
- 4) Guide PWSs on completing a sampling plan and selecting the most representative sampling points
- 5) Provide PWSs with instructions & templates on the CCR requirements & distribution
- 6) Instruct PWSs about the Filter Backwash Rule, and assist in developing forms for record-keeping
- 7) Guide the PWSs on the requirements of the radionuclides rule

A CWS's compliance with the consumer confidence reporting is also used as a trigger for technical assistance.

**Public Outreach- Analysis:** Training events have resulted in improved State and local coordination of new system applications particularly for new NTNC and TNC systems. The DWS must enhance its webpage to include a capacity development/ sustainability section. Currently the subject matter is intertwined with the DWSRF section of the webpage.

**Modifications to Strategy:** No modification to the current strategy is necessary.

### **Information Management/Information Technology**

A separate information management function was established in 1998 to address anticipated growth in data processing and retrieval of data. These functions are now housed under the Information Systems Unit that has 6 assigned positions providing a variety of services to assure that data necessary for compliance determination is accessible.

**Information Management/Information Technology- Accomplishments:** The Safe Drinking Water Information System (SDWIS) that was installed in 1999 has become the sole database of record for all drinking

water information. SDWIS maintains all aspects of drinking water from inventory to water quality to violations and enforcement, and enables the DWS to report directly to EPA. Connecticut's DPH is a national leader in this area. The DPH DWS is currently in the process of upgrading SDWIS. The new version will be available for testing in November 2008 and should be fully operational by the end of the first quarter of 2009.

On January 1, 2006, the DPH began an Electronic Data Interchange (EDI) program to accept water quality data electronically from water testing laboratories. Presently the DPH receives data electronically directly from PWSs and from approximately 50 labs that perform water testing for thousands of PWSs. All of Connecticut's PWSs are currently submitting drinking water quality data electronically.

**Information Management/Information Technology- Analysis:** Technology provides tools to perform tasks in a more effective and efficient manner. Submission and storage of electronic data in lieu of paper documents greatly reduces the cost for both sender and recipient, improves data quality by automating quality control functions, eliminates re-keying, and greatly improves the speed and ease with which the data can be accessed by all who need to use it. The implementation of EDI has allowed engineering resources and efforts to be shifted to other DWS program areas.

**Modifications to Strategy:** No further modification is necessary.

#### Attachment 1:

Attachment 1 provides the list of new systems created through the Certificate of Public Convenience and Necessity process during the period of July 1, 2005 and June 30, 2008.

Twenty-two (22) new systems were created during the period of July 1, 2005 to June 30, 2008 through the CPCN process. These systems received comprehensive technical, managerial and financial capacity evaluations. Unfortunately, 4 of these PWS were identified on one or more of the annual SNC lists during this period. Two of the systems incurred reporting violations for not submitting water quality testing results by the deadline; these two PWS have returned to compliance. Both of these systems are owned by municipalities, one of which is also an Exclusive Service Area provider. The remaining two failed to monitor for some of the required parameters; these PWS have since begun monitoring for the missed parameters and therefore have returned to compliance. Both of these systems received an extensive TMF capacity evaluation during the review process.

Ensuring that all monitoring and reporting functions are completed is considered a management responsibility. All of these PWS will be evaluated to determine where additional assistance or training is necessary.

#### Attachment 2:

Attachment 2 provides a list newly discovered existing water systems that were identified by or reported to the DWS during that same time frame. Attachment 2 also lists new water systems that were created by existing regulated PWSs that were technically (engineering) approved by this office but did not need financial or managerial capacity evaluations. These attachments also note if the PWS appeared on a SNC list.

One hundred and seven (107) systems are listed on Attachment 2. Most of these were newly discovered existing systems that were identified after the systems had been built and placed into operation. The vast majority were non-community systems that had been in operation for many years and escaped recognition. Some of these systems were existing commercial properties that changed ownership and business operations which subsequently resulted in them becoming PWSs by exceeding the population threshold. Three (3) were new systems that were approved at the local level without complying with the CPCN requirements. All of these

systems were provided the necessary regulatory compliance information and sanitary surveys were conducted. Of these systems, 7 were identified on an annual SNC list during the 7/1/05 to 6/30/08 time period. Violations included monitoring and reporting, a Nitrate MCL violation, and a Radium MCL violation. Four of the systems have returned to compliance and appropriate actions have been or will be taken in an effort to bring the remaining systems back into compliance.

Seven of the 107 systems identified on Attachment 2 submitted projects and were reviewed and approved by the DWS. One new CWS was built by an existing regulated community water system as an independent non-connected satellite system. One new CWS was built as connected consecutive system to another CWS. The remaining 5 systems were businesses upgrading their water supply systems in anticipation of a new tenant and an increase in population that would result in the system meeting the definition of a PWS. One of these 7 systems was identified on an annual SNC list during this same period. The PWS submitted water quality results late and received a reporting violation. This PWS has returned to compliance.

Based on the data presented some conclusions were drawn:

- The evaluation of TMF capacity within the CPCN review process needs to be re-examined. An intent of the CPCN process is to ensure that these new systems understand their regulatory responsibilities and maintain regulatory compliance
- New systems that were built by existing CWSs need a reminder of their regulatory responsibilities to ensure regulatory compliance (i.e. 1 of 2 systems identified as SNCs).
- Newly identified existing systems will continue to be provided regulatory compliance information and technical assistance in an effort to ensure regulatory compliance; though systems with monitoring/reporting violations have returned to compliance, emphasis will be placed on these aspects of water system ownership when educating newly identified PWS.
- More education is necessary at the local level to ensure that new development projects proposed by future water companies are identified and referred through the CPCN process so that technical, financial and managerial evaluations are conducted. Two of the 3 systems constructed without approvals were located in the same town and were built at about the same time. The town officials were contacted and provided information about the CPCN process and review requirements.

## *Capacity Development Strategy – Evaluation*

### “A Quick Analysis”

Congress amended the SDWA in 1996, providing for a variety of initiatives to assist States and PWSs in providing safe drinking water to the public. Capacity development, the Drinking Water State Revolving Fund (DWSRF), operator certification programs, and such resources as the Environmental Finance Centers and Small System Technical Assistance Centers, were instituted to provide assistance to States and CWSs. Congress established capacity development with the intent of focusing on those systems most in need of assistance. These were primarily small systems (serving populations of 3,300 or less).

From 7/1/2007 to 06/30/2008, small systems accounted for 85 percent of all systems that had a “History of Significant Noncompliance” (a system violating one or more National Primary Drinking Water Regulations in any three quarters within a 3-year period). All three components of capacity development (technical, managerial, and financial) are critical to the successful operation of CWSs. EPA stresses the interrelated nature of T/M/F capacity. EPA, States, and drinking water systems house T/M/F expertise in different program areas at different levels. The success of water systems’ achieving capacity to run their operations in an efficient, business-like manner rests on water system owners and operators being able to effectively understand, communicate, and coordinate the various T/M/F needs. States, through the design and implementation of their capacity development strategies, have approached capacity development in different ways, to meet the unique issues facing their systems.

#### Capacity Development Ideology:

A Capacity Development Program for us can be:

- **Flexible** so that we can maximize the use of resources and capabilities to implement processes that meet the unique needs of our PWS’s.
- **Proactive** in identifying and prioritizing those water systems most in need of improving T/M/F capacities.
- **Integrated** so that the resources of all Units are utilized.
- **Accountable** in being able to demonstrate that a capacity development strategy helps water systems provide safe water to customers.

The actual amendment to the SDWA in 1996 states these same four attributes of capacity development:

1. **Flexibility** was identified in the findings section of the Amendments, Public Law 104-182 §3(4), which stated: States play a central role in the implementation of safe drinking water programs, and States need increased financial resources and appropriate flexibility to ensure the prompt and effective development and implementation of drinking water programs.
2. **Proactivity** was required in the capacity development section of the Amendments, Public Law 104-182, §1420(c) (2) (A), which stated: In preparing the capacity development strategy, the State shall consider, solicit public comment on, and include as appropriate – (A) the methods or criteria that the State will use to identify and prioritize the PWSs most in need of improving technical, managerial, and financial capacity.
3. **Integration** was identified in the findings section of the Amendments, Public Law 104-182, §3(8)(B), which stated: [M]ore effective protection of public health requires...maximizing the value of the different and complementary strengths and responsibilities of the Federal and State governments in those States that have primary enforcement responsibility for the Safe Drinking Water Act.
4. **Accountability** was required in the capacity development section of the Amendments, Public Law 104-182, §1420(c) (1), which stated: ...State[s] shall receive only [a portion] of the allotment that the State is otherwise entitled to receive under [DWSRF], unless the State is developing and implementing

capacity development strategies that assist water systems in acquiring and maintaining technical, managerial, and financial capacity.

There is no mandate that all four attributes need to be present to the same degree for capacity development programs to be successful. However, it is logical to believe that the combined presence of these attributes promotes a capacity development process that assists PWSs in attaining T/M/F capacity.

#### Public Water System Assessment Methods

The SDWA Amendments give four sequential, closely linked activities that describe how States can provide proactive capacity assistance to CWSs that can be focused on those systems most in need:

- Assessing water system T/M/F capacities.
- Prioritizing systems based on their capacity needs.
- Delivering T/M/F capacity development services to systems most in need.
- Collecting information to determine whether water systems are achieving results.

To utilize these activities, some of the most useful tools the DWS has are sanitary surveys, source water assessment, SDWIS, review of water system planning when a system is new or expanding, applying for a DWSRF loan, and when a PWS is experiencing problems. All could be used for assessing water system capacity.

#### DWS Strengths:

The DWS has identified strong components of a good capacity development program.

The DWS has available the following units/elements and associated activities that contribute to the Capacity Development Strategy:

1. Compliance: sanitary survey and technical assistance.
2. Design: new or expanding water system plan review
3. Enforcement: identification of systems most in need of assistance
4. DWSRF: DWSRF loan
5. Operator Certification: ensuring professional delivery of drinking water and cross connection control.
6. Inclusion of technical, managerial and financial information into the training portion of the operator certification program.
7. Source Water Protection: source water technical issues, watershed protection and water company owned land.
8. 2% Small System Technical Assistance Set-Aside: addresses small system owners, operators and other stakeholders.
9. SDWIS: PWS data
10. Site Visit Module within SDWIS: 8 elements of a sanitary survey
11. Planning: Individual Water Supply Plans and WUCC
12. Outreach
13. Certificate of Public Convenience and Necessity

#### DWS Weaknesses:

Currently the DWS has within its identified components the following weaknesses:

1. Although enforcement is highly active, we can not require noncompliant systems to develop business plans that contain all three elements of capacity. We should also consider incorporated managerial and financial capacity requirements into our regulations, or include voluntary managerial and financial self-assessment as part of enforcement agreements. Enforcement is often seen as the last resort to address

noncompliant water systems; our State enforcement program can be used to promote long-term managerial and financial capacity with systems.

2. When the DWS reviews plans, a method of assessment and prioritization should be followed that also delivers T/M/F assistance to water systems through capacity development plans. The DWS may be only delivering managerial and financial assistance to systems once a technical deficiency, such as an MCL violation, is identified.
3. EPA requires that DWSRF loans go to systems that either have adequate capacity or will achieve capacity through the loan project. The Drinking Water National Information Management System that EPA uses to track the DWSRF program cannot determine what T/M/F problems the loans were used to solve. Neither can the DWS. Furthermore, the DWS capacity information about the DWSRF program is focused mostly on the financial ability of systems to access and repay the loans, with no focus on the assessing and measuring of the overall T/M/F health of systems.
4. The DWS should investigate how to incorporate capacity development into the individual water supply plan requirements. This would require regulation changes.

### Conclusion:

The DWS works to prevent technical deficiencies in water systems by providing assistance through activities documented in this report. Although the DWS provides a strong technical assistance program, more effort toward assessing and delivering assistance to water systems is needed in developing system managerial and financial capacity.

The number and significance of benchmarks may change as programmatic requirements change. However, for a State program to effectively run a “capacity development” process, a high level of staff training and good internal communications are critically important. Routine and frequent evaluation of the program is also necessary and program adjustments must be made, as necessary.

Through the performance of sanitary surveys, compliance with water system construction and protection, operator certification, cross connection control, monitoring and reporting, water quality and operational regulations, system deficiencies are identified and evaluated. The most common occurrences of noncompliance or deficiencies are with the water system construction and protection regulations. Well construction regulations refer to the physical structure of the well in requiring a watertight seal with all appurtenances in order to protect the well from storm water drainage and runoff. Well protection regulations refer to location of the well in reference to sources of pollution. Water storage facility regulations refer to the construction, location and structural integrity of the facility protecting it from sources of pollution. Other common deficiencies include cross connection violations, on-site water treatment residual disposal violations (DEP) and operational violations.

Sanitary survey results are showing the DWS there is a need for capacity development assistance particularly at small Community PWS. Engineers have been citing violations for Regulations of Connecticut State Agencies (RCSA) 19-13-B102 (o) and RCSA 19-13-B102 (p) on a regular basis at many Community PWS. These two violations focus on supply capacity of Community PWS and the ability of available sources, storage, treatment, pumping, and transmission facilities to maintain flows in excess of maximum demands experienced. The regular citation of these violations has revealed the need for additional capacity development for these small Community PWS.

This Capacity Development Report to the Governor for the period July 1, 2005 – June 30, 2008 will be made available to the public through the DWS’s webpage at [www.ct.gov/dph](http://www.ct.gov/dph). With committed attention to the activities discussed in this report, the DWS can further develop its statewide capacity development strategy that promotes T/M/F in a proactive, integrated, flexible, and accountable manner throughout its key DWS Units.

| PWSID     | NAME                                     | TYPE | CITY             | ACTIVATION DATE | SNC List? |
|-----------|------------------------------------------|------|------------------|-----------------|-----------|
| CT0081104 | BETHANY VOLUNTEER FIRE DEPT HQ           | NC   | BETHANY          | 5/18/2007       |           |
| CT0309094 | ICA DONUTS, LLC                          | NC   | COLUMBIA         | 8/22/2005       |           |
| CT0389153 | 9 OZICK DRIVE                            | NTNC | DURHAM           | 9/10/2007       |           |
| CT0389163 | DISTINCTIVE BUILDING - 45 OZICK DRIVE    | NTNC | DURHAM           | 10/1/2007       | YES       |
| CT0429121 | EAST HAMPTON WPCA - ROYAL OAKS SYSTEM    | C    | EAST HAMPTON     | 1/1/2006        | YES       |
| CT0429153 | THEATER SQUARE                           | NTNC | EAST HAMPTON     | 4/23/2008       |           |
| CT0614024 | 201 SAYBROOK ROAD                        | NC   | HADDAM           | 1/5/2007        | YES       |
| CT0614034 | THE RIVERHOUSE AT GOODSPEED STATION      | NC   | HADDAM           | 6/21/2007       |           |
| CT0709153 | HADDAM KILLINGWORTH INTER/MIDDLE SCHOOL  | NTNC | KILLINGWORTH     | 11/22/2006      | YES       |
| CT0869104 | 1434 ROUTE 85                            | NC   | MONTVILLE        | 2/9/2006        |           |
| CT0878023 | WINVIAN FARM COUNTRY INN - MAIN SYSTEM   | NTNC | MORRIS           | 12/27/2006      |           |
| CT0878024 | WINVIAN FARM COUNTRY INN -COTTAGE SYSTEM | NC   | MORRIS           | 12/27/2006      |           |
| CT0969373 | BULLS BRIDGE GOLF CLUB                   | NTNC | NEW MILFORD      | 6/7/2007        |           |
| CT0979384 | CONGREGATION ADATH ISRAEL-115HUNTINGTOWN | NC   | NEWTOWN          | 8/29/2007       |           |
| CT1021063 | KIDDS & CO., LLC                         | NTNC | NORTH STONINGTON | 3/12/2008       |           |
| CT1059203 | CHURCH OF CHRIST THE KING                | NTNC | OLD LYME         | 9/2/2005        |           |
| CT1301133 | SOUTHFORD RETAIL CENTER                  | NTNC | SOUTHBURY        | 7/10/2007       |           |
| CT1429201 | IVY WOODS                                | C    | TOLLAND          | 1/3/2007        |           |
| CT1609124 | WILLINGTON PUBLIC LIBRARY                | NC   | WILLINGTON       | 11/21/2006      |           |
| CT1609133 | KIDS KINGDOM DAYCARE CENTER              | NTNC | WILLINGTON       | 3/15/2007       |           |
| CT1609141 | WILLINGTON SENIOR CENTER & HOUSING       | C    | WILLINGTON       | 10/18/2007      |           |
| CT1669124 | 1515 WOLCOTT ROAD                        | NC   | WOLCOTT          | 1/31/2007       |           |

| PWSID     | NAME                                    | TYPE | CITY         | ACTIVATION DATE | SNC List? |
|-----------|-----------------------------------------|------|--------------|-----------------|-----------|
| CT0039033 | KIDDERBROOK MONTESSORI SCHOOL           | NTNC | ASHFORD      | 6/23/2006       | YES       |
| CT0081084 | COUNTRY CORNER DINER LLC                | NC   | BETHANY      | 5/26/2006       |           |
| CT0081094 | STEVES DELI                             | NC   | BETHANY      | 8/7/2006        |           |
| CT0099273 | STONY HILL INN & GOLF PRO SHOP          | NTNC | BETHEL       | 7/26/2005       |           |
| CT0099274 | 47 STONY HILL ROAD                      | NC   | BETHEL       | 7/11/2007       |           |
| CT0105044 | WELLSPRING FOUNDATION - ANGELUS         | NC   | BETHLEHEM    | 12/14/2006      |           |
| CT0105053 | WELLSPRING FOUNDATION - SHILOAH         | NTNC | BETHLEHEM    | 12/14/2006      |           |
| CT0121031 | 166-168 BOSTON TURNPIKE                 | C    | BOLTON       | 3/18/2008       |           |
| CT0121041 | 180 BOSTON TURNPIKE                     | C    | BOLTON       | 3/18/2008       |           |
| CT0179044 | 249 TERRYVILLE ROAD                     | NC   | BRISTOL      | 1/8/2007        |           |
| CT0179054 | 739 TERRYVILLE AVE                      | NC   | BRISTOL      | 1/11/2007       |           |
| CT0189793 | ST MARGUERITE BOURGEOYS CHURCH          | NTNC | BROOKFIELD   | 8/14/2007       |           |
| CT0189831 | BROOKFIELD WATER COMPANY - EXTENSION 2A | C    | BROOKFIELD   | 4/1/2006        |           |
| CT0189864 | 439 CANDLEWOOD LAKE RD                  | NC   | BROOKFIELD   | 3/1/2007        |           |
| CT0189873 | PHARMCO PRODUCTS                        | NTNC | BROOKFIELD   | 8/8/2007        |           |
| CT0189874 | BURGER KING - BROOKFIELD                | NC   | BROOKFIELD   | 9/26/2007       |           |
| CT0189884 | 457 FEDERAL ROAD, LLC                   | NC   | BROOKFIELD   | 8/25/2008       |           |
| CT0189894 | 174 FEDERAL ROAD                        | NC   | BROOKFIELD   | 1/30/2008       |           |
| CT0189914 | 305 FEDERAL ROAD                        | NC   | BROOKFIELD   | 3/25/2008       |           |
| CT0189923 | 125 COMMERCE DRIVE                      | NTNC | BROOKFIELD   | 4/1/2008        |           |
| CT0199091 | GORMAN ROAD APARTMENTS                  | C    | BROOKLYN     | 10/19/2006      |           |
| CT0199103 | LEARNING CLINIC - OVERLOOK              | NTNC | BROOKLYN     | 4/16/2008       |           |
| CT0199104 | LEARNING CLINIC - PONDVIEW              | NTNC | BROOKLYN     | 4/16/2008       |           |
| CT0229044 | KNOLLWOOD PLAZA                         | NC   | CANTERBURY   | 1/17/2008       |           |
| CT0235074 | 306 ALBANY TURNPIKE                     | NC   | CANTON       | 1/30/2007       |           |
| CT0248014 | ZLOTNICKS GARAGE LLC                    | NC   | CHAPLIN      | 3/27/2007       |           |
| CT0248024 | 52 WILLIMANTIC ROAD                     | NC   | CHAPLIN      | 3/27/2007       |           |
| CT0279044 | INDIAN RIVER RECREATIONAL COMPLEX       | NC   | CLINTON      | 5/15/2007       |           |
| CT0309104 | CAMP ASTO WAMAH - INFIRMARY             | NC   | COLUMBIA     | 4/1/2006        |           |
| CT0309114 | CAMP ASTO WAMAH - HUNGERFORD            | NC   | COLUMBIA     | 4/1/2006        |           |
| CT0309124 | 52 ROUTE 66                             | NC   | COLUMBIA     | 4/9/2007        |           |
| CT0363064 | RICHCAT, LLC                            | NC   | DEEP RIVER   | 5/22/2007       |           |
| CT0389164 | BRAGA INVESTMENTS LLC                   | NC   | DURHAM       | 10/9/2007       |           |
| CT0399024 | STILL RIVER CAFE                        | NC   | EASTFORD     | 8/3/2006        |           |
| CT0399034 | CHARLIE BROWN CAMPGROUND-REC HALL       | NC   | EASTFORD     | 10/12/2006      |           |
| CT0408024 | EAST GRANBY FARMS                       | NC   | EAST GRANBY  | 12/12/2006      |           |
| CT0429133 | GLOBAL SELF STORAGE                     | NTNC | EAST HAMPTON | 6/25/2007       |           |
| CT0429143 | 3 SMITH STREET                          | NTNC | EAST HAMPTON | 12/18/2007      |           |
| CT0473024 | FLAHERTY FIELD TRIAL AREA               | NC   | EAST WINDSOR | 9/25/2006       |           |
| CT0530234 | FRANKLIN MUNICIPAL COMPLEX              | NC   | FRANKLIN     | 7/11/2006       |           |
| CT0530243 | THE PLANT GROUP, INC                    | NC   | FRANKLIN     | 1/31/2007       |           |
| CT0579144 | FAIRVIEW COUNTRY CLUB - CARRIAGE HOUSE  | NC   | GREENWICH    | 12/21/2006      |           |
| CT0609074 | THE LITTLE STORE                        | NC   | GUILFORD     | 6/22/2006       | YES       |
| CT0609084 | LAKE QUONNIPAUG                         | NC   | GUILFORD     | 6/23/2006       |           |
| CT0609094 | BITTNER PARK                            | NC   | GUILFORD     | 6/23/2006       | YES       |
| CT0609103 | GUILFORD VETERINARY HOSPITAL            | NTNC | GUILFORD     | 9/12/2007       |           |
| CT0609104 | GUILFORD AGRICULTURAL SOCIETY           | NC   | GUILFORD     | 6/5/2008        |           |
| CT0688021 | THE MARVELWOOD SCHOOL-FACULTY HOUSES    | C    | KENT         | 3/16/2006       | YES       |
| CT0709143 | KILLINGWORTH KIDS CENTER                | NTNC | KILLINGWORTH | 1/24/2006       |           |
| CT0709154 | SHELDON FIELD                           | NC   | KILLINGWORTH | 6/20/2006       |           |
| CT0709164 | THE COOKING COMPANY - KILLINGWORTH      | NC   | KILLINGWORTH | 3/15/2007       |           |
| CT0709174 | 183 ROUTE 81 LLC                        | NC   | KILLINGWORTH | 8/2/2007        |           |
| CT0740624 | COZY HILLS CAMPGROUND - WELL 3          | NC   | LITCHFIELD   | 5/2/2008        |           |
| CT0745113 | THE VILLAGE SCHOOL, INC.                | NTNC | LITCHFIELD   | 1/31/2007       |           |

| PWSID     | NAME                                     | TYPE | CITY          | ACTIVATION DATE | SNC List? |
|-----------|------------------------------------------|------|---------------|-----------------|-----------|
| CT0745124 | WEST SHORE SEAFOOD LLC                   | NC   | LITCHFIELD    | 2/26/2007       |           |
| CT0819031 | CTWC - NAUGATUCK REG - HILLCREST         | C    | MIDDLEBURY    | 5/18/2005       |           |
| CT0819041 | CTWC - NAUGATUCK REG-HERITAGE/MIDDLEBURY | C    | MIDDLEBURY    | 5/18/2006       |           |
| CT0900133 | ST LUKES SCHOOL ATHLETIC CENTER          | NTNC | NEW CANAAN    | 12/13/2006      |           |
| CT0915224 | ST. EDWARD ROMAN CATHOLIC CHURCH-AMC     | NC   | NEW FAIRFIELD | 8/30/2006       |           |
| CT0969361 | UNITED WATER CT, INC.-PARK GLEN SYSTEM   | C    | NEW MILFORD   | 5/25/2006       | YES       |
| CT0979284 | 130 MOUNT PLEASANT ROAD                  | NC   | NEWTOWN       | 8/27/2007       |           |
| CT0979354 | SUGAR HILL, LLC                          | NC   | NEWTOWN       | 2/8/2007        | YES       |
| CT0979364 | 1 GLEN ROAD                              | NC   | NEWTOWN       | 7/11/2007       |           |
| CT0979374 | 3 GLEN ROAD                              | NC   | NEWTOWN       | 7/11/2007       |           |
| CT0979393 | 144 SUGAR STREET                         | NC   | NEWTOWN       | 7/24/2007       |           |
| CT1019024 | THE ONLY GAME IN TOWN                    | NC   | NORTH HAVEN   | 8/21/2006       |           |
| CT1080504 | 100 OXFORD ROAD                          | NC   | OXFORD        | 4/21/2008       |           |
| CT1099134 | FRANKOS PIZZA & RESTAURANT               | NC   | PLAINFIELD    | 11/8/2006       |           |
| CT1099141 | ARNIO LAKE REALTY LLC                    | C    | PLAINFIELD    | 10/22/2007      |           |
| CT1099144 | 518 NORWICH ROAD                         | NC   | PLAINFIELD    | 1/28/2008       |           |
| CT1099154 | 15 EAST MAIN STREET LLC                  | NC   | PLAINFIELD    | 1/28/2008       |           |
| CT1099164 | 597 PUTNAM ROAD                          | NC   | PLAINFIELD    | 5/27/2008       |           |
| CT1149044 | PRESTON COMMUNITY PARK - 10 LINCOLN RD   | NC   | PRESTON       | 5/1/2008        |           |
| CT1159054 | JVP BUILDING                             | NC   | PROSPECT      | 10/16/2006      |           |
| CT1179124 | 2 MAIN STREET                            | NC   | REDDING       | 10/1/2007       |           |
| CT1189513 | 590 DANBURY ROAD LLC                     | NTNC | RIDGEFIELD    | 1/8/2007        |           |
| CT1189514 | STONEHENGE INN                           | NC   | RIDGEFIELD    | 2/1/2007        |           |
| CT1249033 | GREAT HILL UNITED METHODIST CHURCH       | NTNC | SEYMOUR       | 11/8/2007       |           |
| CT1249043 | COMCAST CABLE COMMUNICATIONS, LLC        | NTNC | SEYMOUR       | 2/25/2008       |           |
| CT1259134 | CORNWALL BRIDGE CITGO                    | NC   | SHARON        | 5/25/2006       |           |
| CT1299033 | GROWER DIRECT FARMS INC                  | NTNC | SOMERS        | 5/13/2008       |           |
| CT1311034 | KARABIN FARMS                            | NC   | SOUTHINGTON   | 11/3/2005       |           |
| CT1311044 | PANTHORN PARK UPPER RESTROOM             | NC   | SOUTHINGTON   | 4/19/2007       |           |
| CT1311054 | 1103 QUEEN STREET                        | NC   | SOUTHINGTON   | 12/26/2007      |           |
| CT1331024 | 51 WEST MAIN STREET                      | NC   | SPRAGUE       | 1/17/2007       |           |
| CT1331033 | MOHEGAN SUN COUNTRY CLUB AT PAUTIPAUG    | NTNC | SPRAGUE       | 5/14/2007       |           |
| CT1419063 | SCRIBBLES KID CARE                       | NTNC | THOMPSON      | 6/27/2008       |           |
| CT1429204 | FRIENDLY SERVICE STATION #39             | NC   | TOLLAND       | 3/13/2007       |           |
| CT1479021 | VOLUNTOWN HOUSING AUTHORITY              | C    | VOLUNTOWN     | 4/24/2008       |           |
| CT1501143 | MAYFLOWER SPA                            | NTNC | WASHINGTON    | 12/14/2006      |           |
| CT1539024 | VFW POST 5157                            | NC   | WATERTOWN     | 6/9/2006        |           |
| CT1539031 | WATERTOWN WATER & SEWER - WESTGATE       | C    | WATERTOWN     | 8/1/2006        |           |
| CT1539034 | MOUNT OLIVET CEMETERY                    | NC   | WATERTOWN     | 5/20/2008       |           |
| CT1560014 | LOVE TEMPLE CHURCH OF CHRIST IN PRAYER   | NC   | WEST HAVEN    | 12/19/2005      | YES       |
| CT1609134 | SCHOFIELD SPRING                         | NC   | WILLINGTON    | 11/28/2007      |           |
| CT1615144 | WOODCOCK NATURE CENTER INC               | NC   | WILTON        | 5/29/2008       |           |
| CT1620214 | THE SPORTS DOMAIN                        | NC   | WINCHESTER    | 10/26/2005      |           |
| CT1631214 | APOLLO RESTAURANT AND PIZZA              | NC   | WINDHAM       | 5/15/2007       |           |
| CT1650094 | 329 ELLA GRASSO TURNPIKE                 | NC   | WINDSOR LOCKS | 5/23/2008       |           |
| CT1669114 | 2 NORTH ST LLC                           | NC   | WOLCOTT       | 10/4/2006       |           |
| CT1669134 | 421 WOLCOTT ROAD                         | NC   | WOLCOTT       | 4/22/2008       |           |
| CT1670174 | ACADEMY SKATE PARK                       | NC   | WOODBIDGE     | 1/25/2007       |           |
| CT1670184 | WOODBIDGE C.C. - HALFWAY HOUSE           | NC   | WOODBIDGE     | 7/19/2007       |           |
| CT1699053 | SOLAIR RECREATIONAL LEAGUE - PAVILION    | NTNC | WOODSTOCK     | 7/27/2007       |           |
| CT1699061 | SOLAIR RECREATIONAL LEAGUE - LOWER RIDGE | C    | WOODSTOCK     | 7/27/2007       |           |
| CT1699071 | SOLAIR RECREATIONAL LEAGUE - BEAVER BATH | C    | WOODSTOCK     | 7/27/2007       |           |
| CT1699074 | SOLAIR RECREATIONAL LEAGUE - FOX HOLLOW  | NC   | WOODSTOCK     | 7/27/2007       |           |