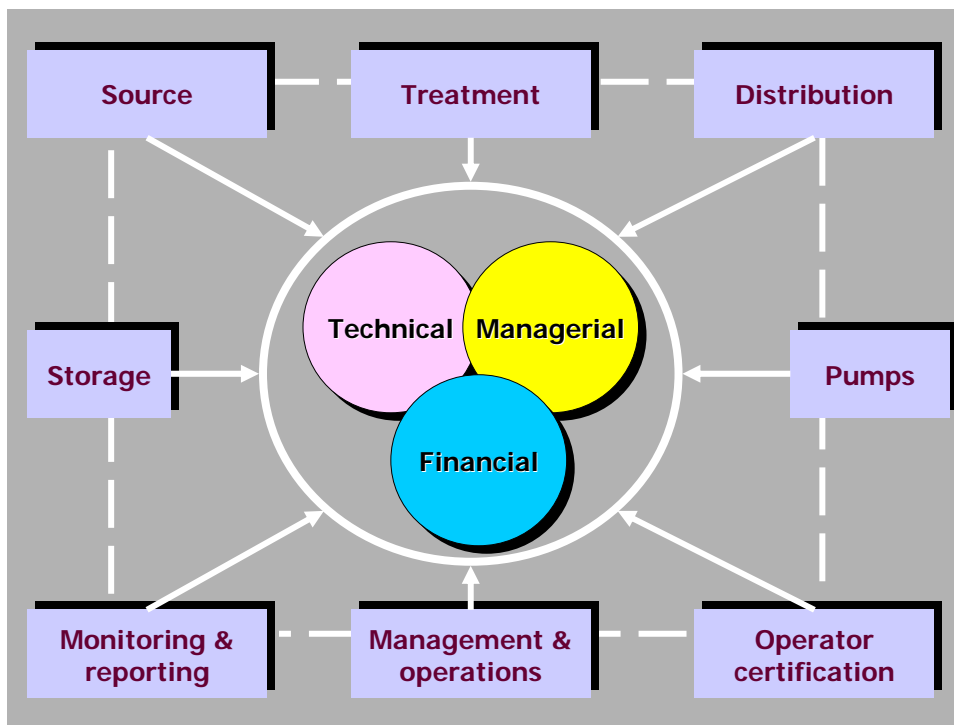


Capacity Development Program Implementation



Prepared By
Water Supply Division
Department of Environmental Conservation

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ATTACHMENT 1 - Vermont WSD Operator Certification Program Annual Report for Calendar Year 2004, dated July 1, 2005

Executive Summary

In the 1996 Amendments to the Federal Safe Drinking Water Act (SDWA), Congress mandated that states develop capacity development strategies to enhance the ability of public water systems to provide safe drinking water. These strategies are aimed at helping water systems acquire and/or maintain the technical, managerial, and financial abilities needed to properly operate, manage and finance their systems. With the assistance of a stakeholder group of State agencies, public water suppliers, technical assistance providers, local government representatives, and environmental groups, the Vermont Water Supply Division issued their Capacity Development Strategy Report on August 28, 2000.

Each State's strategy had to include provisions for new systems, for systems applying for funding within the Drinking Water State Revolving Fund (DWSRF) program, and for existing systems. Under this program, new and existing water systems are to be evaluated for their technical, managerial, and financial capabilities.

The 1996 SDWA Amendments also require that each State submit an annual report of its Capacity Development Strategy and document the progress made towards improving the technical, managerial, and financial capabilities of its public water systems. This report satisfies the statutory requirements of the SDWA and assures that Vermont will not be penalized twenty percent of the DWSRF capitalization grant for failure to comply. Also this annual report is submitted with the state's DWSRF capitalization grant application as part of the ongoing implementation of the capacity development strategy.

The Safe Drinking Water Act (SDWA) as amended in 1996 brings significant improvements to the national drinking water program. Capacity development is an important component of the Act's focus on preventing problems in drinking water. The capacity development provisions offer a framework within which States and water systems can work together to ensure that systems acquire and maintain the technical, financial, and managerial capacity needed to achieve the public health protection objectives of the SDWA.

The report is divided into four sections.

- ❖ Section 1 provides a general review of the SDWA and the Capacity Development Program.
- ❖ Section 2 describes the three capacity development provisions through which a Public Water System's (PWS) technical, managerial, and financial capabilities will be evaluated. The new system provision requires all new Community Water Systems (CWSs) and all new Non-Transient Non-Community water systems (NTNCs) that begin operation after October 1, 1999 to demonstrate adequate capacity. The Drinking Water State Revolving Fund provision prohibits states from providing Drinking Water State Revolving Fund assistance to public water systems that lack adequate capacity. The existing system provision is intended to provide direct assistance to existing PWSs to help them acquire and maintain the necessary capacity. There were five objectives identified in the Capacity Development Strategy: (1) Identify methods or criteria that the State will use to identify and prioritize the PWSs most in need of improving capacity; (2) identify institutional, regulatory, financial, tax, or legal factors at the federal, State, or local level that encourage or impair capacity development; (3) describe how the state will use the authorities and resources of the SDWA to: assist PWSs in complying with applicable laws and regulations; encourage the development of partnerships among PWSs; assist with the training and certification of water system operators; and establish methods for establishing a baseline and measuring improvements in capacity; (4) identify interested stakeholders; and (5) utilize other available resources in

State of Vermont to assist PWSs with their technical, managerial, and/or financial capacity. In addition to the objectives, the activities that were undertaken to address them are discussed.

- ❖ Section 3 state's approach in offering or providing assistance.
- ❖ Section 4 details the progress made in assisting public water systems improve their technical, managerial, and financial capabilities. The successes are measured through existing programs and new initiatives that assist public water systems acquire, maintain, and build upon their technical, managerial, and financial capabilities.

Glossary of Terms

Agency of Natural Resources (ANR) is the agency that oversees three departments Department of Environmental Conservation (DEC), Department of Fish and Wildlife (FWD) and Department of Forests, Parks and Recreation (FPR).

Department Of Environmental Conservation (DEC) department administers most of the Agency's regulatory programs plus several voluntary pollution and waste reduction programs. Program areas include: air quality, environmental assistance, public facilities engineering, geology, environmental permits, solid waste, hazardous waste, surface water quality, watershed planning, stormwater management, drinking water supply.

Water Supply Division (WSD) is the division within DEC responsible for administering the drinking water program in the State of Vermont.

Safe Drinking Water Act (SDWA) is the federal law passed by the U.S. Congress in 1974 and amended in 1986 and 1996, which authorizes the United States Environmental Protection Agency and the States to oversee public water systems and set standards for drinking water to protect public health.

United States Environmental Protection Agency (EPA) is the federal agency responsible for overseeing the state drinking water programs.

Significant Non-Complier (SNC) is a public water system that persistently violates drinking water standards specifically defined in EPA policy.

Public Water System (PWS) means any system(s) or combination of systems owned or controlled by a person, that provides drinking water through pipes or other constructed conveyances to the public and that has at least fifteen (15) service connections or serves an average of at least twenty five (25) individuals daily for at least sixty (60) days out of the year.

Public Community Water System (PCWS) means a public water system which serves at least fifteen (15) service connections used by year-round residents or, regularly serves at least 25 year-round residents.

Non-Transient Non-Community water system (NTNC) is a public water system that that regularly serves at least 25 of the same persons daily for more than six months per year. Examples: schools, factories, office buildings.

Transient Non-Community water system (TNC) is a public water system means a public that is not a Non-transient Non-community (NTNCs) water system. Examples: restaurants, motels, campgrounds.

1. Introduction

The objective of the 1996 Safe Drinking Water Act Amendments (Amendments) is to ensure that public water systems provide safe drinking water to the public. The Amendments seek to prevent compliance problems and associated health risks by ensuring that public water systems have the capability to produce safe drinking water now and in the future. To achieve these goals, the Amendments include provisions for several prevention programs – one of which is the capacity development program.

Water system capacity is the ability to plan for, achieve, and maintain compliance with all applicable drinking water standards. There are three components to capacity: technical, managerial, and financial. Technical capacity refers to a water system's ability to operate and maintain its infrastructure. Managerial capacity refers to the expertise of the water system's personnel to administer the system's overall operations. Financial capacity refers to the financial resources and fiscal management that support the cost of operating the water system. Adequate capability in all three areas is necessary for the successful operation of a public water system.

Capacity development is the process by which water systems acquire, maintain, and build upon their technical, managerial, and financial capabilities to enable them to consistently provide safe drinking water to their customers in a reliable and cost-effective manner. The capacity development program provides a framework for state agencies, local governments, stakeholder groups or organizations, water systems and the public to ensure that drinking water systems acquire and maintain the technical, managerial and financial capacity needed to achieve compliance with applicable State and Federal drinking water regulations.

The purpose of this report is to provide an assessment of the capacity development program in Vermont and the statewide strategy for assisting public water systems in need. The report highlights the progress made toward improving the technical, managerial, and financial capabilities of public water systems in Vermont as a result of the Vermont Water Supply Division Capacity Development Program.

2. Capacity Development Provisions in the Safe Drinking Water Act

The Amendments included three capacity development provisions.

- 1) All new community water systems and all new non-transient non-community water systems that begin operation after October 1, 1999 must first demonstrate that they possess adequate capacity.
- 2) States are prohibited from providing Drinking Water State Revolving Fund (DWSRF) assistance to public water systems that lack adequate capacity, unless that assistance is directly related to improving the system's technical, managerial or financial capacity.
- 3) States must develop and implement a strategy to assist existing public water systems acquire and maintain the necessary capacity.

2.1. *New Systems Provisions*

Section 1420(a) of the Amendments, the new systems provision, applies to all new CWSs and all new NTNCs, that begin operations after October 1, 1999. Vermont had to demonstrate to the United States Environmental Protection Agency (EPA) that it had the legal authority to ensure that all new CWSs and all new NTNCs had the technical, managerial, and financial capacity to comply with all applicable State and Federal drinking water regulations. On February 26, 1999 the EPA determined that Vermont met the guidance and statutory requirements under Section 1420(a). On October 1, 1999, Vermont began implementing the new systems provision of the Amendments.

To date, the Department Of Environmental Conservation (DEC), Water Supply Division (WSD) has submitted to the EPA five annual new systems progress reports. In those reports, the Division documented that the evaluation of new systems is ongoing and addresses the required capacity determinations for new water systems. In recent years, the new systems progress report has been included in the overall program implementation report submittal entitled, "Vermont New Water System Capacity Review Annual Report." WSD has been the primary governmental unit that exercises its authority to ensure the demonstration of new systems capacity. There have been no modifications to the WSD control points which are integrated with the WSD construction permit and operating permit programs.

2.1.1. *New Water System Capacity Reviews*

There were five new CWSs and no new NTNCs approved during state fiscal year 2005. We are currently evaluating proposals for two additional new CWSs and one new NTNC. This information is summarized below in Table 1.

Table 1 Vermont Annual Capacity Program Report Of The New CWSs & NTNCs For The Period July 1, 2004 - June 30, 2005				
# CWSs	Names of Proposed New CWSs	Approved	Denied	Reason Not Approved
1	Townhomes @The Vale	Yes		
2	Vernon Senior Housing	Yes		
3	Dorset Community Housing	Yes		
4	Butterfield Commons Housing	Yes		
5	Town of Putney	Yes		
6	South Alburg Fire District #2	No		Pending Review
7	Rocking Stone Farm, LLC	No		Pending Review
Totals CWSs		5	0	Two Pending Review
# NTNCs	Names of Proposed New NTNCs	Approved	Denied	Reason Not Approved
1	Groton Revitalization Project Water System	No		Pending Review
Totals NTNCs		0	0	One Pending Review

2.1.2. Most Recent Three-Year Record

In any given fiscal year, the WSD receives 20-30 inquiries from developers, landowners, and other entities about creation of new public water systems. In most cases, the WSD promotes alternatives to creating a new water public system, such as consolidation with, or annexation by, existing public water systems.

Summarized in Table 2 below is the operational status of the new Vermont PWSs permitted during the past three state fiscal years and reported on in the annual new systems capacity reports. There are probably another 5-10 entities who have submitted proposals to the Division for creation of a PWS but who have not yet proceeded to engineering design or construction.

Table 2 New Public Water System Activity 7/1/2002 – 6/30/2005			
PWS Number	PWS Name	PWS Type	SNC List Ever?
20874	Northern Power Systems	NTNC	No
20893	Sharon Academy	NTNC	No
20908	Addison County Home & Health Hospices, Inc.	NTNC	No
21015	Champlain Valley Cohousing	CWS	No, under construction
20917	Jackson Gore-Okemo	CWS	No
20904	Oak Hill Child Care	NTNC	No
20907	Lake Champlain Waldrof School	NTNC	No
20944	Townhome @ The Vale	CWS	No, under construction
20986	Vernon Senior Housing	CWS	No, under construction
21026	Dorset Community Housing	CWS	No, under construction
20934	Town of Putney	CWS	No

2.2. DWSRF Applicants Provision

Section 1452(a)(3) of the Amendments applies to those public water systems that seek assistance from the DWSRF. Under this provision, states are prohibited from providing DWSRF assistance to a public water system that lacks the technical, managerial, and financial capability to ensure compliance with the Amendments or that is in significant noncompliance with applicable State and Federal drinking water regulations. However, states are allowed to provide DWSRF assistance to such a public water system if the use of the assistance will assure compliance, or if the owner or operator of the system agrees to undertake feasible and appropriate changes to acquire and maintain the system's technical, managerial, and financial capabilities over the long term.

Vermont's capacity development review criteria for DWSRF applicants are described in each year's Intended Use Plan. A loan fund may not provide any type of assistance to a system that lacks the technical, managerial or financial capability to maintain SDWA compliance, unless the owner or operator of the system agrees to undertake feasible and appropriate changes in operation or if the use of the financial assistance will ensure capacity over the long-term. The Water Supply Division will make a determination on system capacity based on information available in Water Supply Division records, the priority list application,

completion of the capacity evaluation form at the pre-application meeting, and the loan application. Some considerations include current compliance status with requirements for an operation and maintenance manual, operator certification, water quality monitoring, source protection plan, payment of fees, groundwater under the influence determination, sanitary survey recommendations, and long range planning. The financial capacity determination will also consider current and projected water rates, delinquent water accounts, and financial planning. The existence of an active organization with identified responsible officials and business practices are considerations in managerial capability determinations. If a loan applicant is determined to lack capacity in some areas, generally, a corrective action plan will be established and included as a loan condition.

2.3. Existing Systems Provision

Section 1420(c)(2) of the Amendments requires that Vermont develop and implement a capacity development strategy to assist public water systems acquire and maintain technical, managerial, and financial capacity. With the assistance of a stakeholders group formed in 2000 consisting of federal, state, and local government, water districts, fire districts, homeowners associations, mobile home parks, school districts, daycare centers, camps, and consulting engineers, the Division developed a comprehensive capacity development implementation strategy to assist public water systems. The strategy considered identifying and prioritizing public water systems most in need of improving their technical, managerial, and financial capabilities; identifying the institutional, regulatory, financial, tax, or legal factors that encourage or impair capacity development at the Federal, State, or local level; describing how the State will use the authority and resources of the Amendments to assist public water systems in need; establishing a baseline measure of public water system capacity and a means to measure improvements in capacity of public water systems; and identifying those persons that have an interest in capacity development. The Vermont Water Supply Division submitted a Capacity Development Program Strategy Report: "Improving the Technical, Managerial and Financial Capabilities of Public Water Systems in Vermont," in August 2000. In September 2000, EPA determined that the Vermont Capacity Development Strategy met the statutory requirements under Section 1420(c) of the Amendments.

On October 1, 2000, the Division began implementing the existing systems provisions of the Capacity Development Strategy. To date, the Division has submitted to the EPA five annual "State Of Vermont Capacity Development Program Strategy Implementation" reports. The implementation report documented that the State Water Supply Division is implementing a fully functioning existing water system plan according to its capacity development strategy.

2.3.1. Vermont Public Water Systems Demographics

There are 1372 public water systems in Vermont separated into three different types.

Community public water systems regularly serve at least 25 year round residents. There are 439 systems serving an estimated aggregate population of 446,755.

Non-Transient Non-Community water systems serve at least 25 of the same persons daily for more than six months per year. Schools, factories, and office buildings meet these criteria. There are 241 systems in this category serving an aggregate population of 43,966.

Transient Non-Community water systems serve more than 25 persons for at least 60 days during the year. Restaurants, motels, and campgrounds are examples. Approximately 692 systems are classified as transient non-community water systems.

Regulatory requirements vary for the different types of systems. CWSs must meet the strictest requirements, followed by NTNCs and then TNCs. The major focus of the Strategy is therefore on CWSs and NTNCs. Major factors in strategy development and implementation are system size and ownership type. Economies of scale are dramatic for water system operation and maintenance costs and have a major impact on the ability of small volunteer or part-time system operators to maintain their systems in compliance with the ever increasing and more complex EPA and State regulatory requirements.

Figure 1. Number of public water systems by type.

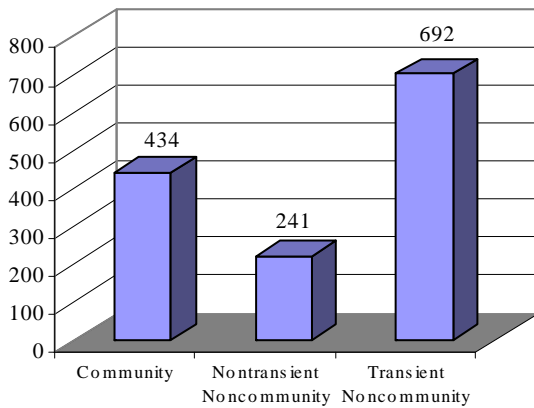
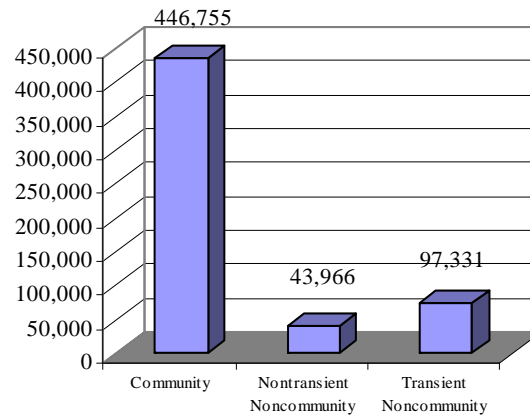


Figure 2. Population served by public system type.



Vermont Public Water Systems Profile			
<i>Population Range</i>	<i>Community</i>	<i>Non-Transient Non-Community</i>	<i>Transient Non-community</i>
25 - 100	142	119	423
101 - 200	92	64	160
201 - 300	32	26	48
301 - 400	23	8	24
401 - 500	24	7	10
501 - 1000	42	12	20
1001 - 3300	48	5	7
3301 >	31	0	0
Total	434	241	692

Approximately 200 of the community systems are privately owned. Most of these serve small rural homeowners associations or mobile home parks; approximately 20 are for-profit systems regulated by the Public Service Board.

Approximately 147 of 241 NTNC water systems serve small rural schools. Most of the remaining 94 systems are privately owned.

Nearly all of the 692 transient systems are privately owned businesses.

Our Capacity Improvement Program is focused primarily, although not exclusively, on those most in need of assistance, the small community system and small rural school system. A significant number of these systems would not economically be able to comply with regulatory requirements and protect public health without the technical and financial assistance provided through this program.

2.3.2. Objectives

In the Capacity Development Program Existing Strategy Report, the Water Supply Division identified and indicated that it would undertake the following activities:

- Identify methods or criteria that the State will use to identify and prioritize the PWSs most in need of improving capacity;
- Identify institutional, regulatory, financial, tax, or legal factors at the federal, State, or local level that encourage or impair capacity development;
- Describe how the State will use the authorities and resources of the SDWA to:
 - Assist PWSs in complying with applicable laws and regulations;
 - Encourage the development of partnerships among PWSs;
 - Assist with the training and certification of water system operators;
 - Establish methods for establishing a baseline and measuring improvements in capacity;
- Identify interested stakeholders; and
- Utilize other available resources in State of Vermont to assist PWSs with their technical, managerial, and/or financial capacity.

The Vermont Water Supply Division has conducted a number of activities to fulfill the objectives specified in the Capacity Development Strategy Report. Below is a summary of these activities.

2.3.3. Capacity Strategy Components

Vermont has a long history of providing both financial and technical assistance to water systems. The 1996 Amendments to the Safe Drinking Water Act provided an opportunity to use federal and state dollars to improve and expand this program to more nearly meet the need. A series of meetings with owners, operators, representative of state and federal organizations, consulting engineering firms and others were held in the spring of 2000 to identify needs, and obtain suggestions for new and revised programs. Based on the public input the Vermont Existing Public Water System Capacity Strategy was developed and submitted to EPA in July of 2000. A copy of the strategy is attached. The strategy continued some programs, expanded or modified others, and added new ones. The three major components of our capacity program are technical assistance, financial assistance, and training. We believe the right emphasis on each of these components will be most successful in assuring Vermont

water systems are able to and will comply with regulatory requirements and protect public health.

2.3.3.1. Financial Assistance

- 1) Reduced Interest Loans for Water System Improvements
- 2) Zero Interest Loans for Planning & Final Design
- 3) Reduced Interest Loans for Land Purchase and Conservation Easements for Source Water Protection
- 4) Negative Interest Construction Loans to Low Income Communities with High Water Rates
- 5) Planning and Final Design Loan Forgiveness for Small Municipalities
- 6) Up to \$25,000 Construction Loan Forgiveness for Municipal School System Improvement Projects.

2.3.3.2. Technical Assistance & Outreach

The Capacity Development Strategy included 13 initiatives plus continuation of other ongoing capacity related programs. This section of the report will focus on the implementation status of the 13 initiatives and five additional new initiatives. The 13 initiatives are detailed on pages 11 through 17 of the Vermont Existing Public Water System Capacity Strategy, dated July 28, 2000.

1. *Monitoring Cost Study.* The WSD plans to complete a report evaluating the options for providing financial assistance to water systems with compliance monitoring activities. The report will include cost estimates, funding sources, and implementation recommendations for NTNCs, TNCs, and small CWSs.

<i>Activity Leader</i>	DWSRF Program Manager	
<i>Resource Personnel</i>	<ul style="list-style-type: none"> ➤ WSD Director ➤ Health Department ➤ Operation & Compliance Section (WSD) ➤ Water Supply Division with Staff (WSD) ➤ Capacity Advisory Workgroup 	
<i>Schedule</i>	Initiate	February 2001
<i>Funding</i>	In-House Study	

Status:

This initiative was implemented in July 2002 for TNCs only. A "TNC Monitoring Cost Study" report was completed in August 2002. The end result is that the WSD hired two contractors to do quarterly monitoring and provide training for TNC Water System operators for one year. The implementation of this program started April 2004. The contractors will collect samples, including nitrate/nitrite, and the samples will be analyzed at the State Department of Environmental Conservation Laboratory at no charge to the water systems. Starting in 2005, water systems will be responsible for collecting their samples and paying laboratory fees for analyses. The cost estimates, funding sources, and implementation recommendations for NTNCs and CWSs will be delayed to a future date.

2. *DWSRF Program Changes.* Various program changes have been identified and implemented since the inception of the Vermont DWSRF.

Changes made to the DWSRF program are summarized each year in the annual DWSRF IUP. When State legislation is needed to enable a program change, WSD personnel typically provide input.

Activity Leader	DWSRF Program Manager	
Resource Personnel	<ul style="list-style-type: none"> ➤ WSD Director ➤ Capacity Advisory Workgroup Representative ➤ Project Development Specialist (WSD) ➤ Department Of Environmental Conservation (DEC) ➤ Vermont Economic Development Authority (VEDA) ➤ Vermont Bond Bank ➤ Rural Community Assistance Program Representative (RCAP) ➤ Department Of Agriculture Rural Development Representative 	
Schedule	Prepare outline of legislative changes for Agency Of Natural Resources (ANR) consideration	August
	Prepare legislative language	September and October
	Submit to legislature	January
	Provide support for legislation	January - May
	Include changes in Intended Use Plan (IUP)	

This initiative is on schedule.

Status:

This initiative is ongoing as program changes are made continuously. A full description of the changes is included in the FFY 2001-2005 Intended Use Plans (IUPs).

3. Technical Training and Assistance. WSD and technical assistance providers are planning on conducting group training programs and providing one-on-one assistance. WSD and the technical assistance providers will provide information on operation & maintenance (O&M) manuals, long-range plans, financial management, and how to perform a capacity assessment. Group programs will be conducted around the state, with evening meetings scheduled bimonthly. WSD may provide additional contract resources if additional assistance is needed.

Activity Leader	Capacity Development Specialist Northeast Rural Water Association (NeRWA)	
Resource Personnel	<ul style="list-style-type: none"> ➤ NeRWA Representative ➤ WSD Representative ➤ Contractor ➤ Capacity Advisory Workgroup 	
Schedule	Initiate	April 1, 2001
	Complete	On-going
Funding	DWSRF Program Management - \$30,000 Materials, Supplies, Travel, Contractor	

Status:

This initiative was combined with operator certification funding program to create an integrated capacity development, operator certification training, and regulatory compliance program. The Annual Report dated July 1, 2005 for Operator Training Program Calendar Year 2004 is attached (Attachment 1, page 14). Periodic regional group operator training meetings component had started and was initiated by VRWA (Vermont Rural Water Association).

4. *Legal Assistance.* WSD will award a contract to a legal assistance provider for work with small systems on DWSRF loan applications and agreements. This will be a 1-year pilot program and continuation will be based on pilot program results. Priority for assistance will be based on the DWSRF priority list. Funding for any one system may be limited.

Activity Leader	Capacity Development Specialist	
Resource Personnel	<ul style="list-style-type: none"> ➤ DWSRF Program Manager ➤ Contractor 	
Schedule	Initiate RFP	November 2000
	Award Contract	January 2001
	Assistance Provided	2001 to present
Funding	Program Management Set-Aside - \$10,000	

Status:

This initiative is intended to target privately owned systems. A contract was awarded to a legal firm; projects on the FFY 2001 priority list and later year lists are eligible for assistance. Three systems have taken advantage of this assistance to date.

5. *Engineering Technical Assistance.* WSD will award contracts to technical assistance providers for work with small systems on operation and maintenance problems, DWSRF loan applications, preparation and review of technical assistance agreements, and review and comment on technical work products. This will be a 1-year pilot program and continuation of the program will be based on the program's results. Priority for assistance will be based on request date, DWSRF priority list status, system ownership type and size, and percent permanent occupancy. Funding for any one system may be limited.

<i>Activity Leader</i>	Capacity Development Specialist	
<i>Resource Personnel</i>	<ul style="list-style-type: none"> ➤ DWSRF Program Manager ➤ Contractors 	
<i>Schedule</i>	Initiate RFP	November 2000
	Award Contracts	January 2001
	Assistance Provided	2001 to present
<i>Funding</i>	Program Management Set-Aside - \$40,000 (multiple contracts)	

Status:

Contracts were awarded to four engineering firms to provide this assistance. Each contract was for \$ 10,000. In 2001, the contracts were increased to \$18,900 each. In 2002 through 2005, we did not increase the contract amounts. To date, we have authorized assistance to 28 water systems. Most assistance is associated with DWSRF loans.

6. *Small System Templates And Self-Assessments.* WSD will develop templates for a small system O&M manual, long-range plan, and financial documentation. The electronic and hard copy templates will be provided to water systems on request and will be used in training programs. In addition, WSD will modify the Capacity Self Assessment Form and establish capacity criteria. WSD is considering the development of additional templates such as ordinances, activity calendars, and Occupational Safety & Health Administration (OSHA) requirements.

<i>Activity Leader</i>	Vermont SRF Specialist (NeRWA)	
<i>Resource Personnel</i>	<ul style="list-style-type: none"> ➤ Capacity Development Specialist (WSD) ➤ DWSRF Program Manager (WSD) ➤ Operation & Compliance Section (WSD) ➤ Capacity Advisory Workgroup 	
<i>Schedule</i>	Initiate	October 1, 2000
	Complete Templates	January 1, 2000
	Field Test Templates	January and February 2001
	Modify Templates	March 2001
	Activity Complete	April 2, 2001
<i>Funding</i>	Program Management Set-aside - \$2,000 (Supplies, materials, and reproduction)	

Status:

Operation & Maintenance (O & M) manual, and long-range plan templates and capacity assessment forms and criteria are complete and being used in the field. These documents are the basis for some of the on-site training and local group training under initiative 3. To date forty five O & M Manuals, thirty Long Range Plans, and two hundred five Capacity Assessments have been completed through this initiative.

7. *User Rate Review and Budgeting.* Technical assistance will be provided to help water systems develop budgets, and analyze and establish user rates. The DEC currently provides some assistance to larger systems. WSD staff and NeRWA will work with small systems using the templates developed under the template initiative. WSD may award a contract to provide this assistance. Priority will be based on request date, DWRSF priority list status, system ownership, system type, system size, and percent permanent occupancy. Funding for any one system may be limited.

Activity Leader	Capacity Development Specialist	
Resource Personnel	<ul style="list-style-type: none"> ➤ DWSRF Program Manager ➤ NeRWA Representative ➤ Contractors ➤ Department Of Environmental Conservation (DEC) 	
Schedule	Large Systems	On going
	Small Systems	Initiate April 1, 2001
Funding	Program Management Set-Aside - \$35,000 DEC Staff Time - \$25,000 Contract time if needed - \$10,000	

Status:

This program has been delayed because of the priority given to the other initiatives. Some of this assistance is being provided through development of long range plans. Additional emphasis on this initiative will be provided during the next year.

8. *Public Service Board Technical Assistance.* WSD may award a contract to a technical assistance provider to help small water systems with public service board rate change procedures.¹ This will be a one-year pilot program and continuation will be based on the program's results. Priority for assistance may be based on system size, dates of submittal, and DWSRF priority loan application status. Funding for any two system may be limited.

Activity Leader	Capacity Development Specialist	
Resource Personnel	<ul style="list-style-type: none"> ➤ DWSRF Program Manager ➤ Public Service Department Representative 	
Schedule	Initiate RFP	October 2001
	Award Contract	January 2001
	Administer Contract	2001
Funding	DWSRF Program Management Set-Aside - \$10,000	

¹This activity will not be implemented unless the Public Service Board agrees that the assistance will benefit both the board and the water systems.

Status:

A contract has been awarded to a legal firm and guidance document for use by small systems has been completed. The document has been distributed to water system owners and assistance providers. We are still expecting the contractor to offer assistance to systems as requested with the guidance manual during the next year. To date we have received 3 requests for assistance.

9. *Board Member Owner Manual.* A Public Water System (PWS) board member manual is being developed. The manual will outline the responsibilities and liabilities for PWS board members. The manual will include information on relevant laws, regulations, and policies, and will include a list of resources.

Activity Leader	Capacity Development Specialist	
Resource Personnel	<ul style="list-style-type: none"> ➤ DWSRF Program Manager ➤ Contractor ➤ NeRWA Representative ➤ RCAP 	
Schedule	Initiate RFP	January 2001
	Award Contract	March 2001
	Complete Contract	July 1, 2001
Funding	Program Management Set-Aside - \$25,000	

Status:

Final approval and distribution of the manual was delayed. The draft did not include critical elements and we have contracted for a detailed review and revision. We anticipate completion and distribution by October 2005.

10. *Small System Design Guidance Manual.* WSD will develop a small system design criteria guidance manual to address system modification and replacement requirements and new regulatory requirements. The manual will target consultants and system owners and operators.

Activity Leader	DWSRF Program Manager	
Resource Personnel (Tentative)	<ul style="list-style-type: none"> ➤ Engineering & Financial Service Section (WSD) ➤ DWSRF Program Manager (WSD) ➤ Capacity Advisory Workgroup 	
Schedule	Initiate	February 2001
	Complete	August 2001
Funding	In-House Effort	

Status:

This initiative has been delayed. We still see a need for this document, but haven't established a target completion date. Work was completed on UV guidelines for TNCs & NTNCs as a first step in implementing this initiative.

11. *Consolidation Study.* The WSD will award a contract to identify opportunities for physical or operational consolidation of water systems in the State. Small CWSs and school water systems will be evaluated. The

contractor will identify impediments to consolidation, the cost and benefits of consolidation, and the advantages and disadvantages to water systems and their customers. The contractor will develop a screening process to identify systems that may benefit from consolidation.

Activity Leader	DWSRF Program Manager	
Resource Personnel (Tentative)	<ul style="list-style-type: none"> ➤ Capacity Development Specialist (WSD) ➤ NeRWA Representative ➤ RCAP Representative ➤ Capacity Advisory Workgroup 	
Schedule	Initiate RFP	November 2000
	Award Contract	February 2001
	Complete Contract	July 2001
Funding	Program Management Set-aside - \$50,000	

Status:

This initiative has also been delayed due to staffing shortages. Funding for the project is still available under the program management set-aside.

12. *Water Supply Divisional Newsletter.* The WSD will begin publishing a newsletter in October, February, and June to improve communications between WSD and systems and to provide timely information. The newsletter will be distributed to all water systems, consultants, and appropriate stakeholders. The newsletter may be targeted to different types of systems or include sections applicable to different types of systems. The newsletter will be posted on the Divisional Web page.

Activity Leader	Capacity Development Specialist	
Resource Personnel	<ul style="list-style-type: none"> ➤ WSD Staff - Prepare articles ➤ Support & Planning Section Representative (WSD) ➤ Contract Assistance 	
Schedule	1 st letter	October 2000
Funding	Program Management Set-Aside - \$20,000	

Status:

Twelve issues of the newsletter have been published. We have received many positive comments and expect to continue the initiative with program management set-asides.

13. *Communication Workgroup.* WSD will establish a Workgroup to evaluate and develop recommendations on mass mailing procedures, Newsletters, the Electronic Bulletin Board, Electronic Communication with Water Systems, and publicity.

Activity Leader	Capacity Development Specialist	
Resource Personnel	<ul style="list-style-type: none"> ➤ Water System Section (WSD) ➤ Operation & Compliance Section (WSD) ➤ Support & Planning Section (WSD) ➤ Capacity Advisory Workgroup ➤ NeRWA Representative 	
Schedule	Initiate	November 2000
	Complete	March 2001
	Initiate Recommendations	On-going
Funding	Program Management Set-Aside - \$15,000	

Status:

The workgroup was formed in December 2002. The workgroup last met in late spring 2003 and established final recommendations for the WSD Director for his consideration. Some of the recommendations have been implemented. This workgroup will be ongoing. WSD considers this a high priority initiative.

2.3.3.3. Modifications To Program Strategy

Intended Use Plans and set-aside work plans provided detailed descriptions of strategy additions and changes. We have added the following initiatives funded from set-asides to our existing system strategy program.

14. *Development of a Cross-Connection Guidance Manual.* The manual will provide guidance to small water systems with development of cross connection control programs. This initiative was included in the FFY 2001 IUP and funded for \$10,000.

Status:

The manual development has been delayed in part due to staffing shortages.

15. *Reservoir Water Quality Study.* This program was funded by an amendment to the August 2001 Program Management set-aside work plan. The study will provide detailed data on changes in source water characterization during the year for two small surface water bodies used by public community water systems in Vermont. The results and recommendations will be provided to other systems operating under similar conditions. The \$ 75,000 project is scheduled for completion in December 2003.

Status:

Field data were collected from April 2002 through May 2003 for the Town of Brattleboro and St. Albans Water Systems. The data have been analyzed and preliminary results have been evaluated and communicated to the participating water systems. A draft final report is done and is expected to be completed this year.

16. *Comprehensive Performance Evaluation Program.* Water Supply Division staff conducted facility-specific technical assessment of surface

water treatment plant design and operation. The program is intended to identify areas of improvement through low cost solutions to optimize finished water quality. The FFY 2002 IUP provides \$ 20,000 to support this ongoing program, which was initiated in the spring of 2002.

Status:

Comprehensive Performance Evaluations (CPEs) were conducted, and final report prepared, identifying performance-limiting factors to optimization for Proctor and Bennington Water Departments in March and July of 2002, respectively. \$20,000 appropriated in the FFY 2002 IUP was used to purchase two Hach 1720D turbidimeters and two Hach PCX 2200 particle counters and related equipment to enhance future CPE and technical assistance capabilities. A 3rd CPE was conducted, which did serve as the 3rd in a series of CPE training sessions run by Cadmus Group, for the Fair Haven Water System. The CPE/training session was conducted in December 2003. The conducting of more CPEs has been delayed in part due to workload and staffing shortages.

17. Operation & Maintenance Template for Small Surface Water Systems.

This is the third component of the program to provide specific support for these types of systems. The FFY 2002 IUP has \$50,000 identified for this initiative. Target completion date is October 2003.

Status:

Template development has been delayed.

18. Water Systems Improvement Plans. In 2000 the WSD had contracted with three professional engineers who completed 79 water systems facility improvement plans. From 2001-2003, the WSD contracted with two professional engineers who completed 81 water systems facility improvement plans. The contracts were 100% federally funded from the DWSRF Local Assistance Set-aside. The FFY 1999 - 2003 Intended Use Plans budgeted \$685,000 for this project. We have a remaining balance of \$424,549 to continuing funding this program. This has been an extremely successful program in assisting Vermont water systems in determining their future water systems needs. The program has been successful in identifying many projects that have ultimately been financed through the DWSRF construction loan program. The improvement plans have served as a good stepping stone for the loan program. It is our intent to continue this program. The Water Supply Division (WSD) has issued WSD contracts over two years with three professional engineers to provide professional engineering services for water systems facility improvement plans (small systems engineering evaluations). In the 2004 IUP \$100,000 of additional funds was added to support this program. In 2005 IUP \$0 is being recommended. Total funding for this program \$835,000.

Small System Engineering Evaluations Funding Summary	
Federal Fiscal Year	Amount
1999	\$150,000
2000	\$250,000
2001	\$135,000
2002	\$150,000
2003	\$0
2004	\$150,000
2005 (proposed)	\$0
Total	\$835,000

3. State's Approach In Offering Or Providing Assistance

As indicated in the original strategy, prioritization of systems for technical assistance and training is not required because assistance is available to meet all requests. Established Drinking Water State Revolving Fund (DWSRF) procedures are used to prioritize systems requesting loans, including planning and source water protection loans. We have given priority for water system evaluations to community systems serving populations of less than 1000 and schools. Sanitary surveys play an important role in prioritization of directing capacity assistance to water systems. An enforcement committee establishes enforcement priorities and an operator certification committee identifies and prioritizes training needs. Systems selected for enforcement are frequently contacted to determine if assistance through the capacity program would be helpful. The priority system for DWSRF loans was changed in 2001 to provide higher priority than previously for small systems. This change has had the intended effect of increasing the number of small systems receiving loans.

In the future, if the need for technical assistance exceeds WSD staff or contract assistance resources, WSD will prioritize systems using the following factors:

1. DWSRF priority list status
2. System ownership (municipal, private non-profit, private profit)
3. System type (CWS, NTNC, TNC)
4. System size (design population)
5. Permanent residents

4. Review of Implementation of the Existing System Strategy

The WSD does not conduct regularly scheduled reviews of the implementation of its Capacity Development Program. There is a great deal of flexibility in program administration and implementation merely evolves in response to water system applicant (new systems) and operator (existing systems) feedback. Non-substantive changes that have seemingly improved program implementation includes the development of staff checklists for use in the review of new water system applicant business plans. The checklists are keyed to the required items enumerated in our WSD Water Supply Rule.

4.1. Availability of the Report to the Public

The WSD posts its annual Capacity Development Program Report to EPA and its triennial Capacity Development Report to the Governor on its web site at:

<http://www.vermontdrinkingwater.org>.

Prepared by: _____

Date: _____

Roger Bergeron
Vermont Capacity Development Coordinator

This report and related environmental information are available electronically via the internet. For information visit us through the Vermont Homepage at <http://www.vermont.gov> or visit VT WSD directly at <http://www.vermontdrinkingwater.org>

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