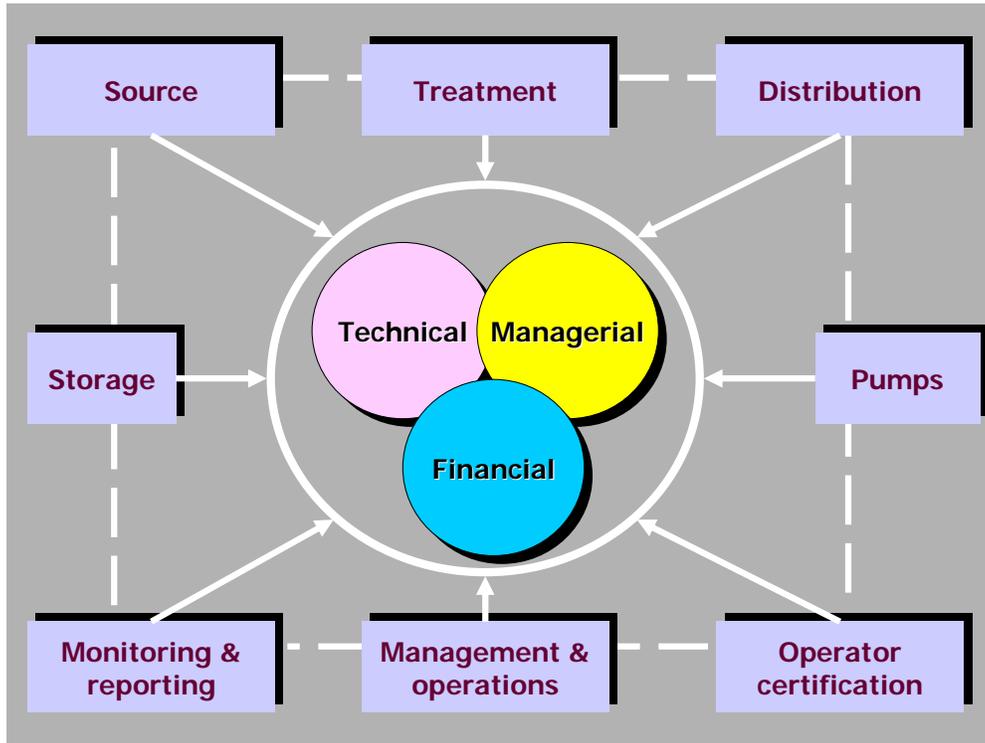


Capacity Development Program Implementation



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## 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 (TMF) abilities needed to properly operate, manage and finance their systems. With the assistance of a stakeholder group made up of State agencies, public water suppliers, technical assistance providers, local government representatives, and environmental groups, the Vermont Water Supply Division issued their initial Capacity Development Strategy Report on August 28, 2000.

Each State's strategy had to include provisions for new systems, for systems applying for funding from the Drinking Water State Revolving Fund (DWSRF) program, and for existing systems. Vermont's strategy requires all new community and non-transient non-community water systems, and systems applying for funding from the DWSRF to obtain a capacity determination. Existing systems not applying for funding are given direct assistance with capacity issues.

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 TMF 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.

The SDWA as amended in 1996 brought significant improvements to the national drinking water program. Capacity development is an important component of the Act's focus on mitigating drinking water issues. Capacity development provisions offer a framework within which States and water systems can work together to ensure that systems acquire and maintain the TMF capacity needed to achieve the public health protection objectives of the SDWA.

The report is divided into four sections.

- ❖ Section 1 provides a general overview of the SDWA and the Capacity Development Program.
- ❖ Section 2 describes the capacity development review provisions that apply to new systems, existing systems applying for a DWSRF loan, and other existing systems. The new system provision requires all new community water systems (CWSs) and non-transient non-community water systems (NTNCs) that begin operation after October 1, 1999 demonstrate adequate capacity. The Drinking Water State Revolving Fund provision prohibits states from providing DWSRF assistance to public water systems that lack adequate capacity. The existing system provision is intended to provide direct assistance to existing public water systems to help them acquire and maintain adequate capacity.

Five objectives that were identified in the Capacity Development Strategy:

- (1) Identify methods or criteria that the State will use to identify and prioritize the water systems most in need of capacity assistance;
- (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 water systems in complying with applicable laws and regulations; encourage the development of partnerships among water systems; assist with the training and certification of water system operators; and develop methods for establishing a baseline and measuring improvements in capacity;
- (4) Identify interested stakeholders; and,
- (5) Utilize other available resources within the State of Vermont to assist water systems with their TMF capacity.

Additionally, a variety of initiatives were undertaken to address the objectives, and a summary of the status of each initiative is provided.

- ❖ Section 3 describes the state's approach to offering or providing assistance.

- ❖ Section 4 describes the progress made assisting public water systems to improve their TMF capabilities. Successes are measured through existing programs and new initiatives that assist public water systems to acquire, maintain, and build upon their TMF capabilities.

## **1. Introduction**

The objective of the 1996 Safe Drinking Water Act (SDWA) Amendments (Amendments) was to ensure that public water systems provide safe drinking water to the public. The Amendments seek to mitigate compliance activities 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 included 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, or capacity, in all three areas is necessary for the successful operation of a public water system.

Capacity development is the process through which water systems acquire, maintain, and build upon their technical, managerial, and financial (TMF) capabilities which enable them to consistently provide safe drinking water to their customers in a reliable and cost-effective manner. Vermont's 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 TMF 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. The report highlights progress made toward improving the TMF capabilities of public water systems in Vermont as a result of the Vermont Water Supply Division's 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 (CWS) and non-transient non-community (NTNC) 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 capacity.

### **2.1. New Systems Provisions**

Section 1420(a) of the Amendments, the new systems provision, applies to all new CWSs and 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 NTNCs had the TMF 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.

Each year, the Department of Environmental Conservation (DEC), Water Supply Division (WSD) submits to the EPA annual new system reports that document the review of new systems and that work is ongoing to address the capacity requirements for new water systems. In recent years, the

new systems progress report is included in the overall program implementation report submittal entitled, "Vermont New Water System Capacity Review Annual Report."

Since September 2004, the WSD has been the sole governmental unit that exercises its authority to ensure the demonstration of new systems capacity. Before then, capacity reviews for NTNCs were divided between DEC's Wastewater Management Division and WSD. There have been no modifications to the WSD control points, which are integrated with the WSD construction permit and operating permit programs.

Since January 2009, the Capacity Development Coordinator for Vermont has been doing quarterly check-ins with new systems that have come through the capacity program. This is done to ensure that each new system takes the appropriate steps toward achieving capacity. In the past, this Division has found that systems fall through the cracks, per se, only to be discovered some time later after they've been serving water without our knowledge and without a permit to operate. Since starting the quarterly checks, we've been able to keep in constant contact with new systems as they progress through construction and into operation.

**2.1.1. New Water System Capacity Reviews**

There were three new CWSs and three new NTNCs reviewed during state fiscal year 2010. Additionally, there were two new source applications which may result in a new public water system. Their information is summarized below in Table 1.

<b>Table 1                      Vermont Annual Capacity Program Report                      New CWSs, NTNCs &amp; Sources                      July 1, 2009 - June 30, 2010</b>				
Proposed New CWSs	Proposed WSID	PID # (internal tracking)	Approved	Notes
Cassidy Meadows	VT0021246	C-2410-10.0	Yes	
Green Field	NONE	C-2520-10.0	Yes	Will be consecutive exempt
Waitsfield Water Supply	VT0020997	C-1689-10.0	Yes	
Village Meadow Subdivision	NONE	C-2512-10.0	Yes	Will be consecutive exempt
Proposed New NTNCs				
Connors Commercial	VT0021263	N-2474-09.0	No	No communication since 10/09
Caspian Area School System	VT0021276	N-2505-10.0	No	In communication with town to take over
Well Spring School	VT0021269	N-2494-09.0	Yes	
Proposed Water System Sources				
Angeleri Development	VT0021002	S-1700-05.2	Yes	Extend permit expiration. Will be new system.
Timber Creek at Okemo	VT0021272	S-2497-09.0	No	Source testing approval issued. Will be new system.

**2.1.2. Most Recent Four-Year Record**

In any given fiscal year, the WSD receives 20-30 inquiries from developers, landowners, and other entities about creating a new public water system. In most cases, the WSD promotes alternatives to creating a new public water system, such as consolidation with, or annexation by, existing public water systems. Since the Vermont Legislature passed H806, *An Act Relating to Public Water Systems (Act #156)*, which authorized consecutive water systems serving less than 500 persons to qualify for an exemption from Federal and State Drinking Water Regulations, the WSD has seen an increase in the number of systems applying for and receiving consecutive exempt status at the beginning of the permitting process.

Table 2 below shows the status of new water systems permitted during the past three state fiscal years and reported on in the annual new system capacity reports. There are probably another 5-

10 entities that have submitted proposals to the Division for creation of a water system that have not yet received a Permit to Construct.

<b>Table 2</b> <b>New Public Water System Activity</b> <b>7/1/2007 – 6/30/2010</b>				
<b>WSID</b>	<b>WS Name</b>	<b>PWS Type</b>	<b>application received</b>	<b>Construction permit issued</b>
VT0021144	WILLIAM E DAILEY PRECAST, LLC	NTNC	10/2/2007	7/25/2008
VT0021145	PINES OFFICE BUILDINGS	NTNC	8/17/2007	On hold
VT0021147	LAROE MIXED USE WATER SYSTEM	NTNC	9/10/2007	9/25/2008
VT0020997	WAITSFIELD WATER SUPPLY	CWS	4/9/2010	7/20/2010
VT0021121	WHEELER BROOK HOUSING DEVELOPMENT	CWS	3/5/2008	5/30/2008
VT0021127	INDUSTRIAL LANE LOT 12	NTNC	4/18/2007	2/19/2008
VT0021079	NE WASTE SERVICES	NTNC	7/17/2006	On hold
VT0021085	NORTH COUNTRY CAREER CENTER LAND LAB	NTNC	8/7/2006	10/8/2007
VT0021057	OUTLOOK AT MT SNOW	CWS	9/5/2006	8/23/2007
VT0021172	244 GRANGER ROAD	NTNC	1/3/2008	7/24/2008
VT0021167	HILLTOP MONTESSORI SCHOOL	NTNC	2/4/2008	8/8/2008
VT0021168	PIDGEON WATER SYSTEM - HARTFORD	NTNC	2/8/2008	10/9/2009
VT0021218	DERBY BORDER PATROL	NTNC	12/16/2008	12/4/2009
VT0021276	CASPIAN AREA SCHOOL SYSTEM	NTNC	12/18/2009	pending
VT0021290	GREEN FIELD HOUSING	CWS	2/19/2010	4/30/2010
VT0021263	CONNORS COMMERCIAL	NTNC	9/28/2009	On hold
VT0021269	WELL SPRING SCHOOL	NTNC	12/2/2009	9/15/2010
VT0021239	ARMED FORCES RESERVE CENTER	NTNC	4/17/2009	pending
VT0021246	CASSIDY MEADOW	CWS	2/3/2010	3/19/2010

## **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 TMF capability 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 TMF capabilities over the long term.

The WSD will make a determination on system capacity based on information available in WSD records, the priority list application, loan application and, most importantly, completion of a capacity evaluation. A capacity evaluation is a meeting between the applicant and the WSD. Previously, WSD had a contract with a technical service provider (Vermont Rural Water Association); however, WSD did not peruse another contract for technical assistance when the last contract expired in June 2010. WSD is able to handle SRF related capacity development needs internally and does not expect to enter into a contract with an outside vendor for any of these services. WSD will consider use of a technical assistance contract if the need presents itself.

Components of the capacity evaluation include discussions related to source capability, monitoring and compliance reporting, water loss, water and energy efficiency, managerial competency, and fiscal responsibility. Discussions regarding financial capacity involve current and projected water rates, delinquent water accounts, and financial long-range planning. The presence of an active organization

with identified responsible officials and business practices are considerations in managerial capacity determinations. If a loan applicant is determined to have a lack of capacity in some areas, a list of action items will be established and considered a condition of loan forgiveness, if applicable. Otherwise, the action items are recommendations and are usually not significant enough to keep the system from maintaining TMF capacity needed to protect public health and maintain the system. The WSD continues to update the survey as needed to reflect the changing needs of the program. More emphasis is now placed on implementation of the action items with consideration being given to withholding construction funding, in addition to planning loan forgiveness, until certain capacity milestones are achieved.

### **2.3. Existing Systems Provision**

Section 1420(c)(2) of the Amendments required that Vermont develop and implement a capacity development strategy to assist existing public water systems acquire and maintain TMF 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 many factors that encourage or impair capacity and worked to develop initiatives to address them. The initial set of initiatives has been discussed at length in past reports and will be listed below without extensive discussion. Since the initial 18, there have been a number of newly introduced initiatives; their progress is summarized below. 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. Annual "State of Vermont Capacity Development Program Strategy Implementation" reports document that the WSD is implementing a fully functioning existing water system plan according to the capacity development strategy.

Ten years have passed since Vermont's Capacity Development Strategy was established and the water system landscape has changed significantly since that time. The Strategy should also reflect this change. In the coming year, the Capacity Development Coordinator, along with stakeholder groups, will endeavor to update the Strategy, bringing new initiatives online and re-invigorate existing ones that are still deemed relevant.

#### **2.3.1. Vermont Public Water Systems Demographics**

There are 1363 public water systems in Vermont that fall into three different categories.

*Public Community water systems* regularly serve at least 25 year round-residents or have 15 or more connections serving year-round residents. There are 444 systems serving an estimated aggregate population of 449,480. About half of these Community systems are privately owned home-owners associations or mobile home parks; approximately 16 are private-for-profit water systems that are regulated by the Public Service Board and the Department of Public Service.

*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 44,040. More than half of these systems are small rural schools, the remainder are mostly privately owned businesses.

*Transient Non-Community water systems* serve more than 25 persons a day for at least 60 days during the year. Restaurants, motels, and campgrounds are examples. Approximately 678 systems are classified as transient non-community water systems. Nearly all of the transient systems are privately owned businesses

Also, there are approximately 6 water bottling companies whose sources are in Vermont and are regulated by the Water Supply Division.

Regulatory requirements vary for the different types of systems and the major focus of the strategy is on CWSs and NTNCs. Factors weighing on 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 Federal and State regulatory requirements. Our capacity program is focused primarily, although not exclusively, on those most in need of assistance-- the very small community system and small rural school system. A significant number of these systems would not be able to comply with regulatory requirements and protect public health without the technical and financial assistance provided through this program. This strategy has proved successful and we are now working to focus more on small municipalities and systems on the verge of enforcement action with onsite managerial assistance.

Additionally, during the past couple of years the capacity program has become increasingly involved in assisting public community water systems regulated by the Department of Public Service and Public Service Board as a utility restructure into a more equitable, user-owned system by means of forming a fire district. Vermont Statutes allow for the formation of a fire district- a quasi-municipal entity with taxing authority established for a variety of reasons (maintain sidewalks, street lights, provide fire protection, water, etc). A fire district is given authority to organize and operate by the selectboard of the town(s). Once formed, the fire district establishes a prudential committee, by-laws, collection practices, etc. A town may have an unlimited number of fire districts and are numbered in the order they are formed (1, 2, 3, etc). A benefit to being a fire district is the potential for more favorable financing terms from our DWSRF program, including access to SRF set-aside programs and the ability to increase user rates when needed without having to obtain Public Service Board approval.

### **2.3.2. Objectives**

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

- ◆ Identify methods or criteria that the State will use to identify and prioritize the water systems 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 water systems in complying with applicable laws and regulations;
  - Encourage the development of partnerships among water systems;
  - Assist with the training and certification of water system operators;
  - Develop methods for establishing a baseline and measuring improvements in capacity;
- ◆ Identify interested stakeholders; and,
- ◆ Utilize other available resources in the State of Vermont to assist water systems with their technical, managerial, and/or financial capacity.

### **2.3.3. Implementation of the Existing Capacity Strategy**

Vermont has a long history of providing both financial and technical assistance to water systems. The 1996 Amendments to the SDWA 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, representatives 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 public input, the Vermont Existing Public Water System Capacity Strategy was developed and submitted to EPA in July of 2000. Reference should be made to prior reports for a detailed summary of achievements for each initiative. New initiatives or capacity undertakings are included in detail below. Major components of any capacity program are technical and financial assistance, and training opportunities, but the Division is currently focusing on providing managerial assistance as the backbone for overall Capacity Development. We believe emphasis on each of these components will be most successful in assuring Vermont water systems are able to comply with regulatory requirements and protect public health.

The Capacity Development Strategy discussion below includes ongoing work related to the original initiatives detailed in the Vermont Existing Public Water System Capacity Strategy of July 28, 2000, as well as initiatives introduced since then.

#### Initial set of Capacity initiatives

1. Monitoring Cost Study- completed
2. DWSRF Program Changes- ongoing
3. Training and Assistance- ongoing
4. Legal Assistance- completed; may re-new if the need arises
5. Engineering Technical Assistance- completed
6. Small System Templates and Self-Assessment- completed
7. User Rate Reviews and Budgeting/Assisting in the Development of Financial Capacity- ongoing;
8. Public Service Board (PSB) Technical Assistance- completed
9. Board Member-Owner Manual- developed; printing needed
10. Small System Design Guidance Manual- ongoing
11. Consolidation Study- replaced Consolidation Study with a Facilitation and Mediation contract beginning in June 2008 continuing through June 2009; contract completed
12. Water Supply Division Newsletter- ongoing
13. Communication Workgroup- completed

#### Modifications to the Capacity Strategy

The following initiatives were added since the original set was developed in 2000, representing modifications to the Capacity Development Strategy for Existing Systems. Funding for these additional initiatives is provided from DWSRF set-asides.

14. Development of a Cross-Connection Guidance Manual- initiative dropped
15. Reservoir Water Quality Study- completed
16. Comprehensive Performance Evaluation Program- 3 were completed and additional CPEs may be performed in the future on a voluntary basis
17. Operation & Maintenance Manual Template for Small Surface Water Systems- initiative dropped; however, we are perusing a contract for O&M Manual preparation for small water systems. In 2008, contracts were awarded to engineering firms to assist school water systems with their construction engineering services, in addition to producing O&M manuals and as-built drawings.
18. Small System Engineering Evaluations- completed; extremely successful initiative and may resume in the future for those systems that did not already receive an evaluation
19. Regulation of Consecutive Water Systems and New Waterline Extensions (2008)- successful passage of H806 to Act 156 *An Act Relating to Public Water Systems*

20. Asset Management (2008)- new initiative beginning Fall 2008; we will be using the EPA-developed CUPSS tool to help systems develop an asset management program. Fair Haven has volunteered to pilot our efforts in Vermont.
21. Determination of Non-Profit Status (2008)- after exhaustive research, the WSD was given the authority to determine if a water system was not-for-profit without being a tax-exempt (through the IRS) entity. This distinction is beneficial in it reduces a potentially significant time and money delay in the DWSRF loan process
22. WaterSense Pilot Project at Windy Hill Acres MHP (2008)- in past years the Windy Hill Acres MHP in Springfield, VT has experienced episodes of water shortages, with the added restriction of not being able to expand the park because of limited source yield. The WSD will be working with the Park to replace fixtures in residents' homes that meet WaterSense criteria for efficiency in an effort to reduce water consumption. Along with replacing fixtures, a significant education component is part of the project. Additionally, the project also hopes to show energy savings along with water savings at the end of the two-year pilot. WSD began the first stage of this pilot, but realized after 9 months of water use data that a conservation plan would not yield enough savings to justify spending the money on fixture replacement. WSD is looking for another system that could meet the goals of the project.
23. Public Service Board (PSB)/Department of Public Service (DPS)/Water Supply Division coordination (2009)- Beginning in early summer of 2009, WSD met with representatives from the PSB and DPS to discuss better coordination between the three entities. The aim is to help the very smallest of regulated public water systems with rate review, tariffs, and reporting. This coordination is still in its early stages, but just starting the conversation is a significant milestone.

#### Specific forms of Financial Assistance

1. Low-interest loans for water system improvements.
2. Zero-interest loans for planning & final design.
3. Low-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 relative to Median Household Income (MHI).
5. Planning and final design loan forgiveness for small municipalities.
6. Up to \$25,000 construction loan forgiveness for municipal school system improvement projects.

### **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. In the future, if the need for *technical assistance* exceeds WSD staff, WSD will prioritize systems using a number of factors including, but not limited to:

- ◆ DWSRF priority list status
- ◆ System ownership (municipal, private non-profit, private profit)
- ◆ System type (CWS, NTNC, TNC)
- ◆ System population- the smaller the population, the higher the priority
- ◆ Permanent residents

Currently, the Division is actively providing intensive ongoing capacity assistance to:

- ◆ Irasburg FD #1
- ◆ Barnet Water System/Barnet FD #2
- ◆ Fair Haven Water Department
- ◆ Castleton FD #1
- ◆ South Alburgh FD#2/Village of Alburgh
- ◆ Village of Plainfield

- ◆ Pico Village
- ◆ Country Estates Water Co./Ascutney FD#2
- ◆ Crystal Springs Water Co./East Montpelier FD #1
- ◆ North Troy Water System
- ◆ Chelsea Water System
- ◆ East Berkshire Water Coop

#### **4. Review of Implementation of the Existing System Strategy**

There is a great deal of flexibility in program administration and implementation as it relates to providing capacity assistance. This has been instrumental in making the capacity program work for those systems that need it most. The WSD does not conduct regularly scheduled reviews of the implementation of its Capacity Development Program; however, there is significant interest in re-visiting the efficacy of the initial Capacity Initiatives and how they relate to program goals. The objective of re-visiting would be to re-establish, re-write and/or develop new initiatives given the program is at the 10 year mark and significant experience was gained during that time. In reviewing the existing strategy, it is apparent that much of the initial 18 initiatives were heavily focused on technical capacity. The focus of the 10+ year should and will be managerial and financial capacity. Additionally, there is a push from within the program to re-work initiatives and incorporate the principals of the Four Pillars of Sustainable Infrastructure that the Environmental Protection Agency has identified as the 'way forward.'

#### **Availability of the Report to the Public**

The WSD posts its annual Capacity Development Program Report to EPA on its web site at: <http://www.vermontdrinkingwater.org>.

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Date: \_\_\_\_\_ 10/5/2010

# Vermont Water Supply Division

## Operator Certification Program

Annual Report for Calendar Year 2009

July 1, 2010

This Annual Report documents Vermont's program compliance with the EPA Operator Certification Guidelines for the calendar year ending December 31, 2009. The US Environmental Protection Agency published guidelines for the "Certification and Recertification of the Operators of Community and Non-transient Non-community Public Water Systems" on February 5, 1999. Vermont adopted the revised rules in the Vermont Water Supply Rule on December 29, 2000 to comply with the EPA guidelines. EPA approved the State of Vermont Operator Certification Program on February 14, 2001 and awarded the Operator Certification Expense Reimbursement Grant (ERG) January 2002. On September 7, 2007 the Department of Environmental Conservation executed EPA's Assistance Amendment for the ERG which approved an extension to receive and use ERG funds until 12/31/2009.

### Program overview and Enforcement efforts

The total number of certified operators for Community, Non-Transient Non-Community, and Transient Non-Community systems is 1417.

Vermont has not grandfathered operators since 1992 when we adopted the initial operator certification rules. The goal was to assist those operators already operating public water systems to become certified. All grandfathered operators are required to maintain their renewal credits for their class each renewal cycle. We currently have 85 grandfathered operators in our certification database (SWOCS).

Vermont offers Operator-in-Training and Provisional Certification to help new water systems and operators become fully certified. SWOCS currently lists 4 operators with Provisional Certification and 32 with Operator-in-Training Certification.

The number of systems without certified operators as of 12/31/09 is listed in the table below.

System type	Number of systems	Number of systems with no certified operator
Community	444	3
Non-Transient Non-Community	242	3
Transient Non-Community*	680	65

\* TNC certification is not mandated by EPA.

The Division Certification Officer continues to work closely with new and delinquent community and non-transient non-community water systems to help them obtain a certified operator. The Certification Officer runs a report monthly to identify community and non-transient non-community systems without a certified operator. The Certification Officer will call these systems and follow up with an initial warning letter, if necessary. The water system has thirty days to notify the Water Supply Division in writing of their certified operator. If the system does not obtain a certified operator, we will issue a Notice of Alleged Violation (NOAV) shortly after the thirty-day period. At this stage, most water systems comply with the NOAV. For the few remaining, the Division attorney may contact the water system and warn the system of a potential enforcement action. If the system still does not obtain a certified operator, we will refer the system to the Agency of Natural Resources Enforcement Division for further action.

Most community and non-transient non-community water systems find themselves without certified operators because their operator(s) fail to renew their certification on time. In calendar year 2008 the division did not issue any NOAVs to systems for failure to have a certified operator. This is attributed to the outreach the Certification Officer provided to systems which may have needed operators.

The Agency of Natural Resources has the authority to revoke or suspend an operator's certificate. Failure to comply with the regulations may require revocation or suspension. In calendar year 2009 we requested no operators to surrender his or her certificate, nor were revocation or suspension actions taken.

### **Training and exams**

The operator training program is coordinated with the Vermont Rural Water Association (VRWA). Communication between the VRWA Coordinator and Water Supply Division and Compliance & Certification staff occurred frequently throughout the year. Additional courses have been coordinated with the Green Mountain Water Environment Association (GMWEA) and the New England Water Works Association (NEWWA). The GMWEA utilized funds allocated from the EPA Expense Reimbursement Grant to subsidize these courses to reduce the course fees.

Ongoing training coordination occurred throughout the year between the Water Supply Division, VRWA, and GMWEA. We continued to hold courses in various locations throughout the state to reach small water systems. The attendance for each class ranged from 10-20 participants (depending on location).

Our courses were publicized on our web site, listed in our newsletter, and mailed to operators before a renewal period. In calendar year 2009 approximately 3876 training contact hours were awarded to 1000 water professionals who attended classes funded by ERG (see list of courses which were offered through the ERG below), 33 operators were reimbursed exam fees using ERG funds and 39 operators were reimbursed certification application fees using ERG funds.

Exams were again administered in the spring and fall, on the same day (typically the first Friday in May and November), at two different locations in the state (Rutland, Waterbury). There were 73 individuals who took the exams.

### **Stakeholder Involvement**

The Vermont Operator Certification Advisory Committee met four times in calendar year 2008. The following major topics were reviewed and discussed: core curriculum, owner responsibilities, water system backup operations, Water Supply Rule Chapter 21-12 Operator Certification, committee organization, operator responsibility, online courses and IACET Certification, and continued discussion pertaining to an aging operator community. The Certification Officer prepared a letter to notify water system operators of non compliance with the responsibilities outlined in the Water Supply Rule which was sent out to three operators and their water systems contacts.

The Division does not have any plans to perform an external review of the Operator Certification program due to resource constraints in the Compliance and Certification Section. As a result of the recent reduction in force, the Compliance and Certification Section Supervisor was displaced by a more senior DEC employee effective June 29, 2009 and priority will be given to training the new person. Also, the Certification Officer/Total Coliform Rule Manager has taken on additional duties related to pre-implementation of the Ground Water Rule which goes in effect December 2009.

### **ERG expenditures**

Operator reimbursement and use of the Operator Certification Expense Reimbursement Grant ended December 2009. As of December 31, 2009, the Division had allocated approximately \$1,280,507 of the ERG funds with a remaining balance of \$2,892 of unused funds. The Division now uses DWSRF Local Assistance money to fund operator training provided by the Vermont Rural Water Association.

## Training provided/coordinated January 1, 2009 – December 31, 2009

Month 2009	Courses	Training Credit Hrs	# of attendees	Training Cont. Hrs
<b>Vermont Rural Water Association (VRWA) Courses</b>				
January	Safety Basics for Operators-Waterbury	4	13	52
	Vermont Rule Update-Montpelier	5	21	102
	Metering-Springfield	3.5	5	17.5
Feb	Training conducted but contract using ERG money delayed by DEC			
March	Water System Operation and Maintenance Manuals-Lyndonville	3	9	27
	Distribution Certification Class D-Rutland-Session 4	5	4	20
	Distribution Certification Class D-Rutland-Session 5	5	4	20
	Distribution Certification Class D-Rutland-Session 6	5	4	20
	Water System Mapping-Lyndonville	3	12	36
	Advanced Operator's Certification-Rutland-Session 6	5	4	20
	Advanced Operator's Certification-Rutland-Session 7	5	4	20
	Advanced Operator's Certification-Rutland-Session 8	5	4	20
	Asset Management-Springfield	3	9	27
	Water System Board Training-Waterbury	3	6	18
	VOSHA Electrical Safety-Middlebury	4	12	48
	Asset Management-Morrisville	3	9	27
	How to Prepare for a Sanitary Survey-Springfield	3	8	24
	On-site Training-Paula Jackson-Chlorine Chemistry-Season on Mt. Snow/Timbercreek-Dover	3	4	12
April	Small Systems Class 2 Operator Certification-Rutland Session 2	4	9	36
	Small Systems Class 2 Operator Certification-Rutland Session 3	4	8	32
	Small Systems Class 2 Operator Certification-Rutland Session 4	4	9	36
	VOSHA Hazardous Communication-Newport	3.5	5	17.5
	Advanced Water Treatment Review-Waterbury	7	6	42
	Small Systems Class 2 Operator Certification-Morrisville Session 1	4	10	40
	Small Systems Class 2 Operator Certification-Morrisville Session 2	4	10	40
	Small Systems Class 2 Operator Certification-Morrisville Session 3	4	10	40
	Small Systems Class 2 Operator Certification-Morrisville Session 4	4	10	40
	Water and Wastewater Line Detection-Enosburg	3	27	81
	Water Distribution System Components-Rutland	4	11	44
	TNC 1B Recertification-Essex	3	7	21
May	Vermont Rule Update and Sampling Seminar-Middlebury	5	7	35
	VRWA Conference-VTWARN Mutual Aid roundtable	1	20	20
	VRWA Conference-GIS/GPS and Facilities Management Strategies	1	38	38
	VRWA Conference-Horizontal Directional Boring	1	25	25
	VOSHA Trenching and Confined Space-Swanton	5	19	95
	TNC 1B Recertification-Waterbury	3	3	9
	Chlorine Chemistry and Disinfection-Waterbury	3	15	45
	Cross Connection Control Seminar-Springfield	3	8	24
	VTWARN Tabletop-Pittsford	4	17	68
	On-site TNC 1B Recertification-Paula Jackson-Manchester	3	4	12
	On-site Training in Distribution flushing and Chlorination Procedures South Georgia FD#1	5	1	5
	On-site Training in Chlorination Procedures-Hyde Park Village	1	1	1

June	Vermont Rule Update and Sampling Seminar-Enosburg	5	11	55
	Water Storage Tank Design and Maintenance/Potable Water Circulation-Montpelier	4	24	96
	Chemical Feed Pump Repair-Randolph Center	5	21	105
	Pumps and Pumping Systems-Springfield	3	7	21
	Keys to Open Communication-Waterbury	6	8	48
	On-site Training-Paula Jackson-Chlorinator pump and SOP-Dummerston School	1.5	1	1.5
	On-site Training-Paula Jackson- 1B TNC Refresher-Rutland	3	11	33
July	TNC 1B Certification-Lyndonville	3	5	15
	Vermont Rule Update and Sampling Seminar-Brattleboro	5	11	55
	VOSHA Trenching and Confine Space Training-Bennington	4	7	28
	VOSHA Ten-Hour Certification Safety Training-Bennington Session 1	5	25	125
	VOSHA Ten-Hour Certification Safety Training-Bennington Session 2	5	25	125
	TNC 1B Certification-Springfield	3	7	21
Aug	Operation and Maintenance of School Water Systems-Springfield	3	7	21
	VOSHA Lock out/Tag out Safety Training-Rutland	3.5	8	28
	Water System Mapping and GIS Applications-Springfield	3	5	15
	On-site Training-Leak Detection/Water Conservation/Pressure Testing-Trillium Woods- Jay	6	1	6
	On-site- Leak Detection/Water Conservation/Pressure Testing Alpine Haven-Jay	6	1	6
Sept	Chlorine Disinfection and Chemistry-Lyndonville	3	16	48
	New Ground Water Rule-Montpelier	3	19	57
	New Ground Water Rule-Enosburg	3	12	36
	Wire to Water Documenting and Conserving Energy Use in Water and Wastewater Facilities-Enosburg	5.5	6	28
	Fundamental Principles of Small Ground Water System Operations-Rutland	5.5	23	126.5
	On-site Training Membrane Filtration, Adsorption, Aeration, Fluoridation, and Distribution Wilmington	6.5	4	25
	On-site Training Membrane Filtration, Adsorption, Aeration, Fluoridation, and Distribution Wilmington	6.5	5	32.5
Oct	21st Century Principles of Water/Wastewater Hypochlorite Disinfection & De-chlorination-Bennington	5.5	21	115.5
	VOSHA/Dig Safe Trenching and Confined Space Safety Training-South Burlington	5.5	17	93.5
	New Ground Water Rule-Bennington	3	21	63
	Small Systems Class 2 Operator Certification-Session 1-Springfield	4	5	20
	Small Systems Class 2 Operator Certification-Session 2-Springfield	4	5	20
	Small Systems Class 2 Operator Certification-Session 3-Springfield	4	5	20
	Small Systems Class 2 Operator Certification-Session 4-Springfield	4	5	20
	Advanced Water Treatment Review-Rutland-Session 1	6	9	54
	Advanced Water Treatment Review-Rutland-Session 2	6	9	54
	Small Systems Class 2 Operator Certification-Session 1-Waterbury	4	5	20
	Small Systems Class 2 Operator Certification-Session 2-Waterbury	4	5	20
	Small Systems Class 2 Operator Certification-Session 3-Waterbury	4	4	16
	Small Systems Class 2 Operator Certification-Session 4-Waterbury	4	5	20
	VOSHA Electrical Safety Training-Brattleboro	4	13	52
	New Ground Water Rule-Springfield	3	22	66
	New Ground Water Rule-Rutland	3	23	69
	Class 2 Certification Exam Review-Waterbury	3	3	9
	Affordable Control/Telemetry Systems for Water and Wastewater-Bennington	4	18	72

Nov	New Ground Water Rule-Lyndonville	3	31	93
	TNC 1B Certification-Waterbury	3	3	9
	How to Prepare for a Sanitary Survey-Quechee	4	3	12
	On-site Training-Chlorination, Cross Connection Control, New Ground Water Rule-Georgia	1	1	1
Dec	Operation and Maintenance of School Water Systems-Lyndonville	3	4	12
	Operation and Maintenance of School Water Systems-White River Junction	3	4	12
	Operation and Maintenance of School Water Systems-Waterbury	3	2	6
	H1N1 Flu Preparation-Brattleboro	4	11	44
	Pump Systems Matters-South Burlington	7	20	140
	H1N1 Flu Preparation-Newport	4	10	40
	On-site Training-Brent Desranleau-Water Pipe Detection-Richmond	2	1	2
	<b>Green Mountain Water Environment Association</b>			
April	Applied Drinking Water Math	6	3	18
May	Hands-on Hydrant and Main Maintenance	6	11	66
	Hands-on Leak Detection and Water Loss Control	6	1	6
Oct	How to Operate and Maintain your Distribution System	6	12	72
Dec	Hands-on Pressure Reducing Valves and Maintenance	6	4	24
	Totals	400	998	3875.5