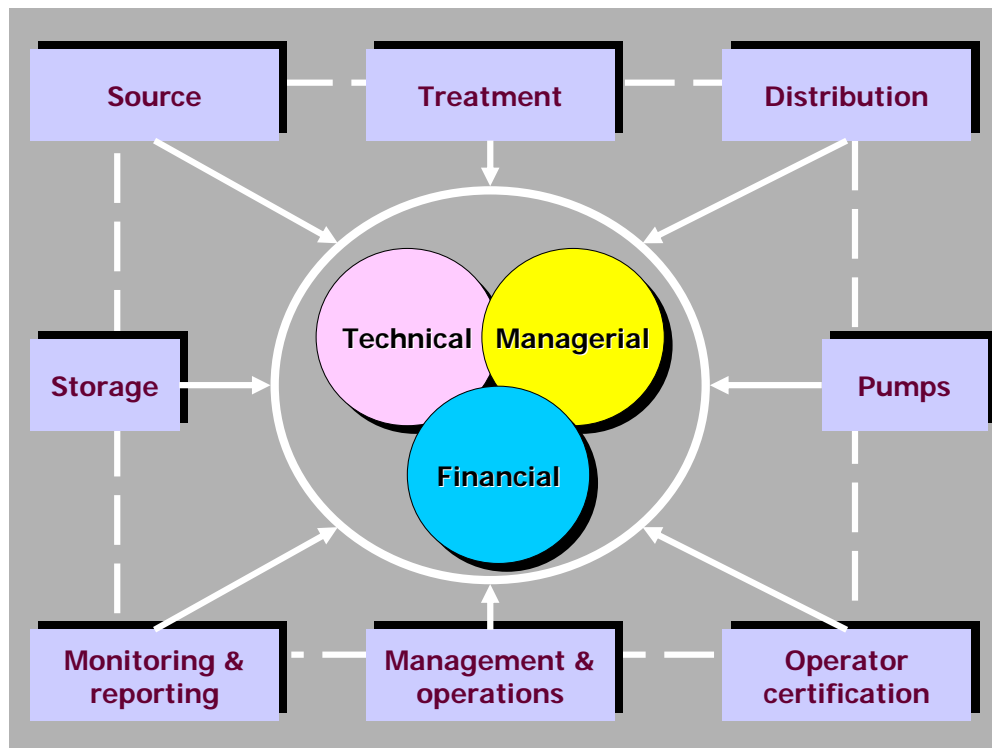


Capacity Development Program Implementation



Prepared By  
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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 seven new NTNCs reviewed during state fiscal year 2008. Their information is summarized below in Table 1.

<b>Table 1</b> <b>Vermont Annual Capacity Program Report</b> <b>New CWSs &amp; NTNCs</b> <b>July 1, 2008 - June 30, 2009</b>				
# CWSs	Proposed New CWSs	PID # (internal tracking)	Approved	Notes
1	Outlook at Mount Snow	C-1815	Yes	
2	Harbor View	C-2093-07.1	Yes	Consecutive Exempt
3	Grange Hill Housing	C-2122-08	Yes	Consecutive Exempt
# NTNCs	Proposed New NTNCs		Approved	Notes
1	244 Granger Rd	N-2095-08.0	Yes	
2	Cameron Well #1	N-2234	Yes	
3	Armed Forces Reserve Center	N-2384	Yes	
4	Hilltop Montessori	N-2109	Yes	
5	The Pines Office Building	N-2029-07	No	Pending Review
6	Pidgeon Water	N-2114-08	Yes	
7	World of Discovery Daycare	N-2125-08	No	Pending Review

**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. The Vermont Legislature recently passed H806, *An Act Relating to Public Water Systems (Act #156)*, which authorizes consecutive water systems serving less than 500 persons to qualify for an exemption from Federal and State Drinking Water Regulations. This act has the rare distinction of authorizing less regulation, not more, without diminishing public health protection. The Act took effect July 1, 2008, and since that date, the WSD has had two new water systems enter into consecutive exempt agreements, releasing them from a formal capacity review. In addition, the Division has had numerous other existing community water systems enter into consecutive exempt agreements.

Table 2 below shows the operational 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 from this Division.

<b>Table 2</b> <b>New Public Water System Activity</b> <b>7/1/2006 – 6/30/2009</b>			
<b>PWS Number</b>	<b>PWS Name</b>	<b>PWS Type</b>	<b>SNC List Ever?</b>
VT0021121	WHEELER BROOK HOUSING DEVELOPMENT	C	NO
VT0021127	INDUSTRIAL LANE LOT 12	NTNC	NO- under construction
VT0021085	NORTH COUNTRY CAREER CENTER LAND LAB	NTNC	NO
VT0021072	HWVCA WELL-HISTORIC WAITSFIELD HOUSE	NTNC	NO
VT0021057	OUTLOOK AT MOUNT SNOW	C	NO-under construction
VT0021035	CANNON PROJECT/ BOLDER RIDGE AT MOUNT SNOW	C	NO- under construction
VT0021033	NEW HORIZONS CHILDREN CENTER	NTNC	NO
VT0021015	CHAMPLAIN VALLEY CO HOUSING	C	NO
VT0021018	LINCOLN PEAK BASE AREA	C	NO- under construction
VT0021005	SUNDANCE SUBDIVISION	C	NO
VT0021003	GROTON VILLAGE REVITALIZATION	NTNC	NO
VT0020999	DELTA INDUSTRIES LLC	NTNC	NO
VT0021083	LINCOLN CORNER	NTNC	NO
VT0021094	GRANGER ROAD INDUSTRIAL PARK	NTNC	NO
VT0021037	VA MEDICAL CENTER	NTNC	NO
VT0021021	BERLIN PROFESSIONAL OFFICES	NTNC	NO
VT0021029	WEST RIVER VALLEY SENIOR HOUSING	C	NO
VT0021172	244 GRANGE RD	NTNC	NO
VT0021147	LAROE MIXED USE	NTNC	NO- under construction
VT0021167	HILLTOP MONTESSORI	NTNC	NO
VT0021144	WILLIAM E DAILY PRECAST	NTNC	NO
VT0021079	NE WASTE SYSTEMS	NTNC	NO
VT0020995	ROCKING STONE FARMS	C	NO- under construction
VT0021168	PIDGEON WATER SYSTEM	NTNC	NO-under construction
VT0005529	BERLIN HEALTH REHABILITATION	C	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 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 or the DWSRF technical assistance provider (currently, Vermont Rural Water Association).

Components of the capacity evaluation include discussions related to source capability, monitoring and reporting compliance, water loss, water and energy efficiency, managerial competency, and fiscal responsibility. Discussions regarding financial capacity will consider current and projected water rates, delinquent water accounts, and financial 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, generally, capacity improvement plan (CIP) will be established and included as a loan condition. The WSD, with VRWA, continues to update the survey as needed to reflect the changing needs of the program. More emphasis is now placed on implementation of the CIP with consideration being given to withholding construction funding, including 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.

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

There are 1364 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 10 or more connections. There are 445 systems serving an estimated aggregate population of 452,468. 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 239 systems in this category serving an aggregate population of 41,327. 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 680 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.

### **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-ongoing activity; managed by the DWSRF TA contract
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; will be using the CUPSS program as we go forward
8. Public Service Board (PSB) Technical Assistance- completed
9. Board Member-Owner Manual- still in development
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
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- completed
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
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 residence's homes that meet WaterSense criteria for efficiency in an effort to reduce water consumption. Along with replacing fixtures, a significant education component will be 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.
23. Public Service Board (PSB)/Department of Public Service (DPS)/Water Supply Division coordination (2009)- Beginning in the 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 or contract assistance resources, 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 size (design population)
- ◆ Permanent residents

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

- ◆ Irasburg FD #1
- ◆ Whiting Water Corporation
- ◆ Barnet Water System/Barnet FD #2
- ◆ Pownal FD #3
- ◆ Fair Haven
- ◆ Windy Hill Acres MHP
- ◆ Castleton FD #1
- ◆ South Alburgh FD#2/Village of Alburgh
- ◆ Enosburg Falls
- ◆ Village of Plainfield
- ◆ Pico Village

### **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 approaching the 10 year mark and significant experience was gained during that time. 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: \_\_\_\_\_9/29/2009

## Vermont Water Supply Division

### Operator Certification Program

Annual Report for Calendar Year 2008

July 1, 2009

This Annual Report documents Vermont's program compliance with the EPA Operator Certification Guidelines for the calendar year ending December 31, 2008. 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" in 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 1444.

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 87 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 6 operators with Provisional Certification and 88 with Operator-in-Training Certification.

The number of systems without certified operators as of 12/31/08 is listed in the table below.

System type	Number of systems	Number of systems with no certified operator
Community	445	4
Non-Transient Non-Community	242	4
Transient Non-Community*	684	72

\* 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 2008 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. For the third year, the VRWA coordinated a full semester water treatment college course with the New Hampshire Community Technical College. 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 2008 approximately 5575 training contact hours were awarded to 1432 water professionals who attended classes funded by ERG (see list of courses which were offered through the ERG below), 100 operators were reimbursed exam fees using ERG funds and 403 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 125 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 continues. As of December 31, 2008, the Division has allocated approximately \$1,197,000 of the ERG funds. The Division expects to spend the remaining balance by December 31, 2009 and is using \$104,000 of DWSRF Local Assistance money in calendar year 2008 to continue to fund operator training provided by the Vermont Rural Water Association.

**Training provided/coordinated January 1, 2008 – December 31, 2008**

<b>Month 2008</b>	<b>Courses</b>	<b>Training Credit Hrs</b>	<b># of attendees</b>	<b>Training Cont. Hrs</b>
<b>Vermont Rural Water Association (VRWA) Courses</b>				
January	Vermont Rule Update and Sampling	6	6	30
	Total Coliform Rule	4	5	20
	Lead and Copper Rule	3.5	7	24.5
	Advanced Water Operator Certification Session 1	3.5	10	35
	Advanced Water Operator Certification Session 2	3.5	9	31.5
	Advanced Water Operator Certification Session 3	3.5	10	35
	On-site Training-Paula Jackson- Town of Proctor 1/10/08	3	3	9
	On-site Training-Paula Jackson- Town of Pittsford 1/15/08	3	7	21
	On-site Training-Paula Jackson Town of Proctor 1/22/08	3	1	3
February	Advance Water Operator Certification Session 4	3.5	9	*
	Advance Water Operator Certification Session 5	3.5	9	*
	Advance Water Operator Certification Session 6	3.5	7	*
	Advance Water Operator Certification Session 7	3.5	6	*
	Lead and Copper Rule-Springfield-	3.5	18	63
	Electrical Safety-Dan Whipple, VOSHA	4.5	20	90
	Vermont Rule Update-White River Jct.-	5	28	140
	AWWAWebcast:Harmful Algal Blooms:Cyanobacteria/Toxi	2	13	26
	On-site Training-P.Jackson-Salisbury Elem. Sch.2/11/08	2	1	2
	On-site Training-P.Jackson-Tri Town/Vergennes Panton 2/14	5	5	25
	On-site Training-P.Jackson-Town of Proctor 2/19/08	3	2	6
	On-site Training-P.Jackson-Royalton FD#1/Eaton MHP 2/20	4.5	2	9
March	Advance Water Operator Certification Session 8	3.5	9	*
	Advance Water Operator Certification Session 9	3.5	9	*
	Advance Water Operator Certification Session 10	3.5	9	*
	Advance Water Operator Certification Session 11	3.5	9	*
	Advance Water Operator Certification Session 12	3.5	8	*
	Distribution Operator Certification Session 1	4	11	*
	Distribution Operator Certification Session 2	4	11	*
	Distribution Operator Certification Session 3	4	11	*
	Distribution Operator Certification Session 4	4	12	*
	AWWA Webcast: Disinfection of Pipelines and Storage Facilities-South Burlington	2	10	20
	Maintanance of Potable Water Tanks-Montpelier-Pittsburg Tank and Tower	4.5	27	121.5
	Total Coliform Rule-Montpelier-Matt Guerino	4	18	72
	On-site-Paula Jackson-TPW Management-Bondville, VT	10	9	90
	On-site-Paula Jackson-Richford, VT-CSE/Trench Safety	4	8	32
	On-site-Paula Jackson-TPW Management-Bondville, VT-Water Operators Math	3	9	27
	On-site-Paula Jackson-North Hero and Vermont State Parks-Tank Cleaning and Pumps	3	6	18
	On-site-Paula Jackson-Fair Haven Water Treatment Facility-Planning for a Pandemic	3.5	2	7
	On-site-Paula Jackson-Fair Haven Water Treatment Facility-Cross Connection Control	3.5	3	10.5
April	Advance Water Operator Certification Session 13	3.5	8	378
	Capacity Development O & M Manuals-Rutland Town	3	18	54
	Distribution Operator Certification Session 5-Waterbury	4	11	

	Distribution Operator Certification Session 6-Waterbury	4	11	
	Distribution Operator Certification Session 7-Waterbury	4	11	296
	Small Systems Class 2 Certification Session 1-Waterbury	4	4	16
	Small Systems Class 2 Certification Session 2-Waterbury	4	4	16
	Small Systems Class 2 Certification Session 3-Waterbury	4	3	12
	Small Systems Class 2 Certification Session 4-Waterbury	4	3	12
	Small Systems Class 2 Certification Session 1-Springfield	4	11	44
	Small Systems Class 2 Certification Session 2-Springfield	4	12	48
	Small Systems Class 2 Certification Session 3-Springfield	4	12	48
	Small Systems Class 2 Certification Session 4-Springfield	4	11	44
	Hazardous Communication-White River Jct.	4	13	52
	Introduction to Excel-Essex Jct	5	18	90
	Intermediate Excel-Essex Jct	5	11	55
	Introduction to Microsoft Access-Putney	5	9	45
	Electrical Safety in the Workplace-Middlebury	4.5	18	81
	Chemical and Fluoride Feed Pump Repair-Rutland	4.5	23	103.5
	On-site-Philip Acebo-City of Montpelier-Water System Math	3	4	12
	On-site-Philip Acebo-City of Montpelier-Water System Math	3	4	12
	On-Site-Paula JacksonTrench Safety-Pittsford Water Department	3	5	15
	On-Site-Brent Desranleau-Derby Line-Storage Tank Cleaning & Inspection	2	1	2
May	Vermont WARN - Spring Conference	1	31	31
	Regulatory Roundup - Spring Conference	1	55	55
	Long Term Planning and Capacity Development - Spring Conference	1	28	28
	GIS Mapping - Spring Conference	1	25	25
	Emergency Management and Security Tools - Spring Conference	1	14	14
	TNC 1B Recertification-Springfield	3	3	9
	TNC 1B Recertification-St. Johnsbury	3	14	42
	Verifying the Water/Wastewater Treatment Process-Rutland	6	17	102
	Hazardous Communications-Middlebury	4	17	68
	Energy Efficiency: How Improvement can Impact your Electric Bill-Townshend	4.5	18	81
	Pumps and Pumping Systems-Randolph Center	4	22	88
	Water Systems Audits and Leak Detection Methods-White River Jct.	3	19	57
	On-site Training-Water Audits and Leaks-Fairhaven	3	1	3
	On-site Training-Paula Jackson-Pandemic Flu Preparation-Tri-Town District #1	3	3	9
June	Vt Rule Update and Sampling Seminar-Randolph Center	6	15	90
	Confined Space Entry-Lyndon	3	15	45
	Trench Safety-Lyndon	3	8	24
	Energy Efficiency: How Improvements Can Impact Your Electric Bill-Berlin	4.5	13	58.5
	How to Prepare a Sanitary Survey-Berlin	3	5	15
	Excavations and Traffic Hazards-Essex Jct	5	12	60
	Chlorine Chemistry and Disinfection for Water Systems-Springfield	3	17	51
	Affordable Control/Telemetry for Water and Wastewater Systems-Lyndon	4.5	4	18
	Safety Basics for Water Operators-Enosburg	4	13	52
	Affordable Control/Telemetry for Water and Wastewater	4.5	13	58.5



	Systems-Brattleboro			
	Cross Connection Control Seminar-Lyndon	3	14	42
	AWWA Webcast-Ductile Iron: The Reliable Pipe	1.5	4	6
	AWWA Webcast-The Road Ahead: Regulatory, EPA and Global Trends	1.5	2	3
	On-site Training-Paula Jackson-Salisbury Community School	4	1	4
	On-site Training-Brent Desranleau-Cooperbury MHP	3	1	3
July	Operation and Maintenance of School Water Systems-Waterbury	3	6	18
	Metering-Lyndonville	4	6	24
	Cross Connection Control for Small Water Systems-White River Jct.	3	10	30
	Pandemic Flu and Emergency Preparedness-Bennington	4	12	48
	On-site Training-Paula Jackson-Lamoille Union High School	3	3	9
August	AWWA Webcast-Burlington Water Treatment Facility	2	4	8
	Chemical Feed Pumps-New Haven	4	22	88
	Navigating VOSHA/OSHA-Newport and Randolph Center	4.5	12	54
	Chlorine Chemistry and disinfection-Lyndon	3	17	51
	Intentional Contamination Tabletop-Montpelier	5	5	25
	Advanced 3 and 4 Operators's Certification-VTC Session 1	5	14	70
	On Site Standby Chlorination-LMI Pump-Paula Jackson-Lamoille U H S	3	2	6
	On Site Chlorine Disinfection-Paula Jackson-Bear Creek	3	3	9
September				
	Safety Basics for Water Operators-Springfield	4	6	24
	UV systems and Disinfection-Waterbury	3	17	51
	On-site Training-O&M and Water System Overview-Tall Timbers MHP White River Jct.	5	1	5
	On-site Training-Standby chlorination Test Run, Dosages, Pump Settings, and SOP	3	3	9
	for Standby Chlorination-Lamoille UHS-Hyde Park			
October	Water Distribution System Components-Rutland	4	12	48
	Advanced Water Treatment Review-Springfield	7	5	35
	Advanced Water Treatment Review Waterbury	7	6	42
	Small Systems Class 2 Operator Certification-Lyndon Session 1	4	8	32
	Small Systems Class 2 Operator Certification-Lyndon Session 2	4	8	32
	Small Systems Class 2 Operator Certification-Lyndon Session 3	4	8	32
	Small Systems Class 2 Operator Certification-Lyndon Session 4	4	8	32
	Small Systems Class 2 Operator Certification-Montpelier and Brattleboro-VIT Session 1	4	9	36
	Small Systems Class 2 Operator Certification-Montpelier and Brattleboro-VIT Session 2	4	9	36
	Small Systems Class 2 Operator Certification-Montpelier and Brattleboro-VIT Session 3	4	9	36
	Small Systems Class 2 Operator Certification-Montpelier and Brattleboro-VIT Session 4	4	9	36
	VOSHA Ten Hour Certification-Montpelier	5	16	80
	VOSHA Ten Hour Certification-Montpelier	5	16	80
	Simplifying Your Water/Wastewater Process Monitoring-Enosburg	4.5	13	58.5
	UV-Common Sense Technology for the 21st Century-Rutland Town	4	4	16
	Comparing Alternative Disinfection Systems for Water/Wastewater-Bennington	5	23	115

November	Advanced Water Operator Certification for Class 3 & 4 Session 5	5	12	60
	Advanced Water Operator Certification for Class 3 & 4 Session 6	5	13	65
	Advanced Water Operator Certification for Class 3 & 4 Session 7	5	13	65
	Advanced Water Operator Certification for Class 3 & 4 Session 8	5	14	70
	Advanced Water Operator Certification for Class 3 & 4 Session 9	5	11	55
December	Water System O & M Manuals-Springfield	3	12	36
	Fire Hydrant Maintenance and Installation-Berlin	3.5	23	80.5
	Water System O & M Manuals-Waterbury	3	12	36
	Horizontal Directional Boring-Montpelier	4	10.5	188.5
	<b>Green Mountain Water Environment Association</b>			
May	Hands-on Disinfection with Chlorine	6	6	36
September	Chemical Feed Pump Operation and Maintenance	5	10	50
October	Hands-on water meter operations and maintenance	6	2	12
	Totals	519.5	1432.5	5575