



CHAMPLAIN WATER DISTRICT

Dedicated to Quality Water & Service

First In The Nation ~ Excellence In Water Treatment, Partnership For Safe Water

2007 - 2008 Annual Report



Often we miss the opportunity to express our appreciation for the reliable working man who quietly goes about his job, year after year, building strong working relationships with his peers, customers, and developers, dedicating his working career to public service, while enhancing the reputation of his employer."

"The Champlain Water District proudly expresses its gratitude to David Plantier, Foreman, for his 30 years of service to the South Burlington Water Department, and Champlain Water District, 1978 to 2008."

MANAGEMENT LETTER

The Champlain Water District (CWD) has reprioritized its Twenty Year Master Plan due to reduced overall water usage by CWD's twelve served municipal water systems in Chittenden County. This Twenty Year Master Plan was reported in September 2002 and covers the planning period through 2021. The present focus of this master plan relates to overall water supply reliability and redundancy. As Vermont's largest water supplier, CWD must strive for an uninterrupted supply of drinking water to our 68,000 customers. Therefore, it is critical to continually analyze the water supply chain from CWD's deep lake intake source to consumer taps, and improve the vulnerable links in this water supply chain to ensure a consistent, reliable drinking water to our customer base.

Following extensive water quality site selection evaluations, CWD began the design and permitting for a second lake source intake into Shelburne Bay in 2006. This new water supply intake, including a thermocline monitoring system, was placed into service on July 2, 2008. This intake line extends 2700 feet into Lake Champlain at a depth of 75 feet and operates in parallel with CWD's original 1973 intake. This allows for reliability and redundancy in delivering source water to the CWD Water Treatment Facility. Given the degree of difficulty and length of time the original single intake would be out of service to repair the intake line itself, or to perform maintenance related to the threat of zebra mussel infestation, a second redundant line is critical to maintain a 24/7/365 supply of drinking water to CWD's Chittenden County customer base.

Additional ongoing activities include the following major projects:

- Completed additional security upgrades at the water treatment facility.
- Rehabilitated Adsorption Clarifier #2 and #3 at the water treatment facility.
- Continued radio communications upgrades to increase the speed of relaying critical County infrastructure information to CWD's Treatment & Transmission Specialists for 24/7/365 response.
- Continued to serve as the Vermont Training Center for the New England Water Works Association hosting six separate training sessions in fiscal year 2007-2008.
- Continued work on water quality process control optimization projects.
- Continued replacement of major control valves at the treatment facility and within the County transmission system.
- Working to complete Phase II of field security upgrades at priority sites in the County service area.
- Continue work to coordinate upgrading two major pumping stations to replace/add pumps and related motor control electrical equipment and controls.
- Continued work on a very proactive water storage tank inspection and maintenance program .

At CWD, "Excellence in Water Treatment" is our overarching mission. The CWD treatment facility received the First-in-the-Nation "Excellence in Water Treatment Award" under the National Partnership for Safe Water program of which the United States Environmental Protection Agency (USEPA) is a partner agency. CWD has maintained this "pinnacle of excellence" status each year since 1999 following an extensive annual review process. At this time, only five (5) additional water treatment facilities across the country have also now attained this public health protection optimization level. CWD continues to work with State and Federal agencies to ensure the quality of CWD's drinking water.

We thank our employees and elected officials for their effort and support in allowing CWD to be proactively managed and operated to supply a drinking water product protective of public health. As always, we welcome groups of any size to tour our facility. Please call 864-7454 to arrange a tour, or if you have questions, or need further information on the Champlain Water District.

Respectfully Submitted,

Tom Bessette, Chair CWD Board of Water Commissioners

Jim Fay, CWD General Manager

DEPARTMENT UPDATES

Water Quality / Operations Team

- Champlain Water District (CWD) celebrated its eleventh consecutive year as a recipient of the Director's award from the Partnership for Safe Water, cosponsored by the USEP. This award acknowledges optimizing water treatment and meeting water quality standards that surpass the Federal Safe Drinking Water Act requirements protective of public health.
- CWD also celebrated its ninth consecutive year in receiving the Partnership for Safe Water Phase IV Excellence in Treatment Award status following the review of the required annual package of District information sent to the Partnership program verifying extensive requirements have been met. CWD was the first in the United States to receive the Excellence Award in 1999 and is one of only six Water Treatment facilities in the U.S. to achieve this pinnacle of excellence.
- Water Quality Maintenance Team completed annual projects related to operating the CWD freeze dry treatment beds (shown at right) and settling lagoon facilities for management of our water treatment residuals.
- Other Water Quality Maintenance accomplishments in the last year are as follows:



- Completed developing a streamlined source assessment review tool.
- Completed mandated additional monitoring under the Safe Drinking Water Act (SDWA) disinfection by-product (Stage 2 DBR) rule, and initiated SDWA mandated additional monitoring under the Long-term 2 (LT2) Surface Water Treatment Rule.
- Continued managing double digit price increases in basic water treatment commodities.
- Continued updates to the state-of-the-art Total Organic Carbon (TOC) analysis systems.
- Optimized residuals treatment with process turbidity curtains.
- Continued updated system wide sampling program with dedicated sampling hydrants ensuring accurate sample results.



- Installed flooring system in the operations center of the treatment facility.
- Rehabilitated Adsorption Clarifiers #2 & #3 to assure their continued efficient operation.
- Continued residuals treatment process research regarding treatment residuals use to reduce phosphorus levels from dairy manure.

CWD Water Quality Maintenance Specialist Foreman, Jason Gagne at Vermont Drinking Water Week. (May 2008 at the Statehouse)

Retail Department

- Completed main line gate valve maintenance and exercising in the City of South Burlington, Colchester Fire District #1 (CFD#1), Village of Jericho, and the Malletts Bay Water Company and Colchester Town water systems.
- Inspected and maintained all public and private fire hydrants within the City of South Burlington, Colchester Town, Malletts Bay Water Company, Village of Jericho, and CFD#1.



- Performed plan review of all proposed projects within the City of South Burlington and inspected all water system installation work associated with several new developments within the Colchester Town Water Systems, Village of Jericho, and CFD#1.
- Performed quarterly meter reading to all water and sewer accounts in South Burlington, Colchester Town, Malletts Bay Water Company, and CFD#1.

Village of Jericho water line replacement – Route 15

- Completed the CWD, Village of Jericho, and South Burlington Operations & Maintenance Manuals to meet VT Water Supply requirements.
- Continue conducting cross connection control surveys and backflow device installation and inspections.
- Performed hydrant flushing and testing in South Burlington, Village of Jericho, CFD#1, Malletts Bay Water Company, and Colchester Town.
- Replaced several obsolete fire hydrants in South Burlington, and CFD#1 as part of their hydrant improvement plans.
- Replaced three main line gate valves on Route 15 in CFD#1 in preparation of the Route 15 paving project.
- Replaced several main line valves in conjunction with the Hinesburg Road paving project in South Burlington.
- Began operational management of the City of Winooski water system.



Retail employee Deb Sweeny conducts a fire flow test

Wholesale Maintenance Team

- Completed annual Line Walking and valve maintenance of all CWD owned Transmission mains.
- Continued maintenance of transmission line right-of-ways.
- Relocated the Johnson Avenue meter vault to avoid conflict with the future Campus Connector road at St. Michael's College, and Camp Johnson in Colchester.
- Upgraded pump #1 at the Essex East Pump Station and rehabbed the entire interior of the pump station.



Williston North Pump Station Rehab (before)

- At the Treatment Plant site tree clearing was done to increase visibility for security, traffic gates were installed to limit access around the site.
- Worked closely with the Vermont Electric Power Company (VELCO) throughout the year to ensure no conflicts occurred between our Main Service Transmission Main and VELCO's new 115kV Transmission Line that runs from New Haven to South Burlington.

Electrical Team

- Continue improving security at Remote sites.
- Continue improving filter backwash process.
- Installed Variable Frequency Drive on Jericho pump for control of system if tank is valved off.
- Upgraded valve actuators in plant.
- Upgraded SCADA radios to higher speed.
- Enhanced SCADA system information and displays.
- Upgraded the network server.



Williston North Pump Station Rehab (after)



VT License #92-0000171

DONALD L. MORRISSETTE, CPA
KEVIN J. MARCHAND, CPA
SHERRY M. PREHODA, CPA
BARNEY K. MCLEAN, CPA
RANDALL L. SARGENT, CPA

INDEPENDENT AUDITORS' REPORT

To the Board of Water Commissioners
Champlain Water District
South Burlington, Vermont

We have audited the combined financial statements of Champlain Water District as of and for the year ended June 30, 2008 and have issued our report thereon dated October 22, 2008.

The accompanying summary financial information is not a presentation in conformity with generally accepted accounting principles as management has elected to omit the notes to the financial statements.

The complete financial statements and our report thereon are available for public inspection at the District offices.

Jmm & Associates

JMM & Associates
October 22, 2008

COMBINED STATEMENTS OF NET ASSETS
JUNE 30, 2008
ASSETS

CURRENT ASSETS		2008
Cash – operating		\$280,735
Cash – reserves		668,311
Cash – contract 80 intake line		77,111
Accounts receivable – water		396,514
Accounts receivable – other		67,769
Inventories		174,122
Prepaid expenses		9,019
TOTAL CURRENT ASSETS		1,673,581
PROPERTY AND EQUIPMENT		
Land and rights-of-way		264,368
Buildings and improvements		20,502,826
Water transmission and mains		16,438,838
Machinery and equipment		5,333,563
Retail service connections		82,104
New construction in progress		6,765
		42,628,464
Accumulated depreciation		(18,127,229)
TOTAL PROPERTY AND EQUIPMENT		24,501,235
TOTAL ASSETS		\$26,174,816
	LIABILITIES & NET ASSETS	
CURRENT LIABILITIES		2008
Current portion of long-term debt		\$510,000
Short-term note payable		2,395,000
Accounts payable		208,142
Accrued vacation		132,219
Other payroll accruals		28,188
Accrued interest payable		33,857
TOTAL CURRENT LIABILITIES		3,307,406
LONG-TERM LIABILITIES		
Notes and bonds payable, net of current portion		6,125,000
TOTAL LONG-TERM LIABILITIES		6,125,000
TOTAL LIABILITIES		9,432,406
NET ASSETS		
Unrestricted		525,753
Restricted		745,422
Invested in capital assets, net of related debt		15,471,235
TOTAL NET ASSETS		16,742,410
TOTAL LIABILITIES AND NET ASSETS		\$26,174,816

**COMBINED STATEMENT OF ACTIVITIES
AND CHANGES IN NET ASSETS
FOR THE YEAR ENDED JUNE 30, 2008**

OPERATING REVENUE	<u>2008</u>
Water sales	\$4,711,929
Management contracts	363,389
Water supply fees	126,570
Other services	169,584
Miscellaneous	25,469
Equipment rental	<u>62,600</u>
TOTAL OPERATING REVENUE	<u>5,459,541</u>
OPERATING EXPENSES	
Operating	3,684,761
Depreciation	1,349,390
General and administrative	197,864
Maintenance	157,803
Water supply fees	<u>126,570</u>
TOTAL OPERATING EXPENSES	<u>5,516,388</u>
INCOME (LOSS) FROM OPERATIONS	<u>(56,847)</u>
NON-OPERATING REVENUES (EXPENSES)	
Interest income	25,252
Connection fees	41,320
Reimbursed interest	15,135
Interest expense	<u>(316,215)</u>
TOTAL NON-OPERATING REVENUES (EXPENSES)	<u>(234,508)</u>
NET LOSS BEFORE CAPITAL CONTRIBUTIONS	(291,355)
Contributed capital	<u>20,000</u>
CHANGE IN NET ASSETS	(271,355)
BEGINNING NET ASSETS	<u>17,013,765</u>
ENDING NET ASSETS	<u><u>\$16,742,410</u></u>

**COMBINED STATEMENT OF CASH FLOWS
FOR THE YEAR ENDED JUNE 30, 2008**

CASH FLOWS FROM OPERATING ACTIVITIES	<u>2008</u>
Cash received from water sales	\$4,847,618
Cash received from fees and services	751,524
Cash received from other sources	23,469
Cash received from interest income	40,387
Cash paid for interest expense	(319,256)
Cash paid to suppliers for goods and services	(1,940,100)
Cash paid for salaries and benefits	<u>(2,166,463)</u>
NET CASH PROVIDED BY OPERATING ACTIVITIES	<u>1,237,179</u>
CASH FLOWS FROM INVESTING ACTIVITIES	
Proceeds from sale of asset	5,000
Purchase of property and equipment	<u>(2,888,957)</u>
NET CASH USED BY INVESTING ACTIVITIES	<u>(2,883,857)</u>
CASH FLOWS FROM CAPITAL & RELATED FINANCING ACTIVITIES	
Proceeds provided from issuance of short-term notes	475,000
Contributed capital received	20,000
Principal payments on short-term notes	(225,000)
Principal payments on long-term debt	<u>(510,000)</u>
NET CASH PROVIDED (USED) BY FINANCING ACTIVITIES	<u>(240,000)</u>
DECREASE IN CASH	(1,886,778)
BEGINNING CASH	<u>2,912,935</u>
ENDING CASH	<u><u>\$1,026,157</u></u>
CASH FLOWS FROM OPERATING ACTIVITIES	
Change in net assets	<u>\$(271,355)</u>
Adjustments to reconcile net income to net cash provided by operating activities:	
Depreciation	1,349,390
Capital contributions	(20,000)
(Increase) decrease in:	
Accounts receivable – water	135,689
Accounts receivable – other	(11,939)
Inventories	(92,530)
Prepaid expenses	(32)
Increase (decrease) in:	
Accounts payable	128,396
Accrued vacation and sick pay	13,002
Other payroll accruals	9,599
Accrued interest payable	<u>(3,041)</u>
Total Adjustments	<u>1,508,534</u>
NET CASH PROVIDED BY OPERATING ACTIVITIES	<u><u>\$1,237,179</u></u>

STAFF	BOARD OF COMMISSIONERS
<p align="center">Administration</p> <p>Jim Fay, General Manager Kathy Pratt, Accountant Tracy Bessette, H.R. Administrator</p>	<p align="center">South Burlington</p> <p>Peter Jacob William Szymanski, Alternate</p>
<p align="center">Engineering</p> <p>Dick Pratt, Asst. General Mgr./Chief Engineer Melissa Hood, Planning Engineer</p>	<p align="center">Shelburne</p> <p>Tom Bessette, Chair Paul Bohne, Town Manager - Alternate</p>
<p align="center">Water Quality</p> <p>Mike Barsotti, Director of Water Quality & Production Diana Butler, WQMS* Chris Collins, TTS* Jason Cairelli, TTS Alicia Duprey, WQMS Jason Gagne, WQMS Foreman Mark Hamel, TTS Anthony Higgins, Lead TTS Jason Scott, WQMS Josh Wolyneec, TTS</p>	<p align="center">Colchester</p> <p>Karen Richard Al Voegele, Town Manager – Alternate</p> <hr/> <p align="center">Essex</p> <p>Bernie Lemieux Ruth Taylor, Alternate</p> <hr/> <p align="center">Milton</p> <p>George Nelson Andrew Legg, Alternate</p>
<p align="center">Wholesale Maintenance</p> <p>Paul Tice, Transmission System Director Norm Fortin, Maint. Foreman Vilas Gentes, Maint. Technician Brian Martin, Maint. Technician George Wimble, Maint. Technician</p>	<p align="center">Village of Jericho</p> <p>Bob Shand</p>
<p align="center">Electrical Department</p> <p>Bruce Bushey, Electrical & Tech. Supervisor Bob Perkins, Technical Supervisor Brian Hilliker, Instrumentation Technician Cory Waterhouse, Electrical Maint. Technician</p>	<p align="center">Williston</p> <p>Don Phillips, Vice Chair Richard McGuire, Town Manager - Alternate</p>
<p align="center">Retail Department</p> <p>Jay Nadeau, Retail Superintendent Julie Ringuette, Billing Specialist Eric Pepin, Water Distribution System Foreman Jeff Gilbert, Senior Meter Technician Dan Jacobs, Water Meter Reader/Dist. Maint. Tech. Deb Sweeny, Water Meter Reader/Dist. Maint. Tech. Art Barnier, Water Meter Reader/Dist. Maint. Tech. Adam Rule, Water Meter Reader/Dist. Maint. Tech</p>	<p align="center">Winooski</p> <p>Peter Crowley George Cross, City Manager - Alternate</p>

TTS=Treatment & Transmission Specialist
WQMS= Water Quality Maintenance Specialist

**CHAMPLAIN WATER DISTRICT WAS THE FIRST WATER SUPPLIER IN THE NATION TO RECEIVE THE "EXCELLENCE IN WATER TREATMENT AWARD"
FOR COMPLETION OF ALL FOUR PHASES OF THE PARTNERSHIP FOR SAFE WATER PROGRAM**

An independent eight-person team performed Champlain Water District's (CWD) onsite Phase IV Comprehensive Performance Evaluation during the week of May 17, 1999. This (3) day onsite evaluation encompassed fifty separate assessment parameters in the areas of facility design, and associated administrative, operational, and maintenance practices and capabilities. The review was conducted to identify any factors that may be adversely impacting the water treatment facility's capability to achieve continuous optimal performance protective of public health. Once potential performance limiting factors are identified, they are classified according to the following guidelines:

- A = Major effect on a long term repetitive basis
- B = Moderate effect on routine basis, or major effect on a periodic basis
- C = Minor effect

Not only did the Champlain Water District "pass" the Comprehensive Performance Evaluation, the Assessment Team stated that CWD was the first water utility, since protocol inception in 1988, that did not have any performance limiting factors identified during the extensive onsite evaluation. Champlain Water District is Vermont's largest regional public water supplier, serving 68,000 people in twelve municipal water systems in Chittenden County. CWD's receipt of the first "Excellence in Water Treatment Award" in the country is a culmination of ten years of staff effort. Following water treatment upgrades beginning in 1989 to further protect public health, CWD has extensively researched optimization of its upgraded water treatment processes. CWD has also made numerous regional and national presentations on its process optimization efforts, with many of these papers being published in both the New England Water Works, and the American Water Works Journals.

CWD was the fifth water utility in the country to receive recognition for successful completion of the Program's Phase III, Self-Assessment requirements, in 1997. CWD was recognized as the first water supplier in the nation to successfully complete all four phases of the Partnership for Safe Water Program during Opening Ceremonies of the New England Water Works Annual Conference on September 20, 1999 at the Sheraton Hotel and Conference Center in South Burlington, VT. CWD was also recognized for this achievement at AWWA's Water Quality Technology Conference on November 1, 1999, in Tampa, Florida. In June 2004 CWD was presented with the Five Year Anniversary Partnership for Safe Water Excellence in Treatment Award, in Orlando, FL, at the AWWA Annual Conference for continuing to meet all Phase IV requirements on an annual reporting basis. As of 2009, there are only five other water treatment facilities in the U.S. that have attained this "Excellence in Water Treatment" status which is the pinnacle of treatment optimization for public health protection. For the past ten years since 1999, CWD has maintained this award status through successful submission of an annual report that is reviewed for water quality test results, as well as the demonstration and documentation of operational tenacity toward continuous quality improvement as required by the Partnership for Safe Water program.

The *Cryptosporidium* outbreak in Milwaukee in 1993 certainly raised the awareness of the susceptibility of drinking water to protozoan contamination. Many water utilities began a critical review of their operating procedures related to protecting the public from microbial pathogens. Formation of the voluntary Partnership for Safe Water Program in 1995 allowed a standardized procedure to be applied in the assessment of surface water treatment facilities on a national scale. It was equally important for the regulatory community and water suppliers to proactively work together on this *Cryptosporidium* threat, realizing that federal legislation was not the immediate solution, due to the analytical difficulties in reliably testing, and enumerating the viability of this specific organism.

Presently, the Partnership for Safe Water Utility membership (January 2009) collectively serves a combined population of more than 85 million people, or nearly two-thirds of U.S. citizens served by surface water sources.

The Partnership for Safe Water is sponsored by the following major drinking water organizations:

- United States Environmental Protection Agency (EPA)
- American Water Works Association (AWWA)
- American Water Works Association Research Foundation (AWWARF)
- Association of State Drinking Water Administrators (ASDWA)
- Association of Metropolitan Water Agencies (AMWA)
- National Association of Water Companies (NAWC)

The goals of the Partnership for Safe Water include:

1. Improved public health protection above and beyond EPA regulations
2. Cooperative partnering between regulatory agencies, water suppliers, and the public.
3. Recognition for supplying a high quality drinking water with tenacity toward improved public health protection

The four phases of the Partnership Program are as follows:

- I. Written commitment to program requirements for Phases I, II, and III
- II. Collection of required water quality data in standardized Partnership format
- III. Submit utility Self Assessment Report to be reviewed by Partnership's Performance Effectiveness Assessment Committee
- IV. Final "voluntary" phase requirements include an assessment of the participating water utility by an independent team of investigators, following the updated Comprehensive Performance Evaluation protocol, which is part of the National Composite Correction Program that has been in place since 1988.

