

# Champlain Water District

Water Quality 2013



PWS ID#: VT0005092

**Safe Drinking Water All the Way to Your Tap**



***Dedicated to Quality Water and Service***

***First in the Nation  
10 Year Excellence in Water Treatment Award!***

In 2012, Champlain Water District's Peter L. Jacob Water Treatment Facility maintained its high degree of treatment process optimization and continued its 13th straight year as the first water utility in the country to receive USEPA's Excellence in Water Treatment Award from the Partnership for Safe Water. To date, a total of 12 water suppliers in the U.S. have attained this pinnacle of public health protection. We invite school and community groups to visit our treatment facility, view this prestigious award, and learn about their drinking water "from source to tap." Water Quality 2013 reports data from calendar year 2012.

The Champlain Water District (CWD) works very hard to assure safe, high quality drinking water is delivered to its customers. We accomplish this by:

- protecting Shelburne Bay as the deep water source that supplies the water,
- treating the water with state-of-the-art filtration, disinfection and corrosion control at the Peter L. Jacob water treatment plant,
- assuring corrosion control and disinfection by-product control throughout the county-wide distribution system.

This year's Water Quality Report announces CWD's 40th anniversary in 2013. **Please turn to the center pages of this report to learn more.**

The water that CWD provides throughout Chittenden County - as far North as Milton, as far East as the Village of Jericho, and as far South as Shelburne - is of the highest quality and serves many uses for CWD's 69,000 customers and many of the area's major employers such as IBM and Husky.

### What are the USEPA regulations?

CWD's philosophy has always been to go beyond Federal and State requirements to protect public health as we continue to meet all present Federal and State water quality standards. In order for our customers to understand these standards, there are some important USEPA definitions to learn:

#### Regulatory Corner

##### Maximum Residual Disinfectant Level (MRDL)

- ▶ Maximum Residual Disinfectant Level Goal (MRDLG) – The level of drinking water disinfectant below which there is no known or expected risk to health. The MRDLG for Monochloramine is 4 mg/L.
- ▶ Maximum Residual Disinfectant Level (MRDL) – The highest level of a disinfectant allowed in drinking water. Addition of a disinfectant maintains sanitary quality. The MRDL for Monochloramine = annual average of 4.0 mg/L.

##### Maximum Contaminant Level (MCL)

- ▶ Maximum Contaminant Level (MCL) - the highest level of a contaminant that is allowed in drinking water.
- ▶ Maximum Contaminant Level Goal (MCLG) – level of a contaminant in drinking water below which there is no known or expected risk to health.
- ▶ MCLs and MCLGs are set by USEPA after extensive research and public comment. MCLs define a safe water supply by setting levels a trace contaminant may not exceed, MCLs are set as close to the MCLG as feasible using the Best Available Technology.

##### Treatment Technique

- ▶ Action level- the concentration of a contaminant which triggers treatment or other requirements that a water system must follow.
- ▶ 90th Percentile - Ninety percent of the samples are below the action level. (Nine of ten sites sampled were at or below this level).
- ▶ Nephelometric Turbidity Unit (NTU) - NTU is a measure of the clarity of water. Turbidity in excess of 5 NTU is just visually noticeable to the average person.

##### Regulation of Contaminants

- ▶ Parts per million (ppm) or Milligrams per Liter (mg/l) - one penny in ten thousand dollars or 1 second in 11.6 days.
- ▶ Parts per billion (ppb) or Micrograms per Liter (ug/l) - one penny in ten million dollars or 1 second in 32 years.
- ▶ Picocuries per liter (pCi/l)- a measure of radioactivity in water.

- ▶ Treatment Technique- a USEPA requirement for water suppliers to install and optimize water treatment processes that are intended to reliably remove a required percentage for a specific possible contaminant.
- ▶ Treatment techniques are set by USEPA when monitoring technology cannot precisely detect certain contaminants. In these cases, a surrogate measurement is used to determine compliance in a reliably operated treatment facility. An example is the use of turbidity to indicate microbial protozoan removal in a treatment plant. (Turbidity is a good indicator of the effectiveness of the disinfectant, the filtration, and the general quality of the water.)
- ▶ USEPA wants you to know that the presence of certain contaminants in drinking water does not necessarily indicate that the drinking water poses a health risk. USEPA and the State of Vermont prescribe regulations which limit the amount of certain contaminants in water provided by the public water system. CWD monitors for all regulated trace contaminants (including naturally occurring radioactivity) on specific schedules as required by USEPA. USEPA never expresses results of water monitoring as "zero". Scientifically, it is impossible to measure "zero". Therefore, USEPA requires every trace substance to be analyzed using an approved method with a required detection limit. When no trace substance is found, then it is expressed as "none detected = ND."
- ▶ CWD monitors for these trace chemicals even though they are extremely unlikely to be present in CWD's source because of the characteristics of CWD's 33.3 billion gallon deep water Shelburne Bay source. CWD has monitored 92 trace substances for many years according to the schedules established by the USEPA and has received all non-detect test results for 2012. In 2011, Radium 226 was detected at the natural background detection limit of 1 Picocuries per liter. The MCL for Radium 226 is 5 Picocuries per liter. CWD's non-detect monitoring results are not specifically listed in this report due to space limitations. **To receive a listing of these specific undetected contaminants – contact CWD and ask for the latest specific non-detect report.**



## Water Characteristics

### Immunocompromised Persons read this!

USEPA requires  all water systems, regardless of the type of source and treatment, to provide this information.

### Sanitary quality

### Source quality

### Disinfectant-by-product quality

### Aesthetic quality



In providing a safe, high quality water there are several characteristics that a water supplier should meet:

- Sanitary quality - bacteriological, viral and protozoan quality that is assured by consistent and efficient filtration, and, by primary free chlorine disinfection and secondary monochloramine disinfection. This is the primary goal of any water supplier as consumers cannot reliably achieve this protection with home treatment devices.

CWD wants immunocompromised persons (ICP's) to know that they may be particularly at risk from infections and should seek advice from their health care providers.

ICP's include:

- Those undergoing chemotherapy or organ transplants.
  - Those with AIDS / HIV or other immune system disorders.
  - Some elderly.
  - Infants.
- Source quality - the cleaner a water supplier's source, the more effective a water supplier's treatment process is at producing high quality water. Common sense tells us that if you have high quality untreated water going into a facility, then you will have the highest quality finished water leaving that facility. This is important for sanitary and trace chemical considerations. Home owners cannot reliably treat poor quality source waters on their own.

In general, USEPA wants you to know that, depending on the condition of any water source and its watershed area, some untreated source water may be impacted by the following contaminants:

- Biological (Viruses & Bacteria).
  - Inorganic (Metals & Salts).
  - Synthetic organic chemicals (Pesticides, Herbicides, Volatile Organic Chemicals).
  - Naturally occurring radioactivity.
- Disinfectant-by-product quality - primary disinfection with free chlorine is essential to assure sanitary water. This disinfection process does create by-products (DBPs) that impact the finished water. All water suppliers must deal with the balancing of sanitary benefits and DBP risks from primary free chlorine disinfection. DBPs may be reduced by the consumer using treatment devices approved by NSF International for TTHM reduction, and only if these devices are installed, used and continually maintained according to manufacturer's instructions.
  - Aesthetic quality - aesthetic considerations also determine the acceptability of a water supply. Distribution system management may impact water taste and odor. Taste/odor is relatively easy to reduce by the consumer using properly installed and maintained NSF approved treatment devices.

### Violations that occurred during the year:

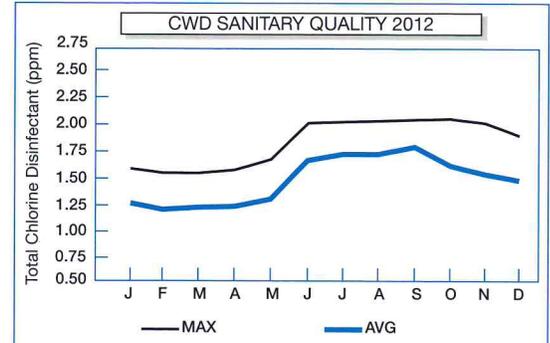
Champlain Water District had no regulatory violations during the year.

USEPA believes that drinking water, including bottled water, may reasonably be expected to contain at least trace amounts of contaminants. More information about contaminants and associated health risks can be obtained by calling CWD or the Safe Drinking Water Hotline.

## CWD's SANITARY QUALITY

When evaluating a high quality water you should look for:

- a monochloramine residual of at least 0.1 mg/L but not more than 4.0 mg/L (MRDL),
- median heterotrophic plate count (HPC) of less than 500 cfu/ml, and
- total coliform absent 95% of the time.
- less than 0.10 ntu turbidity from each filter.



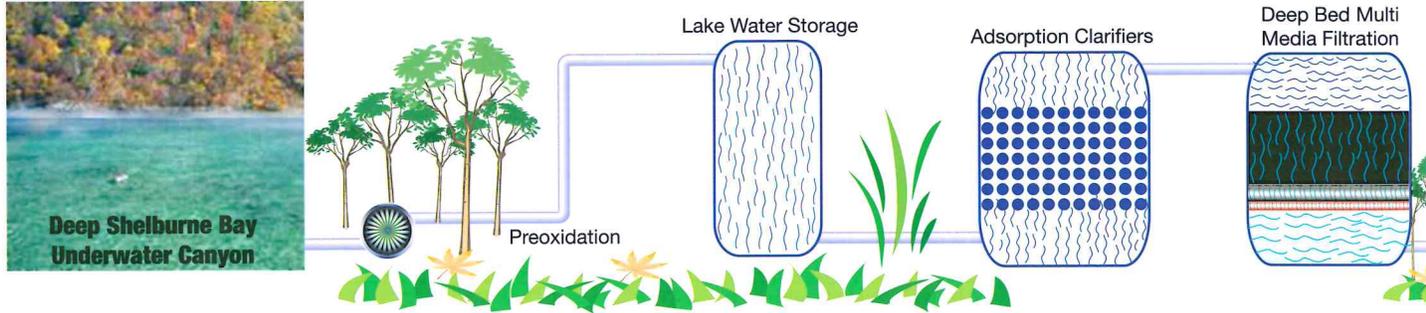
This graph shows that CWD's monochloramine disinfectant residual stays consistent throughout the year and is well below the USEPA allowable level for monochloramine residual of 4.0 mg/L.

The data from the table below shows that, even during warm water conditions experienced during June through October, the sanitary quality of CWD water is excellent with very low HPC levels and total coliforms absent 99 to 100% of the time.

2012 MONTH	AVG / WATER TEMP / DEG-F	MEDIAN HPC COUNT (STD=<500)	TOTAL COLIFORM (STD ABSENT 95% OF THE MONTH)
January	46	3	Absent 100%
February	44	3	Absent 100%
March	43	4	Absent 100%
April	47	3	Absent 100%
May	52	3.5	Absent 100%
June	58	2	Absent 100%
July	63	2	Absent 100%
August	66	2	Absent 100%
September	66	3	Absent 100%
October	63	3	Absent 99%
November	58	4	Absent 100%
December	52	2	Absent 100%

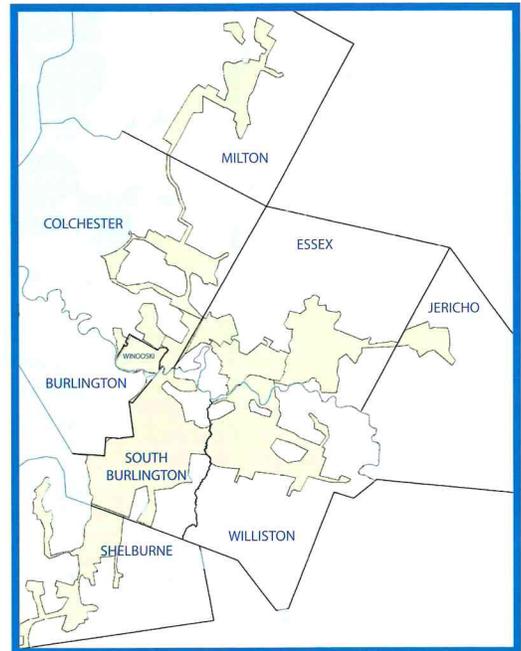
Contaminant	Total Coliform
Date of Positive:	October 09, 2012 in Colchester
Unit	Total Coliform
MCL	Absent at least 95% of the time (Present no more than 5 % of the time).
Detected level/yr	Absent 99.92 % of year ( Present in 1 out of 1234 samples)
Possible Sources	Naturally present in the environment.

# CHAMPLAIN WATER DISTRICT



## Service areas include:

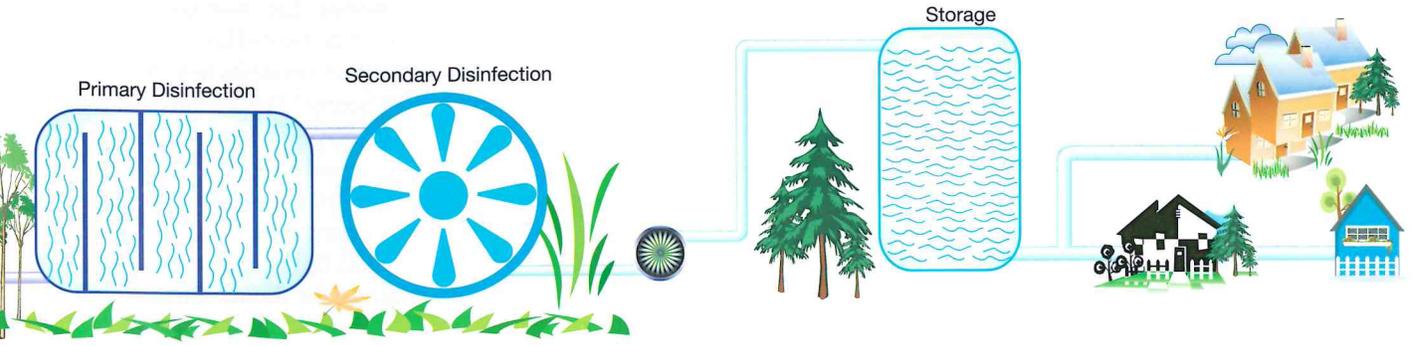
- Shelburne
- South Burlington
- Williston
- Essex Junction
- Essex
- Jericho Village
- Milton
- Winooski
- Mallets Bay Water Company
- Colchester Town
- Colchester Fire District #1
- Colchester Fire District #3



## CWD TIMELINE

<p><b>1966</b> Initial organizational meetings to discuss a regional approach to drinking water supply in Chittenden County</p> 	<p><b>1971</b> Chartered by the State of Vermont as a Municipal Consolidated Water District</p> 	<p><b>1972</b> Construction of multiple water transmission main projects completed to link all members of the newly created Water District</p>	<p><b>1973</b> Water Treatment Facility online supplying South Burlington, Shelburne, Williston, Essex Junction, Essex Town, Winooski &amp; Colchester</p> 	<p><b>1980</b> Water Treatment Facility Expansion (3-Deep Bed Filtration Units)</p>	<p><b>1980</b> CWD 20 Year Master Plan completed by Hamlin Consulting Engineers</p> 	<p><b>1989</b> Water Treatment Facility Expansion (2 additional Deep Bed Filtration Units, Retrofit of (2) Adsorption Clarifiers, and a 1MG Disinfection Contact Tank)</p>	<p><b>1991</b> Milton &amp; Village of Jericho join CWD</p>	<p><b>1992</b> Construction of a second 24" diameter High Service Transmission Main from Treatment Plant to the intersection of Route 15 &amp; Woodside Drive</p>	<p><b>1993</b> CWD Treatment Facility dedicated to Peter L. Jacob, who was instrumental in the formation of CWD, and also served as the long-term Chair of the publicly elected CWD Board of Water Commissioners</p> 	<p><b>1999</b> CWD receives First in the Nation "Excellence in Water Treatment Award from the Partnership for Safe Water Program"</p> 	<p><b>1995</b> Initiated zebra mussel treatment for source lake water supply</p>	<p><b>1000</b></p>
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# DRINKING WATER PROCESS



## Did you know ?

- ▶ your water supplier was the first in the nation to receive the Ten Year Anniversary Excellence in Treatment Award from the Partnership for Safe Water for demonstrating superior water quality each year in complying with the safe drinking water act.
- ▶ your water supplier received the 2007 “Utility of the Year Award” and the year 2012 “Utility Service Award” from New England Water Works Association.
- ▶ your water supplier was one of 76 in the nation to have received the Ten Year Anniversary Director’s Award from the Partnership for Safe Water Program.
- ▶ your water supplier received the Grand Award for Engineering Excellence from the American Council of Engineering Companies for the design and implementation of the secondary disinfection project and for its 2012 Energy Savings Scoping Study.
- ▶ your water was voted “Best Tasting” in a blind taste test of Vermont officials as part of the National Drinking Water Week celebration in Montpelier in May of 2007 and in May 2012.

**Public Involvement:** CWD is governed by a Board of Commissioners publicly elected from each member community. Public Board meetings are held at 12 noon the second Tuesday of each month.

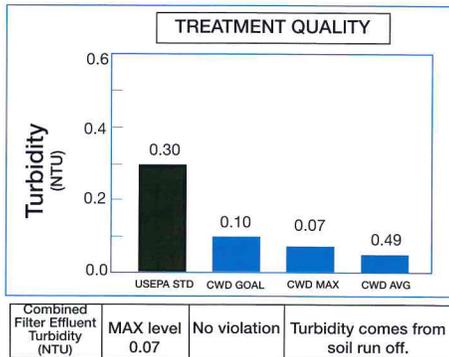
<p>Water Treatment Facility expansion, an additional (third) Adsorption Clarifier is constructed and two additional Deep Bed Filtration Units are added</p>	<p><b>2003</b></p>	<p>Completed (14) projects recommended in CWD’s 20 Year Master Plan related to improved pumping, treatment, electrical and Facility HVAC/ Dehumidification</p>	<p><b>2005</b></p>	<p>Completed construction of primary and secondary electrical supply reliability upgrades for treatment facility and lake water source pumping station.</p>	<p><b>2009</b></p>	<p>10 Year Anniversary Award for maintaining Partnership for Safe Water “Excellence in Water Treatment” criteria for public health protection</p>	<p><b>2013</b></p>	<p>CWD celebrates 40th anniversary of providing safe drinking water and fire protection to (12) served municipal water systems in Chittenden County</p>
<p>Water Treatment Facility expansion, and additional (eighth) Deep Bed Filtration Unit is constructed</p>	<p><b>2002</b></p>	<p>CWD 20 Year Master Plan completed by Dufresne &amp; Associates, PC</p> 	<p><b>2004</b></p>	<p>5 Year Anniversary Award for maintaining Partnership for Safe Water “Excellence in Water Treatment” criteria for public health protection</p>	<p><b>2008</b></p>	<p>Construction completed on a second lake intake pipe for overall reliability and redundancy</p> 	<p><b>2011</b></p>	<p>Began phased installation of two (2) miles of High Service “Cross-tie” transmission piping for overall reliability purposes</p> 

## CWD'S SANITARY QUALITY (continued)

Protozoan and virus protection is provided through optimized filtration and primary disinfection. When evaluating a water supplier for proper protozoan and virus treatment, the combined filtration and post-disinfection processes should remove and destroy 99.5% of *Cryptosporidium* oocysts, 99.9% of *Giardia* cysts and 99.99% of viruses. The treatment removal/inactivation graph below shows that CWD surpasses these treatment requirements.

USEPA believes some people may be more vulnerable to contaminants in drinking water than the general population. *Cryptosporidium* and *Giardia* are microbial parasites that can be found in surface water throughout the U.S. Although filtration removes *Cryptosporidium*, the most commonly used filtration methods cannot guarantee 100 percent removal. This is why CWD continues to upgrade and optimize its water treatment processes. USEPA's turbidity standard is for all the filters combined. CWD's turbidity goal is much stricter and is for each filter.

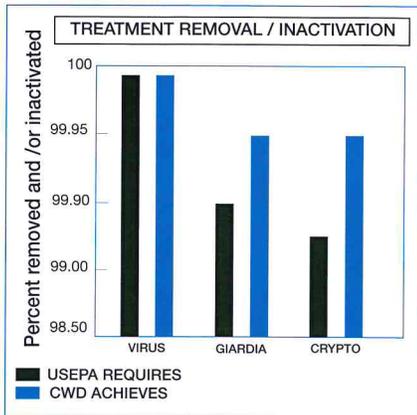
CWD's continued use of state of the art laser particle counting technology continues to allow each process filter to be optimized at removing particles larger than 2 microns (about 1/13,000th of an inch) in size.



## GIARDIA AND CRYPTOSPORIDIUM TESTING

CWD completed the required Giardia and Cryptosporidium monitoring from April 2008 to December 2010 as required under USEPA's Rules. CWD is continuing to monitor, as it has since 1989, in the spring and fall of the year (i.e. "worst case").

All CWD inactivation is performed using free chlorine as primary disinfectant.



LAKE WATER RESULTS	GIARDIA RESULTS		CRYPTOSPORIDIUM RESULTS	
	LAKE WATER	FINISHED WATER	LAKE WATER	FINISHED WATER
April	NONE DETECTED	NONE DETECTED	NONE DETECTED	NONE DETECTED
November	NONE DETECTED	NONE DETECTED	NONE DETECTED	NONE DETECTED

CWD conducted several studies with Dr. Tom Manley of Middlebury College to determine the best strategic locations for our additional source water intake pipe. Results of these studies showed that CWD's 75 feet deep intake location to the northeast of White's Ridge along the Shelburne Bay Deep underwater canyon was the best location for a redundant intake pipe to assure adequate quantity and high quality of water into the future. This new "south intake" was constructed in 2007 and placed into service in July 2008.

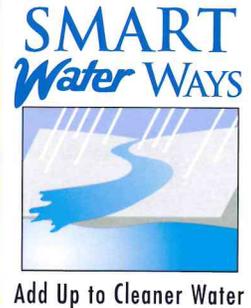
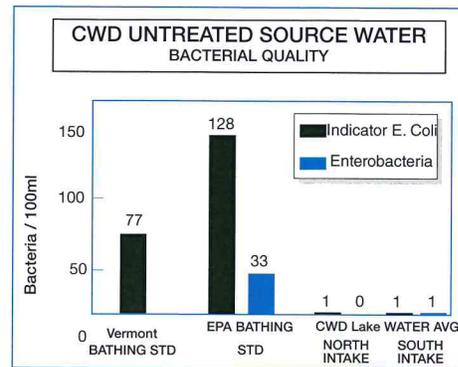
## CWD'S SOURCE QUALITY

Many of the people who live along Shelburne Bay, and the streams flowing into Shelburne Bay, do not realize that their homes, yards, and parks are within an area called the "Shelburne Bay Watershed." By protecting the Shelburne Bay watershed, residents help protect the quality of CWD's deep Shelburne Bay source. The streams that make up this watershed include the Laplatte River, Potash Brook, North Brook, Munroe Brook, McCabes Brook, and Bartlett Brook. CWD's water source is far off shore in Shelburne Bay. CWD invested in this intake source area because it is well away from potential sources of contamination. Shelburne Bay holds 33 billion gallons of water. CWD's Watershed Management Program for Source Protection has the following objectives:

- Characterize watersheds (all the rain and snow melt that enter a specific stream or river come from an area that is called that stream's "watershed") and the Shelburne Bay Source.
- Build partnerships toward improving lake water quality.
- Educate people about Shelburne Bay's role in providing drinking water.
- Limit degradation of the CWD source water.

In a major initiative addressing specific stormwater needs, Champlain Water District continues managing a grant program for Chittenden County municipalities that assists in the construction of stormwater control measures where they are needed the most. \$3.0 Million has been made available through this program through the efforts of Vermont's Senate delegation.

For more info on stormwater measures go to [www.smartwaterways.org](http://www.smartwaterways.org)



This graph shows how CWD untreated source water contains very low numbers of sanitary bacterial indicators even when comparing with levels USEPA says are allowable in bathing beach water. Of course, CWD finished water is free of any bacteriological indicator organisms.

## CWD'S DISTRIBUTION SYSTEM MONITORING

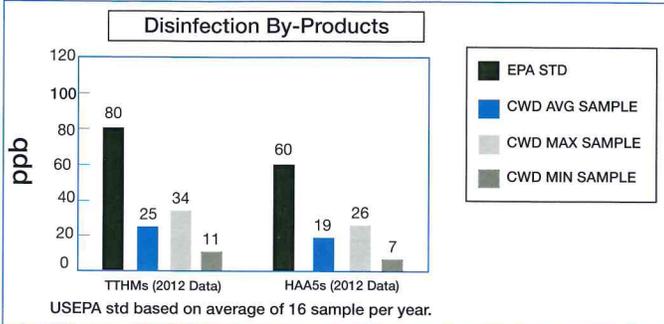
In addition to the 109 trace chemicals monitored for within CWD's deep water Shelburne Bay source, by agreement, CDW monitors the distribution systems of our municipal, served systems. The sanitary quality of this monitoring was described above. Another type of distribution monitoring is testing for asbestos fibers within systems that contain limited amounts of asbestos-cement (AC) pipe. AC pipes are structurally stronger than plain cement pipes and are present in limited areas of the served systems. The MCL for Asbestos is 7 million fibers/L.

MUNICIPAL SYSTEM	MCL	LEVEL DETECTED	VIOLATION YES OR NO	SOURCE
Col. Fire D. #3	7 Million Fibers/L	None Detected	No	AC pipe
Essex Town	7 Million Fibers/L	None Detected	No	AC pipe
Milton	7 Million Fibers/L	1.8 MFL	No	AC pipe

MFL= Million Fibers per Liter

## CWD's DISINFECTANT BY-PRODUCT QUALITY

CWD maintains high quality drinking water, free from pathogenic (dangerous) bacteria and protozoa while, at the same time, keeping disinfectant by-products (DBPs) to a minimum. USEPA has implemented a more restrictive new standard for two groups of compounds – known as total trihalomethanes (TTHMs) and total haloacetic acids (HAA5s). CWD is fortunate to have extremely low natural levels of bromide in its source water as the brominated DBPs have been implicated as contributing the most risk.



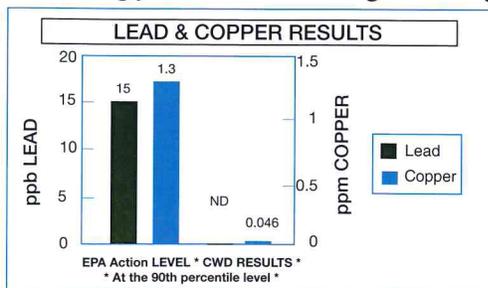
	MCL	Violation Yes or No	Average Detected	Range Detected	Source
TTHMs	80 ppb	No	25 ppb	11-34 ppb	By-Product of Disinfection
HAA5s	60 ppb	No	19 ppb	7-26 ppb	By-Product of Disinfection

CWD uses monochloramine to significantly reduce TTHMs and HAA5s and continues to produce high quality, sanitary water.

## CWD's LEAD & COPPER TREATMENT

CWD adds 0.08 to 0.18 mg/L of zinc and from 0.8 to 1.8 mg/L of phosphate to reduce lead and copper leaching from individual home plumbing. This program has been very effective and allowed CWD to become one of the first systems in Vermont to meet the USEPA action level for lead and copper leaching from home plumbing. CWD is required to extensively monitor 55 high risk sample sites for lead.

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. CWD is responsible for providing high quality drinking water, but cannot control the variety of materials used in home plumbing components. Lead in drinking water is from materials associated with home plumbing installed prior to 1987. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using your water for drinking or cooking.



In 2010, None (zero) of 55 sample sites exceeded the USEPA action level for lead. If your house contains leaded solder, flush your tap for 30 seconds to 2 minutes before using the tap water. The next 3 years monitoring cycle begins June 2013.

If you are concerned about lead in your drinking water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the [Safe Drinking Water Hotline](http://www.epa.gov/safewater/lead) or at <http://www.epa.gov/safewater/lead>.

## PHARMACEUTICAL COMPOUNDS AND PERSONAL CARE PRODUCTS (PPCPs)

In 2012, CWD conducted monitoring for 45 of the most common PPCPs, 2 of the most common algal substances detected nationwide, hydrazine and 5 common nitrosamines. The results for 53 of these substances were none detected at ppt and ppqd levels in CWD water. One of the 53 substances monitored was Bisphenol A (BPA). These results show that CWD water is BPA free! Four substances, cotinine, nicotine, diltiazem, and lincomycin were detected at levels very close to the detection limit of the test procedure. Despite careful sampling techniques, CWD has been unable to eliminate low level detects from sampler/lab personnel use of nicotine, and other environmental substances.

PPCP'S DETECTED IN CWD TREATED WATER	DWG	DETECTED IN LAB FROM SAMPLE	DETECTION LIMIT OF TEST PROCEDURE	FACTOR BELOW HEALTH SCREENING LEVEL	SOURCE, OTHER THAN SAMPLE/ANALYTICAL CONTAMINATION
COTININE <sup>1</sup>	10,000 ppt	2 ppt Finished Water	1 ppt	3,333 times less than	Metabolite of Nicotine
DILTIAZEM <sup>1</sup>	5,000 ppt	0.1 ppt Finished Water	0.1 ppt	50,000 times less than	Pharmaceutical
LINCOMYCIN <sup>2</sup>	12,000 ppt	8.6 ppt Finished Water	0.1 ppt	1,395 times less than	Antibiotic
NICOTINE <sup>1</sup>	10,000 ppt	8 ppt Finished Water	5 ppt	N/A	Tobacco Product
NICOTINE	N/A	13 ppt Laboratory Blank	5 ppt	N/A	Tobacco Product

ppt = parts per trillion or nanograms per Liter (ng/L) or one penny in 10 billion dollars or 1 second in 32,000 years. ppqd = parts per quadrillion or picograms per Liter (pg/L) or one penny in 10 trillion dollars or 1 second in 32,000,000 years. DWG = Drinking Water Guidance Level

<sup>1</sup> 2010 Occurrence of Pharmaceutical and Personal Care Products (PPCPs) in Source Water of the New York City Water Supply, New York City Environmental Protection, August 19, 2012

<sup>2</sup> Report on Pharmaceuticals and Personal Care products in Illinois Drinking Water, Bureau of Water, Illinois EPA, June 2008

## CWD's AESTHETIC QUALITY

All of the different types of water quality presented - sanitary, source and DBP - interact and influence one another as well as affecting the aesthetic quality of the water, CWD's challenge - as for all water suppliers - is to manage all these aspects to produce high quality water. After CWD produces the water, it is distributed to 12 municipal water systems within nine served communities, the water systems then deliver the water to you, the consumer. The following table lists CWD aesthetic water conditions.

These are parameters that are not based upon human health concerns, but affect how a consumer views their water supply.

AESTHETIC CONDITION	USEPA SECONDARY MCL	CWD TREATED WATER
ALUMINUM	0.20 ppm	0.07 ppm (ND-0.16)
COLOR	15 UNITS	2 UNITS
ALKALINITY	N / A	55 ppm (53-59) AS CaCO <sub>3</sub>
CALCIUM HARDNESS	N / A	53 ppm (45-64) AS CaCO <sub>3</sub>
TOTAL HARDNESS	N / A	61 ppm AS CaCO <sub>3</sub> (3.6 GRAINS/GAL.)
CHLORIDE	250 ppm	17 ppm
FOAMING AGENTS	0.5 ppm	LESS THAN 0.1 ppm
CONDUCTIVITY	N / A	204 mS (161 - 228)
pH	6.5-8.5 pH UNITS	7.69 (7.61 - 7.83)
TOTAL DISSOLVED SOLIDS	500 ppm	113 ppm
IRON	IRON	LESS THAN 0.01 ppm
MANGANESE	.05 ppm	LESS THAN .002 ppm
SODIUM	N / A	7.5 ppm
POTASSIUM	N / A	1.31 ppm
SULFATE	250 ppm	13 ppm
SILVER	0.1 ppm	LESS THAN 0.005 ppm *
SILICA	N / A	1.4 ppm
SILICON	N / A	0.67 ppm
BROMIDE	N / A	LESS THAN 0.010 ppm
IODIDE	N / A	LESS THAN 1.00 ppm
FLUORIDE ***	2 ppm	.77 ppm (.74 - .80)
AMMONIUM ION	N / A	0.06 ppm (ND - 0.18)

\* may leach from consumer purchased carbon pre-filters.

**NOTE:** Except for bacterial testing and process control testing, all CWD test analyses are conducted by independent certified laboratories. Bacteriological testing is conducted by CWD's on-site State and NELAC Certified Laboratory. \*\*\*Starting January 8, 2011, CWD changed to adding 0.7 ppm from 1.0 ppm following the recommendation of the CDC. Fluoride is added for dental health under the Vermont Department of Health Fluoridation Program.

## ADDITIONAL INFORMATION

CWD contacts: 802-864-7454. [www.cwd-h2o.org](http://www.cwd-h2o.org)

Jim Fay – General Manager  
Dick Pratt- Asst. General Manager/Chief Engineer  
Michael G. Barsotti- Director of Water Quality & Production, [mikeb@cwd-h2o.org](mailto:mikeb@cwd-h2o.org)

USEPA Safe Drinking Water Hotline (provides information on potential health effects and how to lessen infection risk from *Cryptosporidium* and other biological contaminants)  
1-800-426-4791

Vermont 2-1-1, for health and human services information and referral.  
2-1-1

Vermont DEC Water Supply Division  
1-800-823-6500

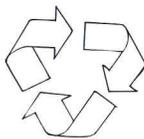
Vermont Dept of Health,  
Division of Environmental Health  
1-802-652-0357

Municipal water systems served by CWD:

VT 0005087	Town of Shelburne	985-5122
VT 0005091	City of South Burlington	864-4361
VT 0005098	Town of Williston	878-1239
VT 0005066	Village of Essex Junction	878-6944
VT 0005065	Town of Essex	878-1344
VT 0005058	Colchester Fire District #1	654-2872
VT 0005060	Colchester Fire District #3	878-4337
VT 0005077	Village of Jericho	899-2938
VT 0020333	Mallets Bay Water Co.	864-7454
VT 0005079	Town of Milton	893-6030
VT 0005102	City of Winooski	655-6422
VT 0005552	Colchester Town	864-7454

### Champlain Water District

403 Queen City Park Road  
South Burlington, VT 05403



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## AVAILABLE CWD PUBLICATIONS

### Watershed Management Program for Source Protection.

- Cryptosporidium- The Filtration Challenge, New England Water Works Association (NEWWA) Journal, December 1999.
- Applying Self assessment to Filter Optimization, American Water Works Association Opflow, February 1997.
- Evaluation of Particle Counters Using Microscopic Counts, Journal of American Water Works Association, December 1997.
- Count Matching In-Situ Particle Counts to Scanning Electron Microscopic Counts for Treatment Facility Control, AWWA, 1998 Water Quality Technology Conference.
- Why a Water Utility Should Join the National Initiative Entitled Partnership for Safe Water, NEWWA Annual Conference, September 1998 and Reseau Environnement, St. Hyacinthe, Quebec, March 2000, NEWWA Journal, June 2000. AWWA Annual Conference 2004.
- Surface Water Source Characterization to Overcome Operational Complacency and Aid Source Delineation, 1999 Water Quality Technology Conference, November 1999.
- Investigating and Controlling HAA5s Within a Complex Transmission System, 2000 Water Quality Technology Conference, October 2000.
- Exploring the Interrelationship of Water Quality Standards, Source Protection and Wastewater Treatment in Northwestern Vermont, AWWA Source Protection Conference, January 2001.
- Modeling Storage and the Inlet Reconfiguration, AWWA International Retention Time Management Symposium 2002.
- Investigating a Stand Pipe Mixing System as a Tool for Managing Retention Time and DBP Formation, 2003 Water Quality Technology Conference, November 2003.
- CWD Lead Public Information Flyer.
- Partnering to Advance Source Protection within the Storm Water Arena, 2005 AWWA Source Protection Conference, January 2005.
- Parent and Consecutive System Considerations in a Regional Municipal Water District in Northwestern Vermont, 2006 NEWWA Water Quality Symposium, May 2006.
- Secondary Disinfection, 2008 Green Mountain Water Environment Association Spring Meeting, March 2008.
- Long Term Experience with Conventional Filtration, 2008 NEWWA Water Quality Symposium, May 2008.
- The Role of Water Quality and Operational Decision Making in Implementing a Load-shed Program, 2009 NEWWA Water Quality Symposium, May 2009.
- Complying with the Upcoming Stage 2 Disinfection By-product Regulations, 2012 Green Mountain Water Environment Association Spring Meeting, May 2012
- Planning and Maintaining Compliance with the Lead and Copper Rule when Making a Disinfectant Change, 2012 NEWWA Water Quality Symposium, May 2012
- Success Stories from Phase III Self-assessments, 2013 AWWA Annual Conference, June 2013

### Municipal Public Utilities

#### “Watch Program”

We are requesting the public to voluntarily set up a public utilities infrastructure “WATCH PROGRAM” modeled after the success of existing Neighborhood Watch programs.

We are asking the public to report any suspicious activity to their local police department. Examples would include unauthorized use of fire hydrants, or trespassing in water or wastewater related treatment facility areas, such as storage tanks. This type of public surveillance will reduce the costs associated with vandalism, as well as further enhance overall security.

Any type of non-emergency questions can be referred to your local public works director within the member communities, or the Champlain Water District’s General Manager. We thank you for your help in assisting us in enhancing public safety and security. This announcement is provided by the Champlain Water District in conjunction with the following communities: South Burlington, Shelburne, Essex Town, Essex Junction, Williston, Colchester, Winooski, Milton, and the Village of Jericho.

**Please open to find Champlain Water District’s latest water quality report.**

**Employers should provide enclosed information to their employees and landlords to their tenants.**

Extra copies are available at no charge by contacting CWD or CWD served systems.