

Champlain Water District Annual Water Quality Report

Reporting Year 2024





Introduction

In 2024 Champlain Water District's Peter L. Jacob Water Treatment Facility continued to maintain the highest degree of treatment process optimization and has maintained the elite Excellence in Water Treatment status for 25 years, from 1999 to 2024. Champlain Water District (CWD) was the first water utility in the country to receive the Excellence in Water Treatment award from the Partnership for Safe Water.

CWD works very hard to ensure 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 and disinfection at the Peter L. Jacob Water Treatment Facility; and
- Ensuring corrosion control and disinfection by-product control throughout the county-wide service area.

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 83,500 customers and many of the area's major employers, such as Global Foundries and Husky.

Where Does My Water Come From?

Champlain Water District's water source is far offshore 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:

- 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

“Water links us to our neighbor in a way more profound and complex than any other.”
-John Thorson

Source Water Assessment

Many of the people who live along Shelburne Bay and the streams flowing into it do not realize that their homes, yards, and parks are within an area called the Shelburne Bay watershed. By protecting the watershed, residents help protect the quality of CWD's deep Shelburne Bay source.

The state of Vermont Water Supply Rule requires public community water systems to develop a source protection plan. This plan delineates a source protection area for our system and identifies potential and actual sources of contamination. Please contact us if

you are interested in reviewing our plan.

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 percent of *Cryptosporidium* cysts, 99.9 percent of *Giardia* cysts, and 99.99 percent of viruses. CWD surpasses these treatment requirements.

CWD completed the required *Giardia* and *Cryptosporidium* monitoring from April 2008 to December 2010 as required under U.S. EPA's rules. CWD has also conducted round two monitoring as specified by U.S. EPA. This follow-up monitoring was completed in September 2018. All inactivation is performed using free chlorine.

U.S. EPA 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. U.S. EPA's turbidity standard is for all the filters combined. CWD's turbidity goal is much stricter and is for each individual 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 two microns.

Important Health Information

Some people may be more vulnerable to contaminants in drinking water than the general population. Immunocompromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health-care providers. U.S. Environmental Protection Agency (U.S. EPA)/Centers for Disease Control and Prevention (CDC) guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the Safe Drinking Water Hotline at (800) 426-4791 or epa.gov/safewater.

Fluoridation

Fluoride is added for dental health under the Vermont Department of Health Fluoridation Program.

QUESTIONS?

For more information about this report, or for any questions relating to your drinking water, please call Travis Sheldon, Director of Water Quality Operations, at (802) 861-4896.

CWD Contact Information:

Joe Duncan – General Manager

Travis Sheldon – Director of Water Quality Operations

Phone: (802) 864-7454

Email: travis.sheldon@champlainwater.org

Website: champlainwater.org

Address: 403 Queen City Park Road, South Burlington, VT 05403

Other Resources:

U.S. EPA Safe Drinking Water Hotline: (800) 426-4791

Provides information on potential health effects and how to lessen infection risk from Cryptosporidium and other biological contaminants.

Vermont Department of Environmental Conservation, Drinking Water & Groundwater Protection Division: (802) 828-1535

Vermont Department of Health, Division of Environmental Health: (802) 652-0357

Municipal water systems served by CWD:

PWSID	WATER SYSTEM NAME	PHONE
VT0005087	Town of Shelburne	(802) 985-5122
VT0005091	City of South Burlington	(802) 864-4361
VT0005098	Town of Williston	(802) 878-1239
VT0005065	Town of Essex	(802) 878-1344
VT0005066	City of Essex Junction	(802) 878-6944
VT0005058	Colchester Fire District #1	(802) 864-7454
VT0005060	Colchester Fire District #3	(802) 864-7454
VT0005077	Village of Jericho	(802) 899-2938
VT0020333	Mallets Bay Water Company	(802) 864-7454
VT0005079	Town of Milton	(802) 893-6030
VT0005102	City of Winooski	(802) 655-6419
VT0005552	Colchester Town	(802) 864-7454

Please share this report with all the other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses).

Substances That Could Be in Water

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals and, in some cases, radioactive material and can pick up substances resulting from the presence of animals or from human activity. CWD utilizes a multi-barrier approach to water treatment to protect against contaminants that may be present in source water which may include:

Microbial Contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.

Inorganic Contaminants, such as salts and metals, which can occur naturally in the soil or groundwater or may result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.

Pesticides and Herbicides, which may come from a variety of sources such as agriculture, urban stormwater runoff, and residential uses.

Organic Chemical Contaminants, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production and can also come from gas stations, urban stormwater runoff, and septic systems.

Radioactive Contaminants, which can occur naturally or as the result of oil and gas production and mining activities.

To ensure that tap water is safe to drink, the U.S. EPA prescribes regulations that limit the amount of certain contaminants in water provided by public water systems. Food and Drug Administration (FDA) regulations establish limits for contaminants in bottled water, which must provide the same protection for public health.

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily mean that water poses a health risk. More information about contaminants and potential health effects can be obtained by contacting the U.S. EPA by calling the Safe Drinking Water Hotline at (800) 426-4791 or visiting epa.gov/safewater.



Test Results

Our water is monitored for many substances on a very strict sampling schedule. The water we deliver must meet specific health standards. Our goal at CWD is to meet and exceed these standards. Here, we show those substances that were detected in our water (a complete list of all our analytical results, including the nondetects, is available upon request). Remember that detecting a substance does not mean the water is unsafe to drink.

The state recommends monitoring for certain substances less than once per year because the concentrations of these substances do not change frequently. In these cases, the most recent sample data is included, along with the year in which the sample was taken.

INORGANIC SUBSTANCES

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	MCL	MCLG	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
Fluoride (ppm)	2024	4	4	0.7	0.6–0.8	No	Erosion of natural deposits; Water additive that promotes strong teeth; Discharge from fertilizer and aluminum factories
Manganese (ppb)	2024	50	NA	0.009	0.003-0.012	No	Leaching from natural deposits
Nitrate (ppm)	2024	10	10	0.24	0.24–0.24	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits

RADIOACTIVE SUBSTANCES¹

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	MCL	MCLG	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
Combined Radium (pCi/L)	2015	5	0	1.1	NA	No	Erosion of Natural Deposits
Gross Alpha (pCi/L)	2011	15	0	0.73	NA	No	Erosion of Natural Deposits
Radium-226 (pCi/L)	2015	5	0	0.4	NA	No	Erosion of Natural Deposits
Radium-228 (pCi/L)	2015	5	0	0.65	NA	No	Erosion of Natural Deposits

DISINFECTION BYPRODUCTS

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	MCL	MCLG	HIGHEST LRAA	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
Haloacetic Acids [HAAs] (ppb)	2024	60	NA	39	26.5-45.8	No	By-product of drinking water disinfection
Total Trihalomethanes [TTHMs] (ppb)	2024	80	NA	44.1	28.3-49.2	No	By-product of drinking water disinfection

LEAD AND COPPER²

SUBSTANCE (UNIT OF MEASURE)	COLLECTION DATE	AL ³	MCLG	90TH PERCENTILE	RANGE LOW-HIGH	SITES OVER AL/TOTAL SITES TESTED	VIOLATION	TYPICAL SOURCE
Lead (ppb)	07/26/2022 - 09/09/2022	15	0	0	0 - 1.5	0/56	No	Corrosion of household plumbing systems; Erosion of natural deposits
Copper (ppm)	07/26/2022 - 09/09/2022	1.3	1.3	0.052	0 - 0.082	0/56	No	Corrosion of household plumbing systems; Erosion of natural deposits

SECONDARY SUBSTANCES

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	SMCL	MCLG	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
Aluminum (ppb)	2024	50-200	NA	0.053	0.041-0.088	No	Erosion of natural deposits; Residual from some surface water treatment processes
Ammonium Ion (units)	2024	NA	NA	0.06	0.01-0.10	No	Naturally occurring
Conductivity (µS/cm)	2024	NA	NA	192	177-216	No	Substances that form ions when in water
pH (units)	2024	6.5-8.5	NA	7.64	7.50-7.74	No	Naturally occurring
Total Hardness (ppm as CaCO ₃)	2024	NA	NA	65	NA	No	Naturally occurring
Zinc (ppm)	2024	5	NA	0.12	ND–0.12	No	Runoff/leaching from natural deposits; Industrial wastes

¹ CWD monitors for naturally occurring radionuclides according to USEPA requirements. This table shows those monitored and the background levels detected. Radionuclides at background levels due to erosion of natural deposits.

² Complete lead tap sampling data (i.e. each individual sample result) are available for review. Please contact us if you would like to receive this data.

³ The lead and copper AL (Action Level) exceedance is based on the 90th percentile concentration, not the highest detected result.

UNREGULATED PFAS SUBSTANCES

COLLECTION DATE	PFHPA	PFNA	PFHXS	PFOA	PFOS	SUM OF 5 REGULATED PFAS COMPOUNDS
10/03/2024	ND	ND	ND	ND	ND	ND
02/20/2024	ND	ND	ND	ND	ND	ND
10/04/2023	ND	ND	ND	2.6	ND	2.6
10/28/2020	ND	ND	ND	ND	ND	ND

*Additional PFAS, not regulated by the Vermont Water Supply Rule, may also have been detected in the past five years. Please contact us if you would like more information on other unregulated PFAS that may be in your drinking water.

Definitions

MCL (Maximum Contaminant Level): The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.

MCLG (Maximum Contaminant Level Goal): The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.

MRDL (Maximum Residual Disinfectant Level): The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.

MRDLG (Maximum Residual Disinfectant Level Goal): The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.

NA: Not applicable.

ND (Not detected): Indicates that the substance was not found by laboratory analysis.

ppm (parts per million): One part substance per million parts water (or milligrams per liter).

ppt (parts per trillion): One part substance per trillion parts water (or nanograms per liter).

SMCL (Secondary Maximum Contaminant Level): These standards are developed to protect aesthetic qualities of drinking water and are not health based.

Lead in Home Plumbing

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 and removing lead pipes but cannot control the variety of materials used in plumbing components in your home. You share the responsibility for protecting yourself and your family from the lead in your home plumbing. You can take responsibility by identifying and removing lead materials within your home plumbing and taking steps to reduce your family's risk. Before drinking tap water, flush your pipes for several minutes by running your tap, taking a shower, or doing laundry or a load of dishes. You can also use a filter certified by an American National Standards Institute-accredited certifier to reduce lead in drinking water. If you are concerned about lead in your water and wish to have your water tested, contact the Champlain Water District. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available at epa.gov/safewater/lead.

In 2022 (monitoring period 2020 to 2022), none of the 56 first-draw sample sites exceeded the U.S. EPA action level for lead. Additionally, none of the sample sites exceeded the action level for copper.

As required by the Lead and Copper Rule Revision, our served systems have prepared a service line inventory. The purpose of the inventory was to determine if any of our service lines contain lead, galvanized pipe requiring removal, or unknown materials. Please contact your local municipal water system if you would like access to this inventory.

PUBLIC NOTICE

IMPORTANT INFORMATION ABOUT YOUR DRINKING WATER

Availability of Monitoring Data for samples collected under the fifth Unregulated Contaminants Monitoring Rule (UCMR 5)

Our Water System has sampled for a series of unregulated contaminants. Unregulated contaminants are those that don't yet have a drinking water standard set by EPA. There may be Vermont-specific standards for some of these contaminants. The purpose of monitoring for these contaminants is to help the EPA decide whether the contaminants should have a standard. As our customers, you have a right to know that this data is available. We had no reported detections for samples collected under UCMR 5. If you are interested in examining the results, please contact Travis Sheldon at 802-861-4896 or travis.sheldon@champlainwater.org

State Water System ID#: VT0005091, VT0005102, VT0005087

