

Annual Drinking Water Quality Report for 2022
Village of Caledonia
3095 Main Street Caledonia, NY 14423
Public Water Supply ID# NY2501013
Caledonia District 1 ID# NY2530004

INTRODUCTION

To comply with State regulations, the Village of Caledonia, will be annually issuing a report describing the quality of your drinking water. The purpose of this report is to raise your understanding of drinking water and awareness of the need to protect our drinking water sources. Last year, your tap water met all State drinking water health standards. We are proud to report that our system did not violate a maximum contaminant level or any other water quality standard throughout 2022. This report provides an overview of last year's water quality. Included are details about where your water comes from, what it contains, and how it compares to State standards.

If you have any questions about this report or concerning your drinking water, please contact **Christopher Buckley, Water Superintendent, (585) 538-2253** or **Livingston County Department of Health, Center for Environmental Health, (585) 243-7280**. For information regarding the Caledonia Town District 1, please contact the Livingston County Water and Sewer Authority (LCWSA) at 346-3523. We want you to be informed about your drinking water. If you want to learn more, please attend any of our regularly scheduled village board meetings. The meetings are held the 1st Tuesday of every month at the Village of Caledonia Village Office located at 3095 Main Street Caledonia, NY. The meetings start at 6:30pm.

WHERE DOES OUR WATER COME FROM?

In general, 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 activities. Contaminants that may be present in source water include: microbial contaminants; inorganic contaminants; pesticides and herbicides; organic chemical contaminants; and radioactive contaminants. In order to ensure that tap water is safe to drink, the State and the EPA prescribe regulations which limit the number of certain contaminants in water provided by public water systems. The State Health Department and the FDA's regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

Our water system serves 2,201 village residents through 905 residential and commercial service connections. Our system also serves the Town of Caledonia District #1 (PWS ID# 2530004) and the Caledonia Manufactured Home Park. The Town of Caledonia District #1 serves 93 customers through 30 service connections south of the Village along Middle Road, including Mar-Shell Lane and Sylvan Court, and a short section of Caledonia-Avon Road (Route 5) from the Village line east toward Avon. The Village of Caledonia purchases water from the Monroe County Water Authority (MCWA) through two (2) metered connections. The MCWA draws its water from Lake Ontario and uses a treatment process that consists of: coagulation, filtration, and disinfection. Coagulants are added to clump together suspended particles, enhancing their removal during filtration. Chlorine is used to disinfect the water and to provide the residual disinfectant that ensures the sanitary quality of the water as it travels from each plant to your home. Chlorine is added for disinfection and fluoride to help prevent tooth decay. In 2022 we purchased a total of 80,791,000 gallons of water. That is a monthly average of 6,733,000 gallons and a daily average of 221,000 gallons. The amount of metered water was 60,593,000 gallons. This leaves an unaccounted-for total of 20,198,000 gallons, approximately 25% of the water purchased. The unaccounted-for water consists of flushing, operation & maintenance, leaks, firefighting, and malfunctioning meters. In 2022, water customers were charged a \$35.00 base rate and \$6.60 per 1,000-gallon usage rate. The annual average water charge per user was \$562.00.

The New York State Department of Health (NYSDOH) has completed a source water assessment for the Great Lakes, based on available information. Possible and actual threats to this drinking water source were evaluated. The state source water assessment includes a susceptibility rating based on the risk posed by each potential source of contamination. The susceptibility rating is an estimate of the potential for contamination of the source water, it does not mean that the water delivered to consumers is, or will become contaminated. See section “Are there contaminants in our drinking water?” for a list of the contaminants that have been detected. The source water assessments provide resource managers with additional information for protecting source waters into the future.

In general, the Great Lakes source used by MCWA is not very susceptible because of the size and quality of Lake Ontario. Because storm and waste water contamination are potential threats to any source water, the water provided to our customers undergoes rigorous treatment and testing prior to its delivery.

Monroe County Department of Health and the NYSDOH will use this information to assist in the direction of future source water protection activities. These may include additional water quality monitoring, resource management, planning, and education programs.

ARE THERE CONTAMINANTS IN OUR DRINKING WATER?

As the State regulations require, MCWA and the Village of Caledonia routinely test your drinking water for numerous contaminants. These contaminants include: Total Trihalomethanes, Halo-acetic Acids, Lead and Copper and Coliform Bacteria, turbidity, inorganic compounds, nitrate, volatile organic compounds, radionuclides and synthetic organic compounds. The table presented below depicts which compounds were detected in your drinking water. The Village of Caledonia’s disinfection byproducts (Total Trihalomethanes, and Halo-acetic Acids) sample site is 3350 Brown Road. Caledonia District #1 disinfection byproduct sample site is located on Sylvan Court. The State allows us to test for some contaminants less than once per year because the concentrations of these contaminants do not change frequently. Some of our data, though representative, are more than one year old.

It should be noted that all drinking water, including bottled drinking water, might be reasonably expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the EPA’s Safe Drinking Water Hotline (800-426-4791) or the Livingston County Health Department at (585) 243-7280.

Water Quality Table

Detected Substances							2022 Results except as noted
Supply (Source)				Village of Caledonia Distribution Sampling	Source Water MCWA L. Ontario		
Substances	Units	MCLG	MCL	Range of detected values		Likely Source	Meets EPA Standards
Barium	mg/L	2	2	NA	0.019-0.023	Erosion of natural deposits	Yes
Chloride	mg/L	NA	250	NA	25-29	Naturally occurring	Yes
Fluoride	mg/L	NA	2.2	NA	0.42-1.15	Natural and additive - promotes strong teeth	Yes
Nitrate	mg/L	10	10	NA	ND-0.4	Erosion of natural deposits	Yes
Perfluorooctanesulfonic Acid (PFOS)	ng/L	NA	10	NA	ND-2.1	Environmental releases from textile sources	Yes
Perfluorobutanoic Acid (PFBA)	ng/L	NA	10	NA	ND-2.8	Environmental releases from textile sources	Yes
Sodium	mg/L	NA	NA	NA	15-17	Naturally occurring	Yes
Sulfate	mg/L	NA	250	NA	25-27	Naturally occurring	Yes
Treatment Requirements - 95% of samples each month must be less than 0.3 NTU (For filtered surface water such as MCWA). Range and lowest monthly percentage are listed. Turbidity is a measure of water clarity and is used to gauge filtration performance.							
Turbidity - Entry Point	NTUs	NA	TT	0.06-0.25 ¹ 100%	0.02-0.11 ¹ 100%	Soil runoff	Yes
Microbial - No more than 5% of monthly samples can be positive. The highest monthly % positive is listed.							
Coliform	% Positive	0	5%	0% positive	1.9% positive	Naturally occurring	Yes
Source Water Microbial Pathogens – The highest positive month and number of samples is listed. In our treatment process, Cryptosporidium is removed/inactivated through a combination of filtration and disinfection or by disinfection alone							
Cryptosporidium	Cysts/L	0	TT	NR	0.05 2 samples	Naturally occurring	Yes
Disinfectant and Disinfectant By-products (DBPs) - Average and Range are listed. * Chlorine has a MDRL (Maximum Disinfectant Residual Level) and MDRLG (MDRL Goal) rather than an MCL and MCLG.							
Chlorine Residual Entry Point	mg/L	4	4	0.90 (0.51-1.34)	1.14 (0.71-1.44) 0.83 (0.35-1.26)	Additive for control of microbes	Yes
Stage 2 DBPs Total THMs	ug/L	NA	80	58.25 ² (40-73)	55.8 (13-73)	Byproduct of water chlorination	Yes
Stage 2 DBPs Haloacetic Acids	ug/L	NA	60	23.00 ² (6-38)	18.8 (ND-30)	Byproduct of water chlorination	Yes
Alkalinity	mg/l	NA	NA	NA	(87-89)	Naturally present in the environment	Yes
Total Organic Carbon	mg/L	TT	NA	NA	2.2-2.4	Naturally present in the environment	Yes
Lead and Copper - 90% of samples must be less than the Action Level (AL). The 90th Percentile and the number of samples exceeding the AL are listed. MCWA completed Lead and Copper sampling in 2021. Village of Caledonia completed Lead and Copper sampling in 2020.							
Copper (Customer Tap Samples) Sept. 2020	mg/L	1.3	AL=1.3	0.14 ³ (None)	0.130 ² (None)	Corrosion of household plumbing	Yes
Lead (Customer Tap Samples) Sept. 2020	ug/l	0	AL=15	2.4 ³ (None)	3.2 ² (Two)	Corrosion of household plumbing	Yes
UCMR4-(Fourth Unregulated Contaminant Monitoring Rule) In 2018, the Monroe County Water Authority was required to collect and analyze water samples for unregulated contaminants. Those detected are listed below. For more information, contact the Monroe County Water Authority (MCWA) at (585)621-2001.							
Total HAA5	ug/L	60	NA	NA	(0.74-31)	Byproduct of water chlorination	NA

Substances	units	MCLG	MCL	Village of Caledonia Result	Source Water MCWA Lake Ontario	Likely Source	Meet EPA Standards
Total HAA9	ug/L	NA	NA	NA	(7.4-42)	Byproduct of water chlorination	NA
Bromochloroacetic acid	ug/L	NA	NA	NA	(ND-4.4)	Byproduct of water chlorination	NA
Bromodichloroacetic acid	ug/L	NA	NA	NA	(ND-5.9)	Byproduct of water chlorination	NA
Chlorodibromoacetic acid	ug/L	NA	NA	NA	(ND-1.6)	Byproduct of water chlorination	NA
Dibromoacetic acid	ug/L	NA	NA	NA	(ND-1.4)	Byproduct of water chlorination	NA
Dichloroacetic acid	ug/L	NA	NA	NA	(.74-15)	Byproduct of water chlorination	NA
Trichloroacetic acid	ug/L	NA	NA	NA	(ND-15)	Byproduct of water chlorination	NA
Total HAA6 Br	ug/L	NA	NA	NA	(ND-12)	Byproduct of water chlorination	NA
Chlorine Residual Measured in Distribution							
Chlorine Residual	mg/L	N/A	MRDL=4.0	(0.10-1.01)	(ND-1.85)	Water Additive used to control microbes	Yes
Town of Caledonia Water District #1 Results							
Stage 2 Disinfection Byproducts							
Stage 2 DBPs Total THMs	ug/L	NA	80	60.25 ² (37-90)	55.8 (13-73)	Byproduct of water chlorination	Yes
Stage 2 DBPs HAA5	ug/L	NA	60	17.25 ² (<2-24)	18.8 (ND-30)	Byproduct of water chlorination	Yes
The LCWSA samples for bacteriological contamination each month in District #1. In 2022 all samples were negative for Total Coliform and E. Coli.							

1 – Turbidity is a measure of the cloudiness of water. It is tested because it is a good indicator of the effectiveness of the filtration system. State regulations require that turbidity must not exceed 1 NTU and that 95% of the turbidity samples collected measure below 0.3 NTU.

2 – This level represents the highest locational running annual average calculated from data collected every 90 days.

3 – **90th Percentile Value:** The values reported for lead and copper represent the 90th percentile. A percentile is a value on a scale of 100 that indicates the percent of a distribution that is equal to or greater than 90% of the lead and copper values detected in your water system. The action level for lead and copper was not exceeded at any of the sample sites.

Definitions:

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

Maximum Contaminant Level Goal (MCLG): 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.

Maximum Residual Disinfectant Level (MRDL): 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.

Maximum Residual Disinfectant Level Goal (MRDLG): 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 contamination.

Action Level (AL): The concentration of a contaminant, which if exceeded, triggers treatment or other requirements, which a water system must follow.

Nephelometric Turbidity Unit (NTU): A measure of the clarity of water. Turbidity in excess of 5 NTU is just noticeable to the average person.

Treatment Technique (TT): A required process intended to reduce the level of a contaminant in drinking water.

Non-Detects (ND): Laboratory analysis indicates that the constituent is not present.

Not Applicable: (NA)

Not Required/Not Reported: (NT)

Milligrams per liter (mg/l): Corresponds to one part of liquid in one million parts of liquid (parts per million - ppm).

Micrograms per liter (ug/l): Corresponds to one part of liquid in one billion parts of liquid (parts per billion - ppb).

MCWA: Monroe County Water Authority.

Cyst/L: Cysts per liter.

Haloacetic acids (five) (HAA5) means the sum of the concentrations in milligrams per liter of five specific haloacetic acid compounds.

Total Trihalomethane (TTHM) means the sum of the concentration of trichloromethane (chloroform), dibromochloromethane, bromodichloromethane and tribromomethane (bromoform)

For more information on The Village of Caledonia's or MCWA's monitoring program call **Christopher Buckley, Water Superintendent, (585) 538-2253 or Livingston County Environmental Health Department, (585) 243-7280**. The full report for Monroe County Water Authority can be found at:

<https://www.mcwa.com/mywater/waterqualityreports.aspx>

WHAT DOES THIS INFORMATION MEAN?

As you can see by the table, our system had no violations. We have learned through our testing that some contaminants have been detected; however, these contaminants were detected below the level allowed by the State.

INFORMATION ON FLUORIDE

The MCWA is one of the many New York water utilities providing drinking water with a controlled, low level of fluoride for consumer dental health protection. According to the U.S. Centers for Disease Control, fluoride is very effective in preventing cavities when present in drinking water at an optimal level of 0.7 mg/L. To ensure optimal dental protection, the State Department of Health requires that we monitor fluoride levels on a daily basis. In 2022 the fluoride levels in your water were within 0.2 mg/L of the CDC's recommended optimal level 97.6% of the time. The highest monitoring result was 1.15 mg/L, below the 2.2 mg/L MCL for fluoride.

CRYPTOSPORIDIUM

Cryptosporidium is a microbial pathogen present in varying concentrations in many surface waters and groundwater under direct influence of surface water. Cryptosporidium is removed/inactivated through a combination of filtration and disinfection or by disinfection treatment techniques.

In 2022, the MCWA analyzed water samples for cryptosporidium taken from Lake Ontario at our Shoremont and Webster WTP's. The samples were taken quarterly throughout the year. Two samples tested positive for cryptosporidium in February and November. Cryptosporidium is removed/inactivated in the treatment process through a combination of filtration and disinfection.

The MCWA encourages individuals with weakened immune systems to consult their physicians regarding appropriate precautions to avoid infection. Ingestion of cryptosporidium may cause cryptosporidiosis, an intestinal illness, and may spread through means other than drinking water. Person-to-person transmission may also occur in day care centers or other settings where handwashing practices are poor. For more information on giardiasis, please contact your local county health department.

INFORMATION ON LEAD IN DRINKING WATER

There is no lead in the water we deliver to your home. It is possible for water to pick up lead from home plumbing solder or fixtures if it sits in the pipes for a long time but our testing indicates this is not a problem for our customers. However, due to problems some water suppliers have had with drinking water lead levels, the USEPA is requiring all water suppliers to include the following educational text in their annual water quality reports:

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. MCWA is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. 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 water for drinking or cooking. If you are concerned about lead in your 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 or at <http://www.epa.gov/safewater/lead>.

IS OUR WATER SYSTEM MEETING OTHER RULES THAT GOVERN OPERATIONS?

We are required to monitor your drinking water for specific contaminants on a regular basis. Results of regular monitoring are an indicator of whether or not your drinking water meets health standards. During 2022 our water system was in compliance with all rules and regulations that govern our operation.

DO I NEED TO TAKE SPECIAL PRECAUTIONS?

Although our drinking water met or exceeded state and federal regulations, some people may be more vulnerable to disease causing microorganisms or pathogens in drinking water than the general population. Immuno-compromised 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 from their health care provider about their drinking water. EPA/CDC guidelines on appropriate means to lessen the risk of infection by Cryptosporidium, Giardia and other microbial pathogens are available from the Safe Drinking Water Hotline (800-426-4791).

WHY SAVE WATER AND HOW TO AVOID WASTING IT?

Although our system has an adequate amount of water to meet present and future demands, there are a number of reasons why it is important to conserve water:

- ♦ Saving water saves energy and some of the costs associated with both of these necessities of life;
- ♦ Saving water reduces the cost of energy required to pump water and the need to construct costly new wells, pumping systems and water towers; and
- ♦ Saving water lessens the strain on the water system during a dry spell or drought, helping to avoid severe water use restrictions so that essential firefighting needs are met.

You can play a role in conserving water by becoming conscious of the amount of water your household is using, and by looking for ways to use less whenever you can. It is not hard to conserve water. Conservation tips include:

- ♦ Automatic dishwashers use 15 gallons for every cycle, regardless of how many dishes are loaded. So get a run for your money and load it to capacity.
- ♦ Turn off the tap when brushing your teeth.
- ♦ Check every faucet in your home for leaks. Just a slow drip can waste 15 to 20 gallons a day. Fix it, and you can save almost 6,000 gallons per year.
- ♦ Watering lawns less frequently and preferably in early morning or late evening.
- ♦ Use swimming pool covers to minimize evaporation.

- ♦ Check your toilets for leaks by putting a few drops of food coloring in the tank, watch for a few minutes to see if the color shows up in the bowl. It is not uncommon to lose up to 100 gallons a day from one of these otherwise invisible toilet leaks. Fix it and you save more than 30,000 gallons a year.

SYSTEM IMPROVEMENTS AND UPGRADES

In 2022 the Village of Caledonia Water Department continued distribution maintenance including: leak detection, valve and hydrant exercising, hydrant flushing, and curb stop repair. The Water Department continued to install AMR style water meters. This technology will allow us to better monitor water consumption and help with leak detection and customer inquiries. We also replaced the Church Street water main and service connections and began collecting data for our new GIS mapping system.

CLOSING

Thank you for allowing us to continue to provide your family with quality drinking water this year. In order to maintain a safe and dependable water supply we sometimes need to make improvements that will benefit all of our customers. The costs of these improvements may be reflected in the rate structure. Rate adjustments may be necessary in order to address these improvements. We ask that all our customers help us protect our water sources, which are the heart of our community. Please call our office if you have questions. **This report was prepared by Christopher Buckley, (State of New York Department of Health Public Water System Operator Certification # NY0036450) and Livingston County Department of Health, Center for Environmental Health utilizing the testing results provided by New York State Department of Health and Life Science Laboratories.**