

ANNUAL WATER QUALITY REPORT

Reporting Year 2022



Presented By
**Village of
Chagrin Falls**



Meeting the Challenge

We are once again proud to present our annual water quality report covering all testing performed between January 1 and December 31, 2022. Over the years, we have dedicated ourselves to producing drinking water that meets all state and federal standards. We continually strive to adopt new methods for delivering the best-quality drinking water to you. As new challenges to drinking water safety emerge, we remain vigilant in meeting the goals of source water protection, water conservation, and community education while continuing to serve the needs of all our water users. Please remember that we are always available should you ever have any questions or concerns about your water.

Where Does My Water Come From?

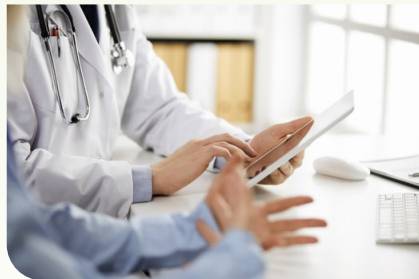
The Village of Chagrin Falls Water Company customers are fortunate because we enjoy an abundant water supply from two sources. We receive water from the City of Cleveland, which is surface water taken from Lake Erie, and we operate the Franklin Street Well Field, a groundwater source. Water from these two sources is blended at the Solon Road Booster Station. Chagrin Falls also has a second connection to Cleveland on Falls Road at the Moreland Hills line.

Community Participation

You are invited to participate in our public forum and voice your concerns about your drinking water. Utilities Committee meetings are held on an as-needed basis at Village Hall, 21 West Washington Street. Dates and times for these meetings are posted at Village Hall.

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 may be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. The U.S. EPA/CDC (Centers for Disease Control and Prevention) 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 <http://water.epa.gov/drink/hotline>.



“Thousands have lived without love, not one without water.”
—W.H. Auden

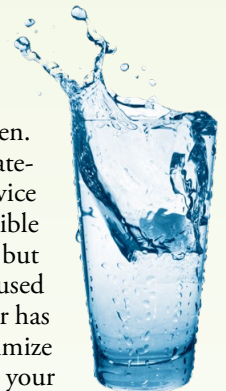
Source Water Assessment

The City of Cleveland uses a multiple-barrier process to treat Lake Erie water to meet drinking water quality standards. This is done because no single treatment process can address all possible contaminants. For more information, contact the Cleveland risk manager at (216) 664-2444, ext. 5634, and request the Drinking Water Assessment Report.

The Ohio EPA has determined that the Franklin Street Well Field's susceptibility to contamination is low because the aquifer is covered by a 183-foot-thick layer of clay; test results do not indicate that contamination has impacted the aquifer. For more information about our Drinking Water Source Assessment, or to request a copy, contact Glenn Elliott at (440) 247-5051.

Lead in Home Plumbing

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. We are responsible for providing high-quality drinking water, but we 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 two 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. A list of laboratories certified in the State of Ohio to test for lead may be found at <http://www.epa.ohio.gov/ddagw> or by calling (614) 644-2752. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline at (800) 426-4791 or at www.epa.gov/safewater/lead.



QUESTIONS? For more information about this report, or for any questions relating to your drinking water, please call Glenn Elliott, Water Department Superintendent, at (440) 247-5051.

Substances That Could Be in Water

To ensure that tap water is safe to drink, the U.S. EPA prescribes regulations limiting the amount of certain contaminants in water provided by public water systems. U.S. Food and Drug Administration 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 these contaminants does not necessarily indicate that the water poses a health risk.

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, in some cases radioactive material, and substances resulting from the presence of animals or from human activity. Substances that may be present in source water include:

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

Inorganic Contaminants, such as salts and metals, which can be naturally occurring 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 may also come from gas stations, urban stormwater runoff, and septic systems;

Radioactive Contaminants, which can be naturally occurring or may be the result of oil and gas production and mining activities.

For more information about contaminants and potential health effects, call the U.S. EPA's Safe Drinking Water Hotline at (800) 426-4791.

Benefits of Chlorination

Disinfection, a chemical process used to control disease-causing microorganisms by killing or inactivating them, is unquestionably the most important step in drinking water treatment. By far, the most common method of disinfection in North America is chlorination.

Before communities began routinely treating drinking water with chlorine (starting with Chicago and Jersey City in 1908), cholera, typhoid fever, dysentery, and hepatitis A killed thousands of U.S. residents annually. Drinking water chlorination and filtration have helped to virtually eliminate these diseases in the U.S. Significant strides in public health are directly linked to the adoption of drinking water chlorination. In fact, the filtration of drinking water and the use of chlorine are probably the most significant public health advancements in human history.

How chlorination works:

Potent Germicide Reduction of many disease-causing microorganisms in drinking water to almost immeasurable levels.

Taste and Odor Reduction of many disagreeable tastes and odors from foul-smelling algae secretions, sulfides, and decaying vegetation.

Biological Growth Elimination of slime bacteria, molds, and algae that commonly grow in water supply reservoirs, on the walls of water mains, and in storage tanks.

Chemical Removal of hydrogen sulfide (which has a rotten egg odor), ammonia, and other nitrogenous compounds that have unpleasant tastes and hinder disinfection. It also helps to remove iron and manganese from raw water.

Water Main Flushing

Distribution mains (pipes) convey water to homes, businesses, and hydrants in your neighborhood. The water entering distribution mains is of very high quality; however, water quality can deteriorate in areas of the distribution mains over time. Water main flushing is the process of cleaning the interior of water distribution mains by sending a rapid flow of water through the mains.

Flushing maintains water quality in several ways. For example, flushing removes sediments like iron and manganese. Although iron and manganese do not pose health concerns, they can affect the taste, clarity, and color of the water. Additionally, sediments can shield microorganisms from the disinfecting power of chlorine, contributing to the growth of microorganisms within distribution mains. Flushing helps remove stale water and ensures the presence of fresh water with sufficient dissolved oxygen and disinfectant levels and an acceptable taste and smell.

During flushing operations in your neighborhood, some short-term deterioration of water quality, though uncommon, is possible. You should avoid tap water for household uses at that time. If you do use the tap, allow your cold water to run for a few minutes at full velocity before use, and avoid using hot water to prevent sediment accumulation in your hot water tank. Please contact us if you have any questions or if you would like more information on our water main flushing schedule.



Test Results

Our water is monitored for many different kinds of substances on a very strict sampling schedule, and the water we deliver must meet specific health standards. Here, we only show those substances that were detected in our water (a complete list of all our analytical results is available upon request). Remember that detecting a substance does not mean the water is unsafe to drink; our goal is to keep all detects below their respective maximum allowed levels.

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 are included, along with the year in which the sample was taken.

Note that we have a current, unconditioned license to operate our water system.

REGULATED SUBSTANCES											
				Village of Chagrin Falls		Cleveland Water					
SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	MCL [MRDL]	MCLG [MRDLG]	AMOUNT DETECTED	RANGE LOW-HIGH	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE		
Barium (ppm)	2020	2	2	0.40	NA	NA	NA	No	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits		
Chlorine (ppm)	2022	[4]	[4]	1.22	0.85–1.76	1.21	1.03–1.32	No	Water additive used to control microbes		
Cyanide (ppb)	2022	200	200	NA	NA	0.012 ¹	0.012–0.012 ¹	No	Discharge from steel/metal factories; Discharge from plastic and fertilizer factories		
Fluoride (ppm)	2020	4	4	0.24	NA	1.01 ²	0.80–1.26 ²	No	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories		
Haloacetic Acids [HAAs]–Stage 2 (ppb)	2022	60	NA	7.30	NA	19.6	6.6–20.30	No	By-product of drinking water disinfection		
Nitrate (ppm)	2022	10	10	<0.10	NA	0.86	ND–0.86	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits		
Total Organic Carbon [TOC]	2022	TT ³	NA	NA	NA	1.52	1.27–1.61	No	Naturally present in the environment		
TTHMs [total trihalomethanes]–Stage 2 (ppb)	2022	80	NA	24.07	NA	35.88	10.40–47.70	No	By-product of drinking water disinfection		
Turbidity ⁴ (NTU)	2022	TT	NA	NA	NA	0.25	0.08–0.25	No	Soil runoff		
Turbidity (lowest monthly percent of samples meeting limit)	2022	TT = 95% of samples meet the limit	NA	NA	NA	100	NA	No	Soil runoff		
Tap water samples were collected for lead and copper analyses from sample sites throughout the community											
				Village of Chagrin Falls			Cleveland Water				
SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AL	MCLG	AMOUNT DETECTED (90TH %ILE)	RANGE LOW-HIGH	SITES ABOVE AL/ TOTAL SITES	AMOUNT DETECTED (90TH %ILE)	RANGE LOW-HIGH	SITES ABOVE AL/ TOTAL SITES	VIOLATION	TYPICAL SOURCE
Copper (ppm)	2021	1.3	1.3	0.209	NA	0/28	0.1	NA	0/58	No	Corrosion of household plumbing systems; Erosion of natural deposits
Lead (ppb)	2021	15	0	ND	NA	0/28	2.28	NA	0/58	No	Lead service lines; Corrosion of household plumbing systems, including fittings and fixtures; Erosion of natural deposits

UNREGULATED SUBSTANCES

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	Village of Chagrin Falls		Cleveland Water		TYPICAL SOURCE
		AMOUNT DETECTED	RANGE LOW-HIGH	AMOUNT DETECTED	RANGE LOW-HIGH	
Bromodichloromethane (ppb)	2022	14.92	6.74–23.1	4.5	3.5–5.8	By-product of drinking water disinfection
Bromoform (ppb)	2022	2.52	<0.5–2.52	NA	NA	NA
Chloroform (ppb)	2022	20.2	10.3–30.0	4	2.7–5.8	By-product of drinking water disinfection
Dibromochloromethane (ppb)	2022	10.1	3.80–16.4	1.93	1.7–2.1	By-product of drinking water disinfection

OTHER UNREGULATED SUBSTANCES

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	Village of Chagrin Falls		Cleveland Water		TYPICAL SOURCE
		AMOUNT DETECTED	RANGE LOW-HIGH	AMOUNT DETECTED	RANGE LOW-HIGH	
Dibromoacetic Acid (ppb)	2022	2.05	2.04–2.06	NA	NA	By-product of drinking water disinfection
Dichloroacetic Acid (ppb)	2022	10.9	10.7–11.2	NA	NA	By-product of drinking water disinfection
Monobromoacetic Acid (ppb)	2022	2.39	2.32–2.45	NA	NA	By-product of drinking water disinfection
Trichloroacetic Acid (ppb)	2022	6.22	6.17–6.26	NA	NA	By-product of drinking water disinfection

¹ The reported value is only slightly above the laboratory detection limit (0.010 mg/L). The MCL is 0.2 mg/L, or 17 times higher than the sample result. We have not had a cyanide detection in many years, and our other three plants had no detection, as usual. While the result is legitimate, we believe it to be an anomaly with no apparent cause. Future monitoring will determine if this result requires further investigation by Cleveland Water.

² Sampled in 2022.

³ The value reported under Amount Detected for TOC is the lowest ratio of percentage of TOC actually removed to percentage of TOC required to be removed. A value of greater than 1 indicates that the water system is in compliance with TOC removal requirements. A value of less than 1 indicates a violation of the TOC removal requirements.

⁴ Turbidity is a measure of the cloudiness of the water. It is monitored because it is a good indicator of the effectiveness of the filtration system.

Definitions

90th %ile: The levels reported for lead and copper represent the 90th percentile of the total number of sites tested. The 90th percentile is equal to or greater than 90% of our lead and copper detections.

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

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.

NTU (Nephelometric Turbidity Units): Measurement of the clarity, or turbidity, of water. Turbidity in excess of 5 NTU is just noticeable to the average person.

ppb (parts per billion): One part substance per billion parts water (or micrograms per liter).

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

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