

ANNUAL WATER QUALITY REPORT

Reporting Year 2022



Presented By
**Town of Newburgh
Consolidated Water District**





Our Mission Continues

We are once again pleased 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.

Water Conservation Tips

You can play a role in conserving water and save yourself money in the process by becoming conscious of the amount of water your household is using and looking for ways to use less whenever you can. It is not hard to conserve water. Here are a few tips.

- 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.
- 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 an invisible toilet leak. Fix it and you save more than 30,000 gallons a year.
- Use your water meter to detect hidden leaks. Simply turn off all taps and water-using appliances. Then check the meter after 15 minutes. If it moved, you have a leak.



Water Source Restriction

During 2022 the Chadwick Lake Filter Plant was offline for construction of an additional solid waste holding tank in preparation for an extended shutdown of the Delaware Aqueduct planned for the end of 2023. DEP performed routine operation of essential equipment at the Delaware Aqueduct Filter Plant's intake point. This required the source water to be off for a one-to-three-hour window but did not inhibit the required daily water production.

Where Does My Water Come From?

The town utilizes two sources of water. Chadwick Lake Filter Plant is supplied by the Chadwick Lake Reservoir and has the capacity to treat 3.2 million gallons of water per day. The Delaware Aqueduct Filter Plant's supply is taken from the New York City Department of Environmental Protection's (DEP) Delaware Aqueduct, which is comprised of four large reservoirs in the Catskill region; it has the capacity to treat six million gallons of water per day.

Important Health Information

Some people may be more vulnerable to disease-causing microorganisms or pathogens 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 from their health care provider about their drinking water. U.S. 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 at (800) 426-4791.

If present, elevated levels of lead can cause serious health problems, especially for pregnant women, infants, and young children. It is possible that lead levels at your home may be higher than at other homes in the community as a result of materials used in your home's 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. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline (800) 426-4791 or at www.epa.gov/safewater/lead.



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 activities. Contaminants that may be present in source water include Microbial Contaminants, Inorganic Contaminants, Pesticides and Herbicides, Organic Chemical Contaminants, and Radioactive Contaminants.

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 indicate that water poses a health risk. In order to ensure that tap water is safe to drink, the state and the U.S. EPA prescribe regulations which limit the amount of certain contaminants in water provided by public water systems. NYS DOH and U.S. FDA regulations establish limits for contaminants in bottled water which must provide the same protection for public health. More information about contaminants and potential health effects can be obtained by calling the U.S. EPA's Safe Drinking Water Hotline at (800) 426-4791.

Unregulated Contaminant Monitoring

In 2020 we were required to collect and analyze drinking water samples for the following unregulated contaminants:

Total microcystins, Microcystin-(LA, RR, LF, YR, LR, LY), nodularin, cylindrospermopsin, anatoxin-a, germanium, manganese, alpha-hexachlorocyclohexane, profenofos, chlorpyrifos, tebuconazole, dimethipin, total permethrin (cis- and trans-), ethoprop, tribufos, oxyfluorfen, HAA5 (dibromoacetic acid, dichloroacetic acid, monobromoacetic acid, monochloroacetic acid, trichloroacetic acid), HAA6Br (bromochloroacetic acid, bromodichloroacetic acid, dibromoacetic acid, chlorodibromoacetic acid, monobromoacetic acid, tribromoacetic acid), HAA9 (bromochloroacetic acid, bromodichloroacetic acid, chlorodibromoacetic acid, dibromoacetic acid, dichloroacetic acid, monobromoacetic acid, monochloroacetic acid, tribromoacetic acid, and trichloroacetic acid), 1-butanol, 2-propen-1-ol, 2-methoxyethanol, butylated hydroxyanisole, 0-toluidine, and quinoline.

You may obtain the monitoring results by calling Daniel Bertola at (845) 564-2180.

Facts and Figures

Our water system serves around 23,300 customers through 6,763 service connections. The total amount of water produced in 2022 was 953 million gallons. The daily average of water treated and pumped into the distribution system was 2.8 million gallons. The 2022 billing rate was \$20 for the first 7,500 gallons, \$4.66 per 1,000 gallons for the next 10,000 gallons, \$5.36 per 1,000 gallons for the next 82,500 gallons, and \$6.36 per 1,000 gallons thereafter. The minimum quarterly bill was \$20.

Water Treatment Process

At the Chadwick Lake Filtration Plant, water is drawn from the reservoir, and a chemical is added for coagulation. This process causes small particles to adhere to one another, forming what is called floc. As the floc grows larger, it becomes heavier and settles into a basin, from which sediment is removed. The water is then processed through sand filters, producing a crystal-clear effluent. Chemicals for pH adjustment and corrosion control are added at this point. Finished water can then pass through an additional filtration process for the removal of iron and manganese, as necessary.

The water from our Delaware Aqueduct facility is purchased from DEP. At our new state-of-the-art filtration plant for the Delaware source, water is filtered through a membrane barrier and then chemically treated for pH and corrosion control. Sodium hypochlorite is added to both drinking water sources as a disinfectant.

Typically, both the town's filter plants are online and supply water to the distribution system simultaneously. Most parts of the town will see a combination of both sources at the tap. In an effort to increase dental health protection for the consumer, our water is fluoridated at both facilities.

About Our Violations

1. During second quarter 2022, we did not monitor for the presence of disinfection by-products (DBPR) in the public drinking water system. We analyzed our water supply for DBPRs the following week. Results of the analysis were well within regulatory limits and have been received and properly recorded as required by state and federal law.
2. During November 2022, due to Chadwick Lake Filter Plant being offline for the majority of the month, we did not sample for total organic carbon (TOC). All submitted TOC samples comply with regulatory requirements.

QUESTIONS? For more information about this report, contact John P. Egitto, Operations Engineer, at (845) 564-2180, or the Orange County Health Department, at (845) 291-2331. You may also contact the New York State Department of Health (NYS DOH) at (800) 458-1158. The U.S. EPA drinking water website, www.epa.gov/safewater, also provides valuable information.

Fluoridation of Our Water

Our system is one of the many in New York State that provides drinking water with a controlled low level of fluoride for consumer dental health protection. According to the CDC, fluoride is very effective in preventing cavities when present in drinking water at an optimal range from 0.8 to 1.2 parts per million (ppm). To ensure that the fluoride supplement in your water provides optimal dental protection, NYS DOH requires that we monitor fluoride levels on a daily basis. During the reporting year, monitoring showed fluoride levels in your water were in the optimal range 100 percent of the time. None of the monitoring results showed fluoride at levels that approach the 2.2 ppm maximum contaminant level.

Nondetected Contaminants

Following is a list of contaminants that we tested for but did not detect in our water supply.

Inorganics:

Antimony, Arsenic, Asbestos, Beryllium, Bromate, Cadmium, Chlorite, Cyanide, Iron, Mercury, Selenium, Silver, Thallium, Uranium, Zinc

Volatile Organics:

Alachlor, Aldicarb, Aldicarb sulfone, Aldicarb sulfoxide, Aldrin, Atrazine, Benzene, Benzo(a)pyrene, bis(2-Ethylhexyl)adipate, bis(2-Ethylhexyl)phthalate, Bromobenzene, Bromomethane, Butachlor, n-Butylbenzene, sec-Butylbenzene, tert-Butylbenzene, Bromochloromethane, Carbon tetrachloride, Carbaryl, n-Carbofuran, 3-Hydrocarbofuran, Chlordane, Chloroethane, Chloromethane, 1,2-Dibromo-3-chloropropane, 1,2-Dibromoethane, 2-Chlorotoluene, 4-Chlorotoluene, Dalapon, Dibromomethane, Dicamba, Dinoseb, 1,2-Dichlorobenzene, 1,3-Dichlorobenzene, 1,4-Dichlorobenzene, Dichlorodifluoromethane, 1,1-Dichloroethane, 1,2-Dichloroethane, 1,1-Dichloroethene, cis-1,2-Dichloroethene, trans-1,2-Dichloroethene, 1,2-Dichloropropane, 1,3-Dichloropropane, 2,2-Dichloropropane, 1,1-Dichloropropene, cis-1,3-Dichloropropene, trans-1,3-Dichloropropene, Dieldrin, Endrin, Ethylbenzene, gamma-BHC (Lindane), Heptachlor, Heptachlor epoxide, Hexachlorobenzene, Hexachlorocyclopentadiene, Hexachlorobutadiene, Isopropylbenzene, p-Isopropyltoluene, Methoxychlor, Methomyl, Metalochlor, Methylene chloride, Metribuzin, Oxamyl, PCB (total), Pentachlorophenol, Picloram, Propachlor, n-Propylbenzene, Styrene, Simazine, 1,1,1,2-Tetrachloroethane, 1,1,2,2-Tetrachloroethane, 2,4,5-TP (Silvex), Tetrachloroethene, Toluene, Toxaphene, 1,2,4-Trichlorobenzene, 1,1,1-Trichloroethane, 1,1,2-Trichloroethane, Trichloroethane, Trichlorofluoromethane, 1,2,3-Trichloropropane, 1,2,4-Trimethylbenzene, 1,3,5-Trimethylbenzene, o-Xylene, m-Xylene, p-Xylene, Xylene (total), MTBE, Vinyl chloride

Source Water Assessment

NYS DOH has evaluated the Town of Newburgh Consolidated Water District's (TONCWD) susceptibility to contamination under the Source Water Assessment Program (SWAP), and its findings are summarized in this section. It is important to stress that these assessments were created using available information and only estimate the potential for source water contamination. Elevated susceptibility ratings do not mean that source water contamination has occurred or will occur for this water district. TONCWD provides treatment and regular monitoring to ensure the water delivered to consumers meets all applicable standards. A copy of the assessment, including a map of the assessment area, can be obtained by contacting our office at (845) 564-2180.

Chadwick Lake Reservoir Assessment Summary

The assessment found an elevated susceptibility to contamination for this source of drinking water. Land cover and its associated activities within the assessment area do not increase the potential for contamination. Nonsanitary wastewater discharges may contribute to contamination. There are no noteworthy contamination threats associated with other discrete contaminant sources. Additional sources of potential contamination include a roadway.

Delaware Aqueduct Source Water Assessment Summary

TONCWD obtains water from the New York City water supply system. Water comes from the Delaware watershed west of the Hudson River. The SWAP methodologies applied to the rest of the state were not applied to the Delaware Aqueduct source. Additional information on water quality and protection efforts in these New York City watersheds can be found at the DEP website, www.nyc.gov/dep/watershed.



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.

REGULATED SUBSTANCES

SUBSTANCE (UNIT OF MEASURE)	MCL [MRDL]	MCLG [MRDLG]	DATE SAMPLED	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
Barium (ppm)	2	2	11-29-22	0.015	0.0087–0.015	No	Erosion of natural deposits
Chloride (ppm)	250	NA	11-29-22	83	13–83	No	Naturally occurring
Dichloromethane (ppb)	5	NA	11/30/22	2.4	1.4–2.4	No	Discharge from pharmaceutical and chemical factories
Fluoride (ppm)	2.2	NA	11-29-22	0.63	ND–0.63	No	Water additive that promotes strong teeth
Haloacetic Acids [mono-, di-, and trichloroacetic acid, and mono- and dibromoacetic acid]–Stage 1 (ppb)	60	NA	Quarterly 2022	24.05 ¹	13.3–35.0	No	By-product of drinking water disinfection needed to kill harmful organisms
Nickel (ppm)	10	NA	11-29-22	0.00093	ND–0.0093	No	Erosion of natural deposits
Sodium (ppm)	NA ²	NA	11-29-22	41	7.7–41	No	Naturally occurring
Sulfate (ppm)	250	NA	11-29-22	11	ND–11	No	Naturally occurring
Total Trihalomethanes [TTHMs – chloroform, bromodichloromethane, dibromochloromethane, and bromoform]–Stage 2 (ppb)	80 ³	NA	Quarterly 2022	41.35 ¹	20–100	No	By-product of drinking water chlorination needed to kill harmful organisms, formed when source water contains large amounts of organic matter
Turbidity [distribution system] ⁴ (NTU)	TT	NA	November	1.89	0.03–1.89	No	Soil runoff
Turbidity ⁵ (NTU)	TT	NA	01/25/22	0.12	0.01–0.12	No	Soil runoff
Turbidity (lowest monthly percent of samples meeting limit)	TT = 95% of samples meet the limit	NA	01/25/22	100	NA	No	Soil runoff

Tap water samples were collected for lead and copper analyses from sample sites throughout the community

SUBSTANCE (UNIT OF MEASURE)	AL	MCLG	DATE SAMPLED	AMOUNT DETECTED (90TH %ILE)	RANGE LOW-HIGH	SITES ABOVE AL TOTAL SITES	VIOLATION	TYPICAL SOURCE
Copper (ppm)	1.3	1.3	June-September 2020	0.13	0.015–0.340	0/31	No	Corrosion of household plumbing systems
Lead (ppb)	15	0	June-September 2020	2.0	ND–4.5	0/31	No	Corrosion of household plumbing systems

UNREGULATED SUBSTANCES

SUBSTANCE (UNIT OF MEASURE)	DATE SAMPLED	AMOUNT DETECTED	RANGE LOW-HIGH	TYPICAL SOURCE
Bromide (ppb)	Quarterly	32.6	ND–32.6	NA
Bromochloroacetic Acid (ppb)	2020	3.3	1.3–3.3	NA
Bromodichloroacetic Acid (ppb)	2020	4.7	1.3–4.7	NA
Chlorodibromoacetic Acid (ppb)	2020	0.57	ND–0.57	NA
Dibromoacetic Acid (ppb)	2020	0.53	ND–0.53	NA
Dichloroacetic Acid (ppb)	2020	21.6	ND–21.6	NA
Manganese (ppb)	2020	9.0	1.3–9.0	NA
Monobromoacetic Acid (ppb)	2020	0.44	ND–0.44	NA
Monochloroacetic Acid (ppb)	2020	2.4	ND–2.4	NA
Perfluorooctanesulfonate Acid [PFOS] (ppt)	2020-2021	3.53	ND–3.53	Released into the environment from widespread use in commercial and industrial applications
Perfluorooctanoic Acid [PFOA] (ppt)	2022	3.8	ND–3.8	Released into the environment from widespread use in commercial and industrial applications
Total Organic Carbon [TOC] (ppb)	2020	6,990	1,370–6,990	NA
Trichloroacetic Acid (ppb)	2020	21.8	5.7–21.8	NA

¹ Highest locational running annual average for the year; range is that of all individual samples collected throughout the year.

² Water containing more than 20 ppm of sodium should not be used for drinking by people on severely restricted sodium diets. Water containing more than 270 ppm of sodium should not be used for drinking by people on moderately restricted sodium diets.

³ Some people who drink water containing trihalomethanes in excess of the MCL over many years may experience problems with their liver, kidneys, or central nervous system and may have an increased risk of getting cancer.

⁴ Turbidity is a measure of the cloudiness of the water and used as an indicator of water quality in the distribution system. The MCL for distribution turbidity samples is 5 NTU.

⁵ Our highest single turbidity measurement for the year occurred as indicated in the table above. State regulations require that turbidity must be <0.3 NTU 95% of the time. Our samples met the turbidity standard 100% of the time.

Definitions

90th %ile: The levels reported for lead and copper represent the 90th percentile of the total number of sites tested. A percentile is a value on a scale of 100 that indicates the percent of a distribution that is equal to or below it. The 90th percentile is equal to or greater than 90% of the lead and copper values detected at your water system.

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 MCLG as possible.

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).

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

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