ANNUAL WATER QUALITY REPORT

Reporting Year 2021

Presented By

Town of Newburgh
Consolidated Water District

PWS ID#: NY3503578

We've Come a Long Way

Once again, we are proud to present our annual water quality report covering the period between January 1 and December 31, 2021. In a matter of only a few decades, drinking water has become exponentially safer and more reliable than at any other point in human history. Our exceptional staff continues to work hard every day—at all hours—to deliver the highest-quality drinking water without interruption. Although the challenges ahead are many, we feel that by relentlessly investing in customer outreach and education, new treatment technologies, system upgrades, and training, the payoff will be reliable, high-quality tap water delivered to you and your family.

Source Water Assessment

The NYS DOH has evaluated the Town of Newburgh Consolidated Water District's (TONCWD) susceptibility to contamination under the Source Water Assessment Program (SWAP); their findings are summarized in the paragraphs below. 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 or will occur for this Water District. The TONCWD provides treatment and regular monitoring to ensure that 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 us, as noted in this report.

Chadwick Lake Reservoir Assessment Summary

This 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 also 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

The TONCWD also 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 the water quality and protection efforts in these New York City watersheds can be found at the DEP's web site at www.nyc.gov/dep/watershed.

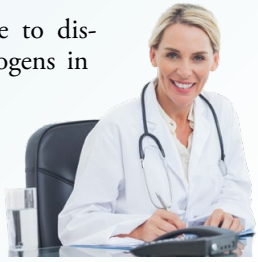
Fluoridation of Our Water

Our system is one of the many drinking water systems in New York State that provides 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 range from 0.8 to 1.2 ppm. To ensure that the fluoride supplement in your water provides optimal dental protection, the State Department of Health 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% of the time. None of the monitoring results showed fluoride at levels that approach the 2.2 ppm MCL for fluoride.

Where Does My Water Come From?

The Town utilizes two sources of water. Chadwick Lake Filter Plant's supply is the Chadwick Lake Reservoir, which has the capacity to treat 3.2 million gallons of water per day. The Delaware Aqueduct Filter Plant's supply is taken from New York City DEP's Delaware Aqueduct, which comprises four large reservoirs in the Catskill region.

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 those with cancer undergoing chemotherapy, those 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 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 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 (800) 426-4791 or at www.epa.gov/safewater/lead.

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 at (800) 458-1158. The U.S. EPA drinking water Web site (www.epa.gov/safewater) also provides valuable information.

Facts and Figures

Our water system serves around 23,000 customers through 6,600 service connections. The total amount of water produced in 2021 was 1.158 billion gallons. The daily average of water treated and pumped into the distribution system was 3.18 million gallons per day. The 2021 billing rate was $20.00 for the first 7500 gallons used, $4.62/1,000 gals. for the next 10,000 gals., $5.32/1,000 gals. for the next 82,500 gals. used, and $6.32/1,000 gals. thereafter. The minimum quarterly bill was $20.00.

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; Bromomethene; Butachlor; n-Butylbenzene; sec-Butylbenzene; tert-Butylbenzene; Bromochloromethane; Carbon Tetrachloride; Carbaryl; nCarbofuran; 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-Trichlorpropane; 1,2,4-Trimethylbenzene; 1,3,5-Trimethylbenzene; o-Xylene; m-Xylene; p-Xylene; Xylene, total; MTBE; Vinyl chloride

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- &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, 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.

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 that limit the amount of certain contaminants in water provided by public water systems. The State Health Department's and the U.S. FDA's regulations establish limits for contaminants in bottled water that must provide the same protection for public health. More information about contaminants and potential health effects can be obtained by calling the EPA's Safe Drinking Water Hotline at (800) 426-4791.

Test Results

Our water is monitored for many different kinds of substances on a very strict sampling schedule. Also, the water we deliver must meet specific health standards. Here, we show only 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 often 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.

You can play a role in conserving water and saving yourself money in the process 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.

As part of routine lead and copper sampling, a sample taken within our water system received a result for lead of 1,300 µg/L. This result is over the set action level (AL) of 15 µg/L. Consequently, several repeat samples were taken from various other points within the residence. The repeated samples returned results between 1.0 and 3.1 µg/L. The reason for the initial high sample result is unknown. Infants and children who drink water containing lead in excess of the action level could experience delays in their physical or mental development. Children could show slight deficits in attention span and learning abilities. Adults who drink this water over many years could develop kidney problems or high blood pressure.

REGULATED SUBSTANCES

SUBSTANCE (UNIT OF MEASURE)	DATE SAMPLED	MCL [MRDL]	MCLG [MRDLG]	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
Barium (ppm)	06-15-21	2	2	0.019	0.0047–0.019	No	Erosion of natural deposits
Chloride (ppm)	06-23-21	250	NA	88	13–88	No	Naturally occurring
Fluoride (ppm)	06-15-21	2.2	NA	0.69	0.66–0.69	No	Water additive that promotes strong teeth
Haloacetic Acids (HAA5s) [mono-, di-, and trichloroacetic acid, and mono- and dibromoacetic acid]–Stage 1[1] (ppb)	Quarterly 2021	60	NA	33.90	16.8–62.4	No	By-product of drinking water disinfection needed to kill harmful organisms
Nickel (ppm)	06-15-21	10	NA	0.75	ND–0.75	No	NA
Nitrate (ppm)	06-15-21	10	10	0.28	0.065–0.28	No	Runoff from fertilizer use
Sodium (ppm)	06-23-21	See footnote[2]	NA	77	41–77	No	Naturally occurring
Sulfate (ppm)	06-23-21	250	NA	8.1	5.0–8.1	No	Naturally occurring
Total Trihalomethanes [TTHMs – chloroform, bromodichloromethane, dibromochloromethane, and bromoform]–Stage 2[1,3] (ppb)	Quarterly 2021	80	NA	45.43	22–120	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)	December 2021	TT	NA	0.94	0.02–0.94	No	Soil runoff
Turbidity[5] (NTU)	4/16/21	TT	NA	0.16	0.01–0.16	No	Soil runoff
Turbidity (Lowest monthly percent of samples meeting limit)	2021	TT = 95% of samples meet the limit	NA	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)	DATE SAMPLED	AL	MCLG	AMOUNT DETECTED (90TH %ILE)	RANGE LOW-HIGH	SITES ABOVE AL/ TOTAL SITES	VIOLATION	TYPICAL SOURCE
Copper (ppm)	June-Sept 2019	1.3	1.3	0.15	0.011–0.150	0/31	No	Corrosion of household plumbing systems
Lead (ppb)	June-Sept. 2019	15	0	1.1	1.0–1,300.0	1/31	No	Corrosion of household plumbing systems

OTHER 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)[6] (ppt)	2020-2021	4.06	2.19–4.06	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] TTHM and HAA5 values as indicated represent the highest Locational Running Annual Average for the year and show the range 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 (TTHMs) in excess of the MCL over many years may experience problems with their livers, kidneys, or central nervous systems, and may have an increased risk of getting cancer.

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

[5] Turbidity is the measure of the cloudiness of water and is used as an indicator for filter performance. Our highest single turbidity measurement for the year occurred as indicated in the table. State regulations require that turbidity must be <0.3NTU 95% of the time. Our samples met the turbidity standard 100% of the time.

[6] Although our 3rd Quarter sample result for PFOA is over the MCL of 10 ng/L, subsequent sampling has returned results within regulation standards. As of the date of this report, the State Health Department is still deliberating whether or not this single sample constitutes a violation.

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 this 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 the New York City 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 their tap. In an effort to increase dental health protection, our water is fluoridated at both facilities for the consumer.

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 that, if exceeded, triggers treatment or other requirements that 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.