

ANNUAL WATER QUALITY REPORT

REPORTING YEAR 2018



Presented By
Croton-on-Hudson

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, 2018. 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.

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. 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.



How Is My Water Treated?

Groundwater pumped from the sand and gravel aquifer is treated with chlorine at the water treatment plant for disinfection purposes. We carefully monitor the amount of chlorine, adding the quantity necessary to protect the safety of our water without compromising taste or other water quality parameters. The groundwater is also treated with a corrosion control additive to reduce corrosion in the distribution system and plumbing in buildings.

Community Participation

You are invited to participate in our public forum and voice your concerns about your drinking water. The Village Board of Trustees meets on the first and third Monday of each month beginning at 8:00 p.m. at the Stanley H. Kellerhouse Municipal Building, One Van Wyck Street, Croton-on-Hudson, New York.

Water Conservation Tips

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 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.

Facility Modification/System Improvements

The corrosion control treatment system to reduce copper levels at the tap received final approval from WCHD in early 2018 and has been in operation since April 13, 2018. The water main work on Elliott Way has been completed. Design work for cement lining of old water mains on various streets has begun, with the cement lining work expected to be scheduled in 2019. Design work on a chlorine booster station at the North Highland booster pump station has begun, with construction expected in 2019.



Lead in Home Plumbing

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 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 at (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. The State Health Department's and the U.S. FDA's 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 EPA's Safe Drinking Water Hotline at (800) 426-4791.

 We remain vigilant in delivering the best-quality drinking water 

Source Water Assessment

The New York State Department of Health (NYS DOH) has completed a source water assessment for this system. Based on available information, potential 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 and how easily contaminants can move through the subsurface to the wells. 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 the section Test Results in the Source Water Assessment Report 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.

The source water assessment has rated our three wells as having a medium-high susceptibility to microbial contaminants. These ratings are due primarily to the fact that these are high-yielding wells drawing from a possible unconfined aquifer, which is a shallow aquifer that occurs immediately below the ground surface and has no overlying protective layer to prevent contamination from potential sources. While the source water assessment rates our wells as being susceptible to microbial contaminants, please note that our water is disinfected to ensure that the finished water delivered into your home meets New York State's drinking water standards for microbial contamination.

A copy of the Source Water Assessment Report can be obtained for a fee by contacting the Village Engineering Department at (914) 271-4783.

Where Does My Water Come From?

The Village of Croton-on-Hudson's main water source is a well system located in the Croton River Valley downstream from the New Croton Dam. Treated water is pumped directly from the well field into the distribution system, which consists of a network of water mains, four storage tanks (reservoirs), control valves, booster pump stations, hydrants, and other water-related infrastructure. The village's total distribution system storage capacity is 2.3 million gallons. Most residents receive water from the municipal water system; the remainder use private wells, which are not covered by this report.

Table Talk

Get the most out of the Testing Results data table with this simple suggestion. In less than a minute, you will know all there is to know about your water:

For each substance listed, compare the value in the Amount Detected column against the value in the MCL (or AL) column. If the Amount Detected value is smaller, your water meets the health and safety standards set for the substance.

Other Table Information Worth Noting

Verify that there were no violations of the state and/or federal standards in the Violation column. If there was a violation, you will see a detailed description of the event in this report.

If there is an ND or a less-than symbol (<), that means that the substance was not detected (i.e., below the detectable limits of the testing equipment).

The Range column displays the lowest and highest sample readings. If there is an NA showing, that means only a single sample was taken to test for the substance (assuming there is a reported value in the Amount Detected column).

Facts and Figures

The water system supplies approximately 8,060 people, primarily in residences but also in businesses and industries, through approximately 2,500 service connections. During 2018 the total amount of water withdrawn from the aquifer was approximately 293 million gallons. The daily average volume of water treated and pumped into the distribution system was slightly more than 800,000 gallons per day. Approximately 93 percent of the total water produced was billed directly to consumers. The balance, or unaccounted for water, was consumed in firefighting, hydrant use, distribution system leaks, and unauthorized use.

The 2018 billing charge has five tiers.

- Tier 1, which is base service with zero usage or no reads, is a base rate of \$12.50 per billing cycle (quarterly billing).
- Tier 2 is 1 to 748,000 gallons per year at \$10.53 per 1,000 gallons.
- Tier 3 is 748,001 to 3,740,000 gallons per year at \$11.59 per 1,000 gallons.
- Tier 4 is 3,740,001 to 7,480,000 gallons per year at \$11.79 per 1,000 gallons.
- Tier 5 is greater than 7,480,001 gallons per year at \$12.65 per 1,000 gallons.

Nondetected Substances

As required by state regulations, we routinely test our drinking water for numerous contaminants. In 2018 and previous years, the following substances were not detected:

1,2-Dibromoethane, 1,2-Dichloroethane, 1,1-Dichloropropane, 1,2-Dichloropropane, 1,1,1,2-Tetrachloroethane, 1,1,1-Trichloroethane, 1,1,2,2-Tetrachloroethane, 1,1,2-Trichloroethane, 1,1-Dichloroethane, 1,2,3-Trichlorobenzene, 1,2,3-Trichloropropane, 1,2,4-Trichlorobenzene, 1,2,4-Trimethylbenzene, 1,2-Dibromo-3,1,2-Dichlorobenzene, 1,2-Dichloroethane, 1,3,5-Trimethylbenzene, 1,3-Dichloropropane, 1,3-Dichlorobenzene, 1,4-Dichlorobenzene, 2,2-Dichloropropane, 2,4,5-TP (Silvex), 2,4-D, 2-Chlorotoluene, 3-Hydroxycarbofuran, 4-Chlorotoluene, 4-Isopropyltoluene, Alachlor, Aldicarb, Aldicarb Sulfone, Aldicarb Sulfoxide, Aldrin, Antimony, Arsenic, Atrazine, Benzene, Benzo(A)Pyrene, Beryllium, Bromobenzene, Bromochloromethane, Bromomethane, Butachlor, Cadmium, Carbaryl, Carbofuran, Carbon Tetrachloride, Chlordane, Chlorobenzene, Chlorodifluoridomethane, Chloroethane, Chloromethane, Chromium, Color, Cumene, cis-1,2-Dichloropropene, cis-1,3-Dichloroethane, Cyanide, Dalapon, Di(2-Ethylhexyl)Adipate, Di(2-Ethylhexyl)Phthalate, Dibromochloropropane, Dibromomethane, Dicamba, Dichlorodifluoromethane, Dieldrin, Dinoseb, Dioxin, Diquat, Endothall, Endrin, Ethylbenzene, Ethylene Dibromide, Fluoride, Gamma-Heptachlor, Glyphosate, Gross Alpha, Gross Beta, Heptachlor, Heptachlor Epoxide, Hexachlorobenzene

Hexachlorobutadiene, Hexachlorocyclopentadiene, Iron, Isopropylbenzene, Lindane, Manganese, MEK, Mercury, Methomyl, Methoxychlor, Methylene Chloride, Metolachlor, Metribuzin, Microextractables, Monobromoacetic Acid, Monochloroacetic Acid, Methy Tert, Butyl Ether, Napthalene, Nickel, N-Butylbenzene, Nitrite, N-Propylbenzene, Odor, Organohalide, Oxamyl (Vydate), Polychlorinated biphenyl, Pentachlorophenol, Picloram, Propachlor, Radium 226, Radium 228, Sec-Butylbenz, Selenium, Silver, Simazine, Styrene, tert-Butylbenzene, Tetrachloroethene, Thallium, Toluene, Toxaphene, trans-1,2-Dichloroethene, trans-1,3-Dichloropropene, Trichloroethene, Trichlorofluoromethane, Uranium, Vinyl chloride, Xylene, Zinc.

QUESTIONS?

For more information about this report, or for any questions relating to your drinking water, please call John Spatta, Water Foreman, at (914) 271-3775 or Westchester County Department of Health (WCDH) at (914) 813-5000 or www.westchestergov.com/health.

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)	DATE SAMPLED	MCL [MRDL]	MCLG [MRDLG]	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
Barium (ppm)	06/15/2016	2	2	0.0451	0.0314–0.0451	No	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Chloride (ppm)	06/15/2016	250	NA	93	88–93	No	Naturally occurring or indicative of road salt contamination
Chlorine (ppm)	2018	[4]	NA	1.81	0.97–1.81	No	Water additive used to control microbes
Haloacetic Acids [mono-, di-, and trichloroacetic acid and mono- and dibromoacetic acid] ¹ (ppb)	08/01/2018	60	NA	6.0	1.3–6.0	No	By-product of drinking water disinfection needed to kill harmful organisms
Manganese (ppb)	06/15/2016	300	NA	50	ND–50	No	Naturally occurring; Indicative of landfill contamination
Nitrate (ppm)	07/10/2018	10	10	0.53	0.45–0.53	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Sodium (ppm)	March–December 2018	None ²	NA	51.54	34.0–51.54	No	Naturally occurring; Road salt; Water softeners; Animal waste
Sulfate (ppm)	06/15/2016	250	NA	13.7	13.0–13.7	No	Naturally occurring
Total Trihalomethanes [TTHMs – chloroform, bromodichloromethane, dibromochloromethane, and bromoform] ³ (ppb)	08/01/2018	80	NA	27.76	3.99–27.76	No	By-product of drinking water chlorination needed to kill harmful organisms; TTHMs are formed when source water contains large amounts of organic matter

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)	Spring 2018 Jan-June	1.3	1.3	0.82	ND–1.16	0/40	No	Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives
Copper* (ppm)	Fall 2018 July-Dec.	1.3	1.3	0.93	ND–1.06	0/40	No	Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives
Lead* (ppb)	Spring 2018 Jan-June	15	0	8.6	ND–12.1	0/40	No	Corrosion of household plumbing systems; Erosion of natural deposits
Lead* (ppb)	Fall 2018 July-Dec.	15	0	2.7	ND–16.6	1/40	No	Corrosion of household plumbing systems; Erosion of natural deposits

Definitions

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.

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).

* 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.

Forty (40) samples were collected both Spring and Fall of 2018 and the 90th percentile values were 8.6 ppb and 2.7 ppb for Lead and 0.82 ppm and 0.93 ppm for Copper which were below the action level. The water level for lead exceeded the action level at zero locations in Jan-June and at one (1) location in July-Dec.

OTHER REGULATED SUBSTANCES

SUBSTANCE (UNIT OF MEASURE)	DATE SAMPLED	MCL [MRDL]	MCLG [MRDLG]	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
Fluridone (ppb)	July to October 2018	50	NA	0.83	ND–0.83	No	Aquatic herbicide used to control invasive plants

¹The haloacetic acids detected were dichloroacetic acid, bromochloroacid, and trichloroacetic acid.

²No designated limit. 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 diets.

³The trihalomethanes detected were bromodichloromethane, bromoform, chloroform, and dibromochloromethane.