

ANNUAL WATER QUALITY REPORT

REPORTING YEAR 2019



Presented By

Town of New Windsor Consolidated Water

George J. Meyers, Supervisor

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, 2019. 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.

We highly recommend signing up for text alerts @ newwindsor-ny.gov to get real-time information pertaining to any water or Town-wide emergencies.

Facts and Figures

Our water system serves approximately 29,048 customers through approximately 5,490 service connections. The total amount of water produced in 2019 was approx. 1.1 billion gallons. The daily average of water treated and pumped into the distribution system was 3 million gallons per day. The 2019 billing rate was \$8.69 per 1,000 gallons. The minimum quarterly bill was \$39.90.

Community Participation

You are invited to participate in our public forum and voice your concerns about your drinking water. The time and place of regularly scheduled town board meetings may be obtained from the Town Clerk, Kelly Allegra, at New Windsor Town Hall ((845) 563-4611) or online at newwindsor-ny.gov.

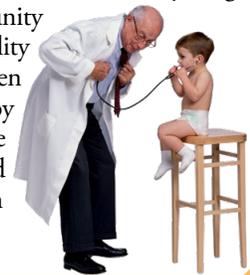
Water Conservation Tips

- 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.
- 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.
- 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.

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.

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 (800) 426-4791 or at www.epa.gov/safewater/lead.



QUESTIONS?

For more information about this report or for questions related to your drinking water, please call John P. Egitto, Operations Engineer, at (845) 561-2550, 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 website (www.epa.gov/your-drinking-water) can also provide you with additional information regarding your drinking water.

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.

Water Source Restriction

In May 2019, NYSDOH testing and follow-up confirmation tests showed detectable levels of PFAS contaminants in the Butterhill Wells, as follows: On 4/7/19, sample results showed PFOS contaminant level of 2.63 ng/l and PFOA level of 3.15 ng/l. At this time, although the detected levels were well below the current public health advisory (PHA) of 70 parts per trillion (as well as below the anticipated new maximum contaminant limit [MCL] of 10 ppt), the Town opted to shut down the Butterhill Water Filtration Plant out of an abundance of caution. At this time, the town transitioned back to the Catskill Aqueduct water source and its Riley Rd. Filtration Plant. (ng/l = nanograms per liter: corresponds to one part of liquid to one trillion parts of liquid (parts per trillion -- ppt).)

Facility Modification/System Improvements

Beginning in May 2019, The NYSDEC facilitated the construction of a temporary granular activated carbon (GAC) treatment system at the Butterhill Treatment Plant. The system has a 2.2-million-gallon-per-day capacity, and is designed to remove PFAS and other contaminants through adsorption. Construction was completed in time for a scheduled shutdown of the Catskill Aqueduct, and placed into service in November 2019.

In 2018, the Kroll Well was removed from service upon detection of PFAS contaminants. In August 2019, the Kroll Well returned to service following the construction of a GAC treatment system.

How Is My Water Treated and Purified?

The Catskill Aqueduct Water treatment process consists of a series of steps. First, raw water is drawn from the Ashokan Reservoir via the Catskill Aqueduct, or from the Silver Stream Reservoir during times of aqueduct shutdown. The raw water can then enter the filtration plant located at Riley Road, where chemicals are then added for coagulation and pH adjustment. At the Riley Road Filter Plant, the addition of these substances cause small particles to adhere to one another (called floc), making them large enough to be captured in sand filters. At this point, the water is filtered through layers of fine coal and silicate sand. Chlorine is then added as a precaution against any bacteria that may still be present (we carefully monitor the amount of chlorine, adding the smallest quantity necessary to protect the safety of your water without compromising taste). Finally, caustic soda (used to adjust the final pH and alkalinity) is added before the water is pumped to sanitized above-ground storage towers or surface reservoirs and into your home or business. The water from the Kroll well is disinfected with chlorine at the well site and blended with water in the system coming from the Riley Road filtration plant.

At the Butterhill Treatment Plant, groundwater entering the Plant from one of the three production wells is chlorinated with sodium hypochlorite to oxidize iron, manganese, and any organics that may be present. The pretreated water is then filtered through treatment vessels to remove any of the oxidized material, particularly iron and manganese. By October 2019, the DEC had installed a temporary granular activated carbon (GAC) system to further treat the water to remove PFAS and other absorptive contaminants. Final disinfectant is added if necessary at this point. In addition, a corrosion inhibitor/sequestering agent is added to the water prior to distribution. This reduces the potential for lead and copper leaching as well as sequestering the hardness in the water to reduce the potential for scaling in water mains and customers' plumbing.

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.

Upon being placed back into service, the NYSDEC has undertaken a rigorous monthly monitoring schedule for PFAS contaminants at both Kroll Well and Butterhill Treatment Plant sites. All testing results are posted and can be viewed on the Town's website, www.newwindsor-ny.gov, under the heading "Water News."

REGULATED SUBSTANCES										
SUBSTANCE (UNIT OF MEASURE)	MCL [MRDL]	MCLG [MRDLG]	Town of New Windsor			Riley Road			VIOLATION	TYPICAL SOURCE
			DATE SAMPLED	AMOUNT DETECTED	RANGE LOW-HIGH	DATE SAMPLED	AMOUNT DETECTED	RANGE LOW-HIGH		
Barium (ppm)	2	2	NA	NA	NA	07/09/2019	0.0085	NA	No	Erosion of natural deposits
Chloride (ppm)	250	NA	NA	NA	NA	NA	NA	NA	No	Naturally occurring or indicative of road salt contamination
Haloacetic Acids [mono-, di-, and trichloroacetic acid, and mono- and dibromoacetic acid] (ppb)	60	NA	Quarterly 2019	18.2	<1.0–47.5	NA	NA	NA	No	By-product of drinking water disinfection needed to kill harmful organisms
Nitrate (ppm)	10	10	NA	NA	NA	NA	NA	NA	No	Erosion of natural deposits
Sodium ¹ (ppm)	*see footnote	NA	NA	NA	NA	07/09/2019	9.31	NA	No	Naturally occurring; Road salt
Sulfate (ppm)	250	NA	NA	NA	NA	NA	NA	NA	No	Naturally occurring
Total Coliform Bacteria (positive samples)	TT = 2 or more positive samples	0	2019	3 ²	NA	NA	NA	NA	No	Naturally present in the environment
Total Trihalomethanes [TTHMs – chloroform, bromodichloromethane, dibromochloromethane, and bromoform] (ppb)	80	NA	Quarterly 2019	29.3	<0.5–76.9	NA	NA	NA	No	By-product of drinking water chlorination needed to kill harmful organisms. TTHMs are formed when source water contains large amounts of organic matter
Turbidity (NTU)	TT	NA	NA	NA	NA	05/19/2019	0.22 ³	0.05–0.22	No	Soil runoff
Turbidity (lowest monthly percent of samples meeting limit)	TT = 95% of samples meet the limit	NA	NA	NA	NA	05/19/2019	100	NA	No	Soil runoff
Zinc (ppm)	5	NA	NA	NA	NA	NA	NA	NA	No	Naturally occurring

REGULATED SUBSTANCES

SUBSTANCE (UNIT OF MEASURE)	MCL [MRDL]	MCLG [MRDLG]	Butterhill Wells			Kroll Well			VIOLATION	TYPICAL SOURCE
			DATE SAMPLED	AMOUNT DETECTED	RANGE LOW-HIGH	DATE SAMPLED	AMOUNT DETECTED	RANGE LOW-HIGH		
Barium (ppm)	2	2	2019	NA	0.0377–0.085	11/12/2019	0.0198	NA	No	Erosion of natural deposits
Chloride (ppm)	250	NA	01/08/2019	70.1	NA	11/12/2019	116	NA	No	Naturally occurring or indicative of road salt contamination
Haloacetic Acids [mono-, di-, and trichloroacetic acid, and mono- and dibromoacetic acid] (ppb)	60	NA	NA	NA	NA	NA	NA	NA	No	By-product of drinking water disinfection needed to kill harmful organisms
Nitrate (ppm)	10	10	07/09/2019	0.0839	NA	11/12/2019	4.15	NA	No	Erosion of natural deposits
Sodium ¹ (ppm)	*see footnote	NA	2019	NA	9.31–50.1	11/12/2019	63.8	NA	No	Naturally occurring; Road salt
Sulfate (ppm)	250	NA	01/08/2019	7.33	NA	11/12/2019	19.7	NA	No	Naturally occurring
Total Coliform Bacteria (positive samples)	TT = 2 or more positive samples	0	NA	NA	NA	NA	NA	NA	No	Naturally present in the environment
Total Trihalomethanes [TTHMs – chloroform, bromodichloromethane, dibromochloromethane, and bromoform] (ppb)	80	NA	NA	NA	NA	NA	NA	NA	No	By-product of drinking water chlorination needed to kill harmful organisms. TTHMs are formed when source water contains large amounts of organic matter
Turbidity (NTU)	TT	NA	11/16/2019	0.896 ³	0.015–0.896	NA	NA	NA	No	Soil runoff
Turbidity (lowest monthly percent of samples meeting limit)	TT = 95% of samples meet the limit	NA	11/16/2019	100	NA	NA	NA	NA	No	Soil runoff
Zinc (ppm)	5	NA	01/08/2019	0.0081	NA	11/12/2019	0.0175	NA	No	Naturally occurring

Tap Water Samples Collected for Copper and Lead 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
Lead (ppb)	15	0	1st half 2019 2nd half 2019	1.56 3.34	ND–10.2 ND–9.8	0/60 0/69	No	Corrosion of household plumbing systems

¹Water 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.

²All repeat samples did not detect coliform bacteria.

³Turbidity is a measure of the cloudiness of the water. It is tested because it is a good indicator of the effectiveness of the filtration system. Our highest single turbidity measurement for the year occurred as indicated in the table above. State regulations require that turbidity must always be below 1 NTU. The regulations require that 95% of the turbidity samples collected have measurements below 0.3 NTU. (Note that TT is dependent upon filtration method: conventional, 0.3 NTU; slow sand, 1.0 NTU; or diatomaceous earth filtration, 1.0 NTU.) Although the month as indicated in the Date column above was the month when we had the fewest measurements meeting the treatment technique for turbidity, the levels recorded were within the acceptable range allowed and did not constitute a treatment technique violation.

UNREGULATED SUBSTANCES

SUBSTANCE (UNIT OF MEASURE)	Butterhill Wells			Kroll Well			TYPICAL SOURCE
	DATE SAMPLED	AMOUNT DETECTED	RANGE LOW-HIGH	DATE SAMPLED	AMOUNT DETECTED	RANGE LOW-HIGH	
Nickel (ppb)	01/08/2019	0.8	NA	11/12/2019	1.1	NA	Nickel is a natural element of the earth's crust; therefore, small amounts are found in food, water, soil, and air

Non-detected Contaminants

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

Inorganics

Antimony, Arsenic, Beryllium, Cadmium, Chromium, Cyanide, Fluoride, Mercury, Selenium, Thallium

Volatile Organics

Alachlor; Aldicarb; Aldicarb sulfone; Aldicarb sulfoxide; Aldrin; Atrazine; Benzene; Benzo(a) pyrene; bis(2-Ethylhexyl)adipate; bis(2-Ethylhexyl) phthalate; Bromobenzene; Bromochloromethane; Bromomethane; Butachlor; n-Butylbenzene; sec-Butylbenzene; tert-Butylbenzene; Carbon Tetrachloride; Chlorobenzene; Carbaryl; Carbofuran; Chloroethane; 2-Chlorotoluene; 4-Chlorotoluene; Dibromomethane; 1,2-Dibromo-3-Chloropropane (DECP); 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; Ethylbenzene; gamma-BHC (Lindane); Heptachlor; Heptachlor Epoxide; Hexachlorobenzene; Hexachlorocyclopentadiene; Hexachlorobutadiene; Isopropylbenzene; 4-Isopropyltoluene; Methoxychlor; Methomyl; Metalochlor; Methylene Chloride; Metribuzin; Oxamyl; PCB, total; Propachlor; n-Propylbenzene; Styrene; Simazine; 1,1,1,2-Tetrachloroethane; 1,1,2,2-Tetrachloroethane; Tetrachloroethene; 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; MTBE; Vinyl Chloride

Organic Chemicals

Group 1: Chlordane; Endrin, 2,4,5-TP (Silvex); 2,4-D; Pentachlorophenol

Group 2: Dieldrin; Dicamba; Dinoseb; Picloram

SOCs: Aroclor 1016; Aroclor 1221; Aroclor 1232; Aroclor 1242; Aroclor 1248; Aroclor 1254; Aroclor 1260; 1,2-Dibromo-3-chloropropane (DBCP); 1,2-Dibromoethane (EDB)

Where Does My Water Come From?

During the calendar year 2019, the Town of New Windsor residents have received water from a variety of pristine sources. The Ashokan Reservoir feeds the Catskill Aqueduct, which delivers water to the New York City water supply system. As the aqueduct passes through the town, two taps on the large pipeline deliver water to two individual filtration plants. Also, in 2019 the Town utilized the Kroll Well. The water from this well is chlorinated at the wellsite, then blends with water in the system and helps supply water to the town when needed. The water source to the Butterhill Treatment Plant is supplied by three large production wells, located on a protected site on the eastern portion of the Town of New Windsor. Each well can be operated independently or in conjunction with one another to meet the total water demands of the Town. When these supplies are not available, the Silver Stream Reservoir can be used as an emergency source. The Town of New Windsor also has the capability to obtain water from the City and the Town of Newburgh in an emergency or drought condition. To learn more about our watershed on the Internet, go to the New York City Dept. of Environmental Protection website at www.nyc.gov/html/dep/html/drinking_water/index.shtml.

For more information on water from the Catskill Aqueduct, you can view the water quality report here: www.nyc.gov/waterqualityreport.

Source Water Assessment

The New York State (NYS) Department of Health (DOH) has evaluated our surface water system's susceptibility to contamination under the Source Water Assessment Program (SWAP), and their findings are summarized in the paragraph below. These assessments were created using available information. They estimate only the potential for source water contamination. Elevated susceptibility ratings do not mean that source water contamination has or will occur in our water system. We provide treatment and regular monitoring to ensure the water delivered to consumers meets all applicable standards.

The assessment area for this drinking water source contains some medium-rated threats to water quality. First, the watershed contains a large amount of high-density residential land cover, which results in a medium susceptibility for protozoa. Also, there are a number of potential contaminant sources listed in the NYS SWAP database. Of these sources, the most significant threats to drinking water quality are related to a main roadway and its associated businesses.

A copy of the assessment, including a map of the assessment area, can be obtained by contacting John P. Egitto, Operations Engineer, at (845) 561-2550.

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.

LRAA (Locational Running Annual Average): The average of sample analytical results for samples taken at a particular monitoring location during the previous four calendar quarters. Amount Detected values for TTHMs and HAAs are reported as the highest LRAAs.

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).

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