

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



ANNUAL  
**WATER**  
**QUALITY**  
**REPORT**

WATER TESTING PERFORMED IN 2017

## Quality First

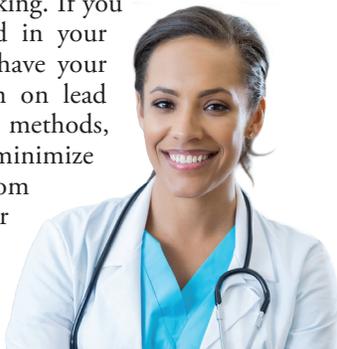
Once again, we are pleased to present our annual water quality report. As in years past, we are committed to delivering the best-quality drinking water possible. To that end, we remain vigilant in meeting the challenges of new regulations, source water protection, water conservation, and community outreach and education while continuing to serve the needs of all our water users. Thank you for allowing us the opportunity to serve you and your family.

We encourage you to share your thoughts with us on the information contained in this report. After all, well-informed customers are our best allies. 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 website ([www.epa.gov/safewater](http://www.epa.gov/safewater)) also provides valuable information.

## 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](http://www.epa.gov/safewater/lead).



## 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 by looking for ways to use less whenever you can. It is not hard to conserve water. Here are 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.

## 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 United States Centers for Disease Control, fluoride is very effective in preventing cavities when present in drinking water at an optimal target dosage of 0.7 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 within standard deviation  $\pm 0.1$  ppm, 96% of the time. None of the monitoring results showed fluoride at levels that approach the 2.2 ppm MCL for fluoride.

## Facts and Figures

Our water system serves 22,800 customers through 6,600 service connections. The total amount of water produced in 2017 was 959.0 million gallons. The daily average of water treated and pumped into the distribution system was 2.6 million gallons per day. The 2017 billing rate was \$16.00 for the first 7500 gallons used, \$4.40/1,000 gallons for the next 10,000 gallons, \$5.20/1,000 gallons for the next 82,500 gallons used, and \$6.20/1,000 gallons thereafter. The minimum quarterly bill was \$16.00.

## 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), and 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 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. Non-sanitary 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 website at [www.nyc.gov/dep/watershed](http://www.nyc.gov/dep/watershed).

## Where Does My Water Come From?

The Town utilizes two sources of water: Chadwick Lake Reservoir and New York City DEP's Delaware Aqueduct. The Chadwick Lake Filter Plant has the capacity to treat 3.2 million gallons of water per day. The Delaware Aqueduct supply is taken from New York City's Delaware Watershed, which is comprised of four large reservoirs in the Catskill region. The Delaware Aqueduct Facility has the capacity to supply 6 million gallons of water per day. A new filtration plant for the Delaware source went on line in November 2013.

## 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. 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.

## Water Treatment Process

The Town utilizes two separate water sources, which are blended in our distribution system. 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 a 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 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. The water is fluoridated at both facilities for consumer dental health protection.

## Community Participation

If you would like to learn more about your drinking water, please attend any of our regularly scheduled Town Board meetings. A schedule of meetings is available from the Town Clerk's Office, 1496 Route 300, Newburgh, NY, or by calling (845) 564-4554.

## Non-detected 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.

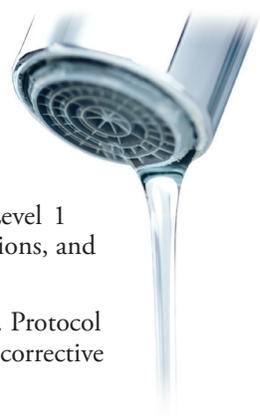
Volatile Organics: Alachlor; Aldicarb; Aldicarb sulfone; Aldicarb sulfoxide; Aldrin; Atrazine; Benzene; Benzo(a)pyrene; bis(2-Ethylhexyl)adipate; bis(2-Ethylhexyl)phthalate; Bromobenzene; Bromomethene; Butachlor; n-Butylbenzene; sec-Butylbenzene; tert-Butylbenzene; Bromochloromethane; Carbon Tetrachloride; 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-Trichloropropane; 1,2,4-Trimethylbenzene; 1,3,5-Trimethylbenzene; o-Xylene; m-Xylene; p-Xylene; Xylene, Total; MTBE; Vinyl chloride.

## Compliance Sampling

Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially harmful, waterborne pathogens may be present or that a potential pathway exists through which contamination may enter the drinking water distribution system. We found coliforms, indicating the need to look for potential problems in water treatment or distribution. When this occurs, we are required to conduct assessment(s) to identify problems and to correct any problems that were found during these assessments.

During the past year we were required to conduct one Level 1 assessment. Protocol for one Level 1 assessment was followed and completed. In addition, we were required to take three corrective actions, and we completed all of these actions.

During the past year two Level 2 assessments were required to be completed for our water system. Protocol for two Level 2 assessments was followed and completed. In addition, we were required to take six corrective actions, and we completed all of these actions.



## Test Results

Our water is monitored for many different kinds of substances on a very strict sampling schedule. The information in the data tables shows only those substances that were detected between January 1 and December 31, 2017. Remember that detecting a substance does not necessarily 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.

In 2016 we participated in the 3rd stage of the EPA's Unregulated Contaminant Monitoring Rule (UCMR3) program by performing additional tests on our drinking water. UCMR3 benefits the environment and public health by providing the EPA with data on the occurrence of contaminants suspected to be in drinking water, to determine if EPA needs to introduce new regulatory standards to improve drinking water quality. Contact us for more information on this program.

### REGULATED SUBSTANCES

			Town of Newburgh Consolidated Water District			Chadwick Lake			Delaware Aqueduct				
SUBSTANCE (UNIT OF MEASURE)	MCL [MRDL]	MCLG [MRDLG]	DATE SAMPLED	AMOUNT DETECTED	RANGE LOW-HIGH	DATE SAMPLED	AMOUNT DETECTED	RANGE LOW-HIGH	DATE SAMPLED	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
Barium (ppm)	2	2	NA	NA	NA	3-24-17	0.0084	NA	3-24-17	0.022	NA	No	Erosion of natural deposits
Chloride (ppm)	250	NA	NA	NA	NA	4-26-17	78	NA	4-26-17	13	NA	No	Naturally occurring
Fluoride (ppm)	2.2	NA	NA	NA	NA	3-24-17	0.50	0.40–0.90	3-24-17	0.58	0.50–0.70	No	Water additive that promotes strong teeth
Haloacetic Acids (ppb)	60	NA	Quarterly 2017	46.8 <sup>1</sup>	9.7–43.0	NA	NA	NA	NA	NA	NA	No	By-product of drinking water disinfection needed to kill harmful organisms.
Odor (TON)	3	NA	NA	NA	NA	4-26-17	1.0	1.0–1.0	4-26-17	1.0	1.0–1.0	No	Natural sources
Sodium (ppm)	see footnote 2	NA	NA	NA	NA	4-26-17	11	NA	4-26-17	40	NA	No	Naturally occurring
Sulfate (ppm)	250	NA	NA	NA	NA	4-26-17	10	NA	4-26-17	5.9	NA	No	Naturally occurring
TTHMs [Total Trihalomethanes] (ppb)	80	NA	Quarterly 2017	70 <sup>3</sup>	14–74	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 [Distribution System] <sup>4</sup> (NTU)	TT	NA	02-17-17	0.31	NA	NA	NA	NA	NA	NA	NA	No	Soil runoff
Turbidity <sup>5</sup> (Lowest monthly percent of samples meeting limit)	TT = 95% of samples meet the limit	NA	NA	NA	NA	2017	100%<0.3	NA	October	97%<0.3	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% TILE)	RANGE LOW-HIGH	SITES ABOVE AL/TOTAL SITES	VIOLATION	TYPICAL SOURCE
Copper (ppm)	1.3	1.3	Jan.-June 2017	0.14	0.014–0.26	0/61	No	Corrosion of household plumbing systems.
Copper (ppm)	1.3	1.3	June-Dec. 2017	0.24	0.021–0.76	0/61	No	Corrosion of household plumbing systems.
Lead (ppb)	15	0	Jan.-June 2017	2.2	ND–860	3/61	No	Corrosion of household plumbing systems.
Lead (ppb)	15	0	June-Dec. 2017	1.5	ND–37	1/61	No	Corrosion of household plumbing systems.

## UNREGULATED SUBSTANCES

	Chadwick Lake			Delaware Aqueduct			
SUBSTANCE (UNIT OF MEASURE)	DATE SAMPLED	AMOUNT DETECTED	RANGE LOW-HIGH	DATE SAMPLED	AMOUNT DETECTED	RANGE LOW-HIGH	TYPICAL SOURCE
Nickel (ppb)	3-24-17	1.6	1.6–1.6	3-24-17	0.5	0.5–0.5	Erosion of natural deposits

## UNREGULATED CONTAMINANT MONITORING RULE - PART 3 (UCMR3)

	Town of Newburgh Consolidated Water District			Chadwick Lake			Delaware Aqueduct			
SUBSTANCE (UNIT OF MEASURE)	DATE SAMPLED	AMOUNT DETECTED	RANGE LOW-HIGH	DATE SAMPLED	AMOUNT DETECTED	RANGE LOW-HIGH	DATE SAMPLED	AMOUNT DETECTED	RANGE LOW-HIGH	TYPICAL SOURCE
Chlorate (ppb)	6-23-15	217	81.8–217	6-23-15	440	163–440	6-23-15	203	76.5–203	Used in agriculture and as a bleaching agent
Chromium [Total] (ppb)	12-17-14	0.23	0.23–0.23	NA	ND	NA	3-24-15	0.38	0.38–0.38	Natural occurring
Chromium-6 (ppb)	9-10-15	0.29	0.0373–0.29	6-23-15	0.11	0.047–0.11	9-10-15	0.036	0.035–0.036	Industrial by-product
Strontium (ppb)	12-17-14	89.7	21–89.7	3-24-15	113	18.3–113	12-17-14	100	17.6–100	Naturally occurring
Vanadium (ppb)	6-23-15	0.35	0.27–0.35	NA	NA	NA	NA	NA	NA	Natural sources

<sup>1</sup>TTHM's and HAA5's 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. Due to a higher value in past subsequent quarterly averages, the current running annual average is outside the recent sample range.

<sup>2</sup>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.

<sup>3</sup>TTHM's and HAA5's 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.

<sup>4</sup>Turbidity 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. The highest measurement of the monthly average distribution results for the year occurred as indicated in the table above.

<sup>5</sup>Turbidity 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 be less than or equal to 0.3 NTU in 95% of the measurements each month, and less than or equal to 1 NTU all the time. (Note that TT is dependent upon filtration method: conventional, 0.3 NTU; slow sand, 1.0 NTU; or diatomaceous earth filtration, 1.0 NTU.) As indicated in the table above, all our turbidity measurements met the treatment technique for turbidity and were within the acceptable range allowed and did not constitute a treatment technique violation.

## Definitions

**90th percentile:** 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.

**Level 1 Assessment:** A Level 1 assessment is an evaluation of the water system to identify potential problems and determine, if possible, why total coliform bacteria have been found in our water system.

**Level 2 Assessment:** A Level 2 assessment is an evaluation of the water system to identify potential problems and determine, if possible, why an *E. coli* MCL violation has occurred and/or why total coliform bacteria have been found in our water system on multiple occasions.

**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).

**TON (Threshold Odor Number):** A measure of odor in water.

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