

The background of the cover features a close-up of water splashing from a faucet, with a bowl of fresh fruit (raspberries, blackberries, and red grapes) in the lower-left corner. The water is clear and dynamic, with many droplets captured in mid-air. The overall color palette is dominated by blues and greens, with the reds of the fruit providing a vibrant contrast.

ANNUAL WATER QUALITY REPORT

WATER TESTING
PERFORMED IN 2015



Presented By
**Town of Newburgh
Consolidated Water District**
Supervisor: *Gil Piaquadio*

Meeting the Challenge

Once again we are proud to present our annual drinking water report, covering all drinking water testing performed between January 1 and December 31, 2015. 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 your homes and businesses. 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 of our water users.

Important Health Information

Some people may be more vulnerable to disease causing microorganisms or pathogens in drinking water than the general population. Immuno-compromised 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.



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 Treatment Process

The Town uses 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, 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.

Where Does My Water Come From?

The Town uses 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 comprises 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.

Benefits of Chlorination

Disinfection, a chemical process used to control disease-causing microorganisms by killing or inactivating them, is unquestionably the most important step in drinking water treatment. By far, the most common method of disinfection in North America is chlorination.

Before communities began routinely treating drinking water with chlorine (starting with Chicago and Jersey City in 1908), cholera, typhoid fever, dysentery, and hepatitis A killed thousands of U.S. residents annually. Drinking water chlorination and filtration have helped to virtually eliminate these diseases in the U.S. Significant strides in public health are directly linked to the adoption of drinking water chlorination. In fact, the filtration of drinking water plus the use of chlorine is probably the most significant public health advancement in human history.

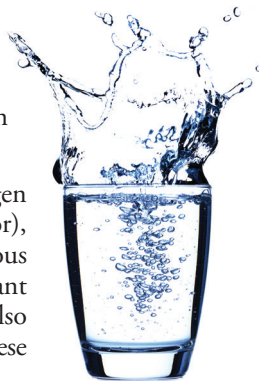
How chlorination works:

Potent Germicide Reduction in the level of many disease-causing microorganisms in drinking water to almost immeasurable levels.

Taste and Odor Reduction of many disagreeable tastes and odors like foul-smelling algae secretions, sulfides, and odors from decaying vegetation.

Biological Growth Elimination of slime bacteria, molds, and algae that commonly grow in water supply reservoirs, on the walls of water mains, and in storage tanks.

Chemical Removal of hydrogen sulfide (which has a rotten egg odor), ammonia, and other nitrogenous compounds that have unpleasant tastes and hinder disinfection. It also helps to remove iron and manganese from raw water.



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; (845) 564-4554.

Water Conservation Tips

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

- Only run dishwasher when fully loaded.
- 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. It is not uncommon to lose up to 100 gallons a day from an invisible toilet leak.
- 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.

Facts and Figures

Our water system serves 22,800 customers through 6,600 service connections. The total amount of water produced in 2015 was 1.1 billion gallons. The daily average of water treated and pumped into the distribution system was 3.0 million gallons per day. The 2015 billing rate was \$15.00 for the first 7,500 gallons used, \$4.00/1,000 gallons for the next 10,000 gallons, \$5.00/1,000 gallons for the next 82,500 gallons used, and \$5.80/1,000 gallons thereafter. The minimum quarterly bill was \$15.00.

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.

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 a properly controlled level. To ensure that the fluoride supplement in your water provides optimal dental protection, we monitor fluoride levels on a daily basis to make sure fluoride is maintained at a target level of 0.7 ppm. During 2015, monitoring showed fluoride levels in your water were within 0.1 ppm of the target level 82% of the time. None of the monitoring results showed fluoride at levels that approach the 2.2 ppm MCL for fluoride.

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:

Benzene; Bromobenzene; Bromomethane; n-Butylbenzene; sec-Butylbenzene; tert-Butylbenzene; Bromochloromethane; Carbon Tetrachloride; Chloroethane; Chloromethane; 2-Chlorotoluene; 4-Chlorotoluene; Dibromomethane; 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; Hexachlorobutadiene; Isopropylbenzene; p-Isopropyltoluene; Methylene Chloride; n-Propylbenzene; Styrene; 1,1,1,2-Tetrachloroethane; 1,1,2,2-Tetrachloroethane; Tetrachloroethene; Toluene; 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

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. 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 DEP's Web site at http://www.nyc.gov/html/dep/html/watershed_protection/index.shtml.

Sampling Results

During the past year, we have taken hundreds of water samples to determine the presence of any radioactive, biological, inorganic, volatile organic, or synthetic organic contaminants. The table shows only those contaminants that were detected in the water. The state requires us to monitor 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.

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, in order to determine if EPA needs to introduce new regulatory standards to improve drinking water quality. Contact us for more information on this program.

The Town of Newburgh Consolidated Water District was issued a Notice of Violation for failure submit an Emergency Response Plan as required for compliance with the NY State Sanitary Code. The Emergency Response Plan has been prepared and submitted to the Orange County Department of Health.

REGULATED SUBSTANCES

SUBSTANCE (UNIT OF MEASURE)	MCL [MRDL]	MCLG [MRDLG]	Town of Newburgh Consolidated Water District			Chadwick Lake			Delaware Aqueduct			VIOLATION	TYPICAL SOURCE
			DATE SAMPLED	AMOUNT DETECTED	RANGE LOW-HIGH	DATE SAMPLED	AMOUNT DETECTED	RANGE LOW-HIGH	DATE SAMPLED	AMOUNT DETECTED	RANGE LOW-HIGH		
Barium (ppm)	2	2	NA	NA	NA	5-11-15	0.0091	0.0091–0.0091	5-11-15	0.024	0.024–0.024	No	Erosion of natural deposits
Chloride (ppm)	250	NA	NA	NA	NA	5-12-15	78	78–78	5-12-15	12	12–12	No	Naturally occurring
Fluoride (ppm)	2.2	NA	NA	NA	NA	5-11-15	0.53	0.53–0.53	5-11-15	0.52	0.52–0.52	No	Water additive that promotes strong teeth
Haloacetic Acids– Stage 1 (ppb)	60	NA	2-13-15	37	20.3–61	NA	NA	NA	NA	NA	NA	No	By-product of drinking water disinfection needed to kill harmful organisms
Haloacetic Acids– Stage 2 (ppb)	60	NA	Quarterly 2015	34.3	13.8 – 76.9	NA	NA	NA	NA	NA	NA	No	By-product of drinking water disinfection needed to kill harmful organisms
Nitrate (ppm)	10	10	NA	NA	NA	4-9-15	0.11	0.11–0.11	4-9-15	0.33	0.33–0.33	No	Erosion of natural deposits
Odor (TON)	3	NA	NA	NA	NA	5-12-15	1.0	1.0–1.0	5-12-15	1.0	1.0–1.0	No	Natural sources
Sodium (ppm)	(see footnote #1)	NA	NA	NA	NA	5-12-15	39	39–39	5-12-15	8.5	8.5–8.5	No	Naturally occurring
Sulfate (ppm)	250	NA	NA	NA	NA	5-12-15	13	13–13	5-12-15	5.5	5.5–5.5	No	Naturally occurring
TTHMs [Total Trihalomethanes]– Stage 1 (ppb)	80	NA	2-13-15	35	23–51	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
TTHMs [Total Trihalomethanes]– Stage 2 (ppb)	80	NA	Quarterly 2015	47.8	17–110	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
Total Coliform Bacteria (# positive samples)	Two or more positive samples	0	2-24-15	1	NA	NA	NA	NA	NA	NA	NA	No	Naturally present in the environment
Turbidity² (NTU)	TT	NA	NA	NA	NA	6-14-15	0.23	0.01–0.23	2-15-15	0.06	0.03–0.06	No	Soil runoff
Turbidity (Lowest monthly percent of samples meeting limit)	TT = 95% of samples < 0.3 NTU	NA	NA	NA	NA	Monthly	100	NA	Monthly	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%TILE)	RANGE LOW-HIGH	SITES ABOVE AL/TOTAL SITES	VIOLATION	TYPICAL SOURCE
Copper (ppm)	1.3	1.3	July, August 2014	0.54	0.029–0.75	0/30	No	Corrosion of household plumbing systems
Lead (ppb)	15	0	July, August 2014	4.9	1–17	1/30	No	Corrosion of household plumbing systems

UNREGULATED CONTAMINANT MONITORING RULE PART 3 (UCMR3) – NEWBURGH CONSOLIDATED

SUBSTANCE (UNIT OF MEASURE)	DATE SAMPLED	AMOUNT DETECTED
Chlorate (ppb)	6/23	440
Chromium-6 (ppb)	6/23	0.19
Chromium(total) (ppb)	3/24	0.38
Strontium (ppb)	3/24	113
Vanadium (ppb)	6/23	0.35

UNREGULATED SUBSTANCE - CHADWICK LAKE

SUBSTANCE (UNIT OF MEASURE)	DATE SAMPLED	AMOUNT DETECTED
Nickel (ppb)	5/11	0.93

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.

²Turbidity 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 single turbidity measurements for the year occurred as indicated for each system 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.) As indicated in the table above, all of 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.

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 Stage 2 TTHMs and HAAs are reported as 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

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.