

Annual
WATER
QUALITY
REPORT

Reporting Year 2013



Presented By
Town of Newburgh
Consolidated Water District

PWS ID#: NY3503578

There When You Need Us

We are once again proud to present our annual water quality report covering all testing performed between January 1 and December 31, 2013. 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 to assist you should you ever have any questions or concerns about your 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 Treatment Process

The Town utilizes two separate water sources that 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. It is treated for manganese removal, as needed. 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.

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 providers 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.

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 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 64% of the time. None of the monitoring results showed fluoride at levels that approach the 2.2 ppm MCL for fluoride.

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 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 DEP's Web site: www.nyc.gov/dep/watershed.

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, Chromium, Chlorite, Cyanide, Mercury, Selenium, Silver, Thallium, 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

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 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 of 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. 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.

Facility Modification and System Improvements

The Town completed construction of a new filtration plant for our Delaware Aqueduct water source in November of 2013.

Water Conservation Tips

You can play a role in conserving water and save 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.

Facts and Figures

Our water system serves 22,800 customers through 6,600 service connections. The total amount of water produced in 2013 was 1.0 billion gallons. The daily average of water treated and pumped into the distribution system was 2.8 million gallons per day. The 2013 billing rate was \$10.00 for the first 7500 gallons used; \$2.25/1,000 gals. for the next 10,000 gals.; \$3.80/1,000 gals. for the next 82,500 gals. used; and \$4.40/1,000 gals. thereafter. The minimum quarterly bill was \$10.00.

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.

About Our Violations

We did not submit repeat samples after a positive coliform sample was collected on August 7, 2013. We have already taken the steps to ensure that adequate monitoring and reporting will be performed in the future so that this oversight will not be repeated.

Due to an oversight in August 2013, we neglected to report a coliform detection. To ensure that all reporting requirements are met in the future, we have implemented additional review policies at the administrative level.

We failed to provide adequate disinfection CT from our Delaware Aqueduct source to the point of entry for 3 days during the month of January 2013, as required for compliance with Section 5-1.30 of the New York State Sanitary Code. CT is a measurement of disinfectant contact time and disinfectant concentration.

Installation of temporary disinfection equipment and a change in the disinfectant chemical from chlorine gas to sodium hypochlorite was necessary during the construction of our new filtration plant. The result was a slightly lower chlorine residual during the transition between disinfectants.

We received the following violations related to a water main break and subsequent Boil Water advisory in Colden Park on July 4, 2013:

- Failure to have a designated Operator available for the period 7-4-13 through 7-5-13.
- Failure to notify the Department of Health of a potential health hazard within 24 hours.
- Failure to notify the public of a potential health hazard within 24 hours.

What is being done?

An additional designated Operator will be provided for coverage during absences or vacations.

Procedures have been reviewed with all personnel involved and a review of notification processes has been conducted.

Prior to the start-up of our new Delaware Aqueduct Filtration Plant, our water system was in violation of a drinking water standard; specifically, a Surface Water Treatment Rule violation. Even though this was not an emergency, you have a right, as our customers, to know what happened and what we have done to correct the situation.

On March 29, 2007, the New York State Department of Health rescinded the Newburgh Consolidated Water District's filtration avoidance determination for use of the Delaware Aqueduct source. The Department of Health required that we comply by filtering the Delaware water by September 29, 2008. Unfortunately, we were unable to comply with the deadline and we were in violation of the New York State Sanitary Code Subpart 5-1.3(b). Subpart 5-1.78 of the State Sanitary Code requires the water system owner/operator to notify all customers of this violation and future actions. This violation was not the result of any issue with the quality of the water. The water from the Delaware source is the same as it was before the State rescinded the filtration waiver.

What should I do?

- You do not need to boil your water. However, if you have specific health concerns, consult your doctor. A home filter will not necessarily provide added protection, because not all home filters protect against parasites. Call NSF International at (800) 673-6275 or the Water Quality Association at (630) 505-0160 for information on appropriate filters.
- People with severely compromised immune systems, people with an infant, and some elderly may be at increased risk. These people should seek advice about drinking water from their health care providers. General guidelines on ways to lessen the risk of infection by microbes are available from the EPA's Safe Drinking Water Hotline at (800) 426-4791. If you have specific health concerns, consult your doctor.

What does this mean?

This was not an immediate risk. If it had been, you would have been notified immediately.

Inadequately treated water may contain disease-causing organisms. These organisms include bacteria, viruses, and parasites that can cause symptoms such as nausea, cramps, diarrhea, and associated headaches.

We do not know of any cases of contamination, and no parasites have been detected in the water.

What is being done?

On November 13, 2013, we began filtering water at our Delaware Aqueduct Filtration Plant. Since this date, all water produced in the Town of Newburgh has undergone filtration.

Please share this information with all the other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this notice in a public place or distributing copies by hand or mail.

Sampling Results

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

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	11-13-13	0.0071	NA	9-5-13	0.022	NA	No	Erosion of natural deposits
Chloride (ppm)	250	NA	NA	NA	NA	11-19-13	53	NA	9-11-13	8.5	NA	No	Naturally occurring
Color (Units)	15	NA	NA	NA	NA	11-19-13	2.5	NA	9-11-13	5.0	NA	No	Natural color; May be caused by decaying leaves, plants, and soil organic matter
Fluoride (ppm)	2.2	NA	11-13-2013	0.51	NA	NA	NA	NA	NA	NA	NA	No	Water additive that promotes strong teeth
Haloacetic Acids–Stage 1 (ppb)	60	NA	Quarterly 2013	41	3–86	NA	NA	NA	NA	NA	NA	No	By-product of drinking water disinfection needed to kill harmful organisms
Manganese (ppb)	300	NA	NA	NA	NA	11-19-13	3.9	NA	NA	NA	NA	No	Naturally occurring
Nitrate (ppm)	10	10	NA	NA	NA	12-10-2013	0.2	NA	8-21-13	0.29	NA	No	Runoff from fertilizer use
Odor (TON)	3	NA	NA	NA	NA	11-19-13	4.0	NA	9-11-13	2.0	NA	No	Natural sources
Sodium ¹ (ppm)	(see footnote)	NA	NA	NA	NA	11-19-13	28	NA	9-11-13	7.1	NA	No	Naturally occurring
Sulfate (ppm)	250	NA	NA	NA	NA	11-19-13	5.5	NA	NA	NA	NA	No	Naturally occurring
TTHMs [Total Trihalomethanes]–Stage 1 (ppb)	80	NA	Quarterly 2013	57	18–110	NA	NA	NA	NA	NA	NA	No	By-product of drinking water chlorination needed to kill harmful organisms
Total Coliform Bacteria (# positive samples)	Two or more positive samples	0	1-2-13, 2-5-13, 4-19-13, 8-7-13, 9-24-13, 12-18-13	1	NA	NA	NA	NA	NA	NA	NA	No	Naturally present in the environment
Turbidity ² (NTU)	TT	NA	NA	NA	NA	2013	0.49	0.01–0.49	2013	1.07 ³	0.63–1.07	No	Soil runoff
Turbidity (Lowest monthly percent of samples meeting limit)	TT = 95% of samples <0.3 NTU	NA	NA	NA	NA	Jan 2013	99%	NA	NA	NA	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 ⁴ (ppm)	1.3	1.3	June, July 2011	0.33	0.047–0.52	0/30	No	Corrosion of household plumbing systems
Lead ⁵ (ppb)	15	0	June, July 2011	3.5	1.0–8.1	0/30	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.

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. Our highest single turbidity measurement for the year occurred as indicated in the table. State regulations require that turbidity must always be below 1 NTU.

³Inadequately treated water may contain disease-causing organisms. These organisms include bacteria, viruses, and parasites, which can cause symptoms such as nausea, cramps, diarrhea, and associated headaches. TT = 1 NTU. The Delaware Aqueduct source installed filtration November 12, 2013. With Filtration, the lowest Turbidity reading was 0.00 NTU and the highest was 4.42 NTU. November 2013 was the month with the fewest readings meeting the Treatment Technique limit of 0.3 NTU (99%)

⁴The level presented represents the 90th percentile of the 30 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 copper values detected at your water system. In this case, 30 samples were collected at your system and the 90th percentile value was the fourth highest value (0.33 mg/L). The action level for copper was not exceeded at any of the sites tested.

⁵The level presented represents the 90th percentile of the samples collected. The action level for lead was not exceeded at any of the sites tested.

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 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).

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.