Annual WATER QUALITY REPORT

Reporting Year 2012

Presented By
Town of Newburgh Consolidated Water District
Wayne Booth, Town Supervisor

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, 2012. 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.

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 (CDC), fluoride is very effective in preventing cavities when present in drinking water at an optimal range of 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 that fluoride levels in your water were in the optimal range 88 percent of the time. None of the monitoring results showed fluoride above the 2.2 ppm MCL for fluoride.

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 4 million gallons of water per day. A new filtration plant for the Delaware source is nearing completion.

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; Bromomethene; 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-Trichlorpropane; 1,2,4-Trimethylbenzene; 1,3,5-Trimethylbenzene; o-Xylene; m-Xylene; p-Xylene; Xylene, Total; MTBE; Vinyl chloride

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.

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.

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.

Source Water Assessment

The NYS DOH has evaluated the Town of Newburgh Consolidated Water District (TONCWD) water sources' 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.

Important Information About Your Drinking Water

Our water system is currently in violation of a drinking water standard. Even though this is not an emergency, you, as our customers, have a right to know what happened and what we are doing 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 are now 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 is 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 is 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?

- We currently have a compliance schedule with the U.S. EPA to modify our water system to comply with Federal and State Drinking Water requirements. This schedule requires the operation of a water treatment plant by July 1, 2013.
- Construction of a new water filtration plant is proceeding on schedule.
- Until filtration is installed, you will receive a notice similar to this one every three months.
- Future notices will include progress updates of the project.

For more information, please contact John Egitto at (845) 564-2180 or by mail at: 343 Route 32, Newburgh, NY 12550.

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 share it by posting this notice in a public place or distributing copies by hand or mail.

Water Treatment Process

The Town utilizes two separate raw 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. The water is treated for manganese removal, as needed. The water from our Delaware Aqueduct facility is an unfiltered water supply, purchased from New York City DEP. A new filtration plant for the Delaware source is nearing completion. This water is chemically treated for pH and corrosion control. Chlorine is added to both drinking water sources as a disinfectant. The water is fluoridated at both facilities for consumer dental health protection.

About Our Violations

The Running Annual Average (RAA) for Total Haloacetic Acids (HAA5) exceeded the Maximum Contaminant Level (MCL) during the 1st quarter of 2012 (1-1-12 to 3-31-12). We returned to compliance in the 2nd quarter of 2012. Steps Taken to Correct Violation: Increased flushing throughout Distribution System. Some people who drink water containing haloacetic acids in excess of the MCL over many years may have an increased risk of getting cancer.

During the 4th quarter of 2012, we did not analyze for or report the water quality parameters of alkalinity, hardness, and Langelier Index in our distribution system. All water quality parameters were completed for both Points of Entry. 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.

We routinely monitor your water for turbidity. This tells us whether we are effectively filtering the water supply. Turbidity monitoring for the period 7-1-12 through 7-31-12 indicated that 60 percent of Filter Effluent Turbidity readings were over the 0.30 NTU turbidity standard.

Turbidity is monitored continuously whenever the filtration plant is on line. These turbidity readings are then reported for every four-hour interval. For the month of July, the plant was online for less than a 24 hour period. During this period, we reported a total of five turbidity readings. Three of these five readings were over the treatment technique limit of 0.3 NTU for the Filter Effluent. None of the readings was over the maximum limit of 1 NTU. The plant was taken offline immediately when it was determined that the treatment technique limit had been exceeded. We have changed coagulants in an effort to improve the treatment of our raw water source.

Turbidity has no health effects. However, turbidity can interfere with disinfection and provide a medium for microbial growth. Turbidity may indicate the presence of disease-causing organisms. These organisms include bacteria, viruses, and parasites that can cause symptoms such as nausea, cramps, diarrhea, and associated headaches. Please pay special attention to the Important Health Information statement in this report regarding Cryptosporidium.

Facts and Figures

Our water system serves 22,800 customers through 6,600 service connections. The total amount of water produced in 2012 was 1.1 billion gallons. The daily average of water treated and pumped into the distribution system was 3 million gallons per day. The 2012 billing rate was $10.00 for the first 7500 gallons used, $2.25/1,000 gals. for the next 10,000 gallons used, $3.80/1,000 gals. for the next 82,500 gallons used, and $4.40/1,000 gals. thereafter. The minimum quarterly bill was $10.00.

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:

- Only run the dishwasher and washing machine when full.
- Turn off the tap when brushing your teeth.
- Check every faucet in your home for leaks.
- Check your toilets for leaks.

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	10-24-12	0.0073	0.0073–0.0073	10-24-12	0.02	0.02–0.02	No	Erosion of natural deposits
Chloride (ppm)	250	NA	NA	NA	NA	10-24-12	55	55–55	10-24-12	7.9	7.9–7.9	No	Naturally occurring
Color (Units)	15	NA	NA	NA	NA	10-24-12	2.5	2.5–2.5	10-24-12	30	30–30	No	Natural color may be caused by decaying leaves, plants, and soil organic matter
Haloacetic Acids (ppb)	60	NA	2012 Quarterly	51	21–91	NA	NA	NA	NA	NA	NA	No	By-product of drinking water disinfection needed to kill harmful organisms
Hexachlorobenzene (ppb)	1	0	NA	NA	NA	4-19-12	0.10	0.10–0.10	4-19-12	0.23	0.10–0.23	No	Agricultural chemicals
Iron (ppb)	300	NA	NA	NA	NA	NA	NA	NA	10-24-12	75	75–75	No	Naturally occurring
Manganese (ppb)	300	NA	NA	NA	NA	10-24-12	7.0	7.0–7.0	10-24-12	31	31–31	No	Naturally occurring
Nitrate (ppm)	10	10	NA	NA	NA	NA	NA	NA	4-12-12	0.24	0.24–0.24	No	Erosion of natural deposits
Odor (Units)	3	NA	NA	NA	NA	10-24-12	1.0	1.0–1.0	10-24-12	1.0	1.0–1.0	No	Organic or inorganic pollutants originating from natural sources
Sodium (ppm)	(see footnote)[1]	NA	NA	NA	NA	10-24-12	35	35–35	10-24-12	5.8	5.8–5.8	No	Naturally occurring
Sulfate (ppm)	250	NA	NA	NA	NA	10-24-12	6.8	6.8–6.8	10-24-12	5.3	5.3–5.3	No	Naturally occurring
Total Coliform Bacteria (# positive samples)	Two or more positive samples	0	8-2012	NA	NA	NA	NA	NA	NA	NA	NA	No	Naturally present in the environment
Total Trihalomethanes [TTHMs] (ppb)	80	NA	2012 Quarterly	55	13–110	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
Turbidity[2] (NTU)	TT	NA	NA	NA	NA	6-6-12	1.24	0.01–1.24	11-1-12[3]	1.3[3]	0.6–1.3[3]	Yes[4]	Soil runoff
Turbidity (Lowest monthly percent of samples meeting limit)	TT	NA	NA	NA	NA	July 2012	40	NA	NA	NA	NA	Yes[4]	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	2011	0.33[5]	0.047–0.52	0/30	No	Corrosion of household plumbing systems
Lead (ppb)	15	0	2011	3.5[6]	ND–8.1	0/30	No	Corrosion of household plumbing systems

OTHER SUBSTANCES (CHADWICK LAKE)

SUBSTANCE (UNIT OF MEASURE)	DATE SAMPLED	AMOUNT DETECTED	RANGE LOW-HIGH	TYPICAL SOURCE
Nickel (ppm)	10-24-12	0.87	0.87–0.87	Naturally occurring

[1] 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.

[2] 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 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.

[3] The highest turbidity measurement of 1.84 NTU occurred on 11-1-12. The highest monthly average occurred in October 2012.

[4] This is a Chadwick Lake violation only.

[5] The level presented represents the 90th percentile of the 10 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, thirty samples were collected at your water system and the 90th percentile value was 0.33 ppml. The action level for copper was not exceeded at any of the 30 sites tested.

[6] The level presented represents the 90th percentile of the thirty samples collected. The action level for lead was not exceeded at any of the 30 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 that, 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).

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