

2015 Annual Water Quality Report

Amawalk-Shenorock Water District

40 Lakeview Drive P.O. Box 618

Shenorock, NY 10587

(Public Water Supply ID# 5903459)

www.Somersny.com

To comply with State and Federal regulations, Amawalk Shenorock Water District annually issues a report describing the quality of your drinking water. The purpose of this report is to raise your understanding of drinking water and awareness of the need to protect our drinking water sources. Last year, your tap water met all State drinking water health standards. We are proud to report that our system did not violate a maximum contaminant level or any other water quality standard. This report provides an overview of last year's water quality. Included are details about where your water comes from, what it contains, and how it compares to State standards.

If you have any questions about this report or concerning your drinking water, please contact Adam Smith, Superintendent of Water at (914) 248-5181. We want you to be informed about your drinking water. If you want to learn more, please attend any of the regularly scheduled Town of Somers Board Meetings. The meetings are held, on the second Thursday of the month, at 7:30pm at the Somers Town House Route 202 Somers, NY.

Where Does Our Water Come From?

In general, 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 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. In order to ensure that tap water is safe to drink, the State and the EPA prescribe regulations which limit the amount of certain contaminants in water provided by public water systems. The State Health Department's and the FDA's regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

Our water sources during 2015 were the Amawalk Reservoir, located in the Town of Somers the Catskill Aqueduct in the Town of Cortlandt and 4 Groundwater wells also located in the Town of Somers. Water at The Catskill and Amawalk Water Treatment Plants are treated with the following processes prior to distribution: pH adjustment, coagulation, filtration, chlorine disinfection, fluoridation, and corrosion control. The Groundwater wells are treated with Sodium Hypochloride for disinfection

The NYS DOH has evaluated the susceptibility of water supplies statewide to potential contamination under the Source Water Assessment Program (SWAP), and their findings are summarized in the paragraph(s) 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 PWS. This PWS provides treatment and regular monitoring to ensure the water delivered to consumers meets all applicable standards. This PWS obtains water from the New York City water supply system. Water either come from the Catskill/Delaware watersheds east of the Hudson River and/or from the Croton watershed in Putnam and Westchester counties. The New York City Department of Environmental Protection (DEP) implements a series of programs to evaluate and protect source water quality within these watersheds. Their efforts focus on three important program areas: the enforcement of strengthened Watershed Rules and Regulations; the acquisition and protection of watershed lands; and implementation partnership programs that target specific sources of pollution in the watersheds.

Due to these intensive efforts, the SWAP methodologies applied to the rest of the state were not applied for this PWS. Additional information on the water quality and protection efforts in these New York City watersheds can be found at DEP's web site

<http://www.nyc.gov/dep/watershed>

This PWS obtains water from the Catskill/Delaware watersheds east of the Hudson. The reservoirs in this mountainous rural area are relatively deep with little development along their shorelines. The main water quality concerns associated with land cover is agriculture, which can contribute microbial contaminants, pesticides, and algae producing nutrients. There are also some potential contamination concerns associated with residential lands and associated wastewater discharges. However, advanced treatments which reduce contaminants are in place for most of these discharges. There are also a number of other discrete facilities, such as landfills, chemical bulk storages, etc. that have the potential to impact local water quality, but large significant water quality problems associated with these facilities are unlikely due to the size of the watershed and surveillance and management practices.

As mentioned before, we also obtain water from 4 drilled wells. The source water assessment has rated these wells as having a medium-high susceptibility to microbials and nitrates. These ratings are primarily due to the close proximity of permitted discharge facilities (industrial/commercial facilities that discharge wastewater into the environment and are regulated by the state and/or federal government) to the wells, as well as residential landuse and associated activities, such as fertilizing lawns.

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In addition, the wells drawing from unconfined aquifer, which is a shallow aquifer that occurs immediately below the ground surface and has no overlying protective layer for protection from potential sources of contamination and the hydraulic conductivity of the aquifer is unknown. While the source water assessment rates our well(s) as being susceptible to microbials, please note that our water is disinfected to ensure that the finished water delivered into your home meets New York State's drinking water standards for microbial contamination

Facts And Figures

Our water system serves approximately 3800 people and has approximately 950 service connections. In 2015, the water district treated approximately 80 million gallons of water and sold 71 million gallons of water to our metered customers. This leaves 9 million gallons of water unaccounted for during the year, which is about 11 % of the total amount purchased. Water that is unaccounted for was primarily lost during our hydrant flushing program, used to fight fires, and was lost from water main breaks or through leakage. In 2015, most water customers were charged a minimum charge of \$40.00 per quarter and \$5.45 per 1,000 gallons.

Are There Contaminants In Our Drinking Water?

As the State regulations require, we routinely test your drinking water for numerous contaminants. These contaminants include: total coliform, turbidity, inorganic compounds, nitrate, nitrite, lead and copper, volatile organic compounds, and synthetic organic compounds. The table presented below depicts which compounds were detected in your drinking water. The State allows us to test for some contaminants less than once per year because the concentrations of these contaminants do not change frequently. Some of our data, though representative, may be more than one year old.

It should be noted that all drinking water, including bottled drinking water, may be reasonably expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the EPA's Safe Drinking Water Hotline (800-426-4791), <http://www.epa.gov/safewater> or the Westchester County Health Department at (914) 813-5000, <http://www.westchester.gov/health>.

Definitions: This report is based upon tests conducted in 2015. Key terms used in this report come from the EPA and are defined here.

Maximum Contaminant Level (MCL): The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible.

Maximum Contaminant Level Goal (MCLG): 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.

Action Level (AL): The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

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

Milligrams per liter (mg/l): Corresponds to one part of liquid in one million parts of liquid (parts per million - ppm).

Micrograms per liter (ug/l): Corresponds to one part of liquid in one billion parts of liquid (parts per billion - ppb).

Picograms per liter (pg/l): Corresponds to one part per of liquid to one quadrillion parts of liquid (parts per quadrillion – ppq).

Picocuries per liter (pCi/L): A measure of the radioactivity in water.

Millirems per year (mrem/yr): A measure of radiation absorbed by the body.

Detected Contaminants. We test for a number of contaminants. The tables show any concentration above its minimum detection limit (MDL). If we can detect a contaminant, it does not mean that it is above the MCL or that we need to take action.

Non-Detected Substances and the Frequency of Testing

according to State regulations, the following lists of substances (along with test frequencies) were tested for in your drinking water and **not detected**. Bromoacetic acid and Bromoform were tested quarterly from eight sites. Antimony, arsenic, beryllium, cadmium, chromium, mercury, nitrite, selenium, silver, thallium and were tested for annually. Bromochloromethane, bromomethane, carbon tetrachloride, chloroethane, chloromethane, dibromomethane, 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, methylene chloride, 1,1,1,2-tetrachloroethane, 1,1,2,2-tetrachloroethane, tetrachloroethene, 1,1,1-trichloroethane, 1,1,2-trichloroethane, trichloroethene, trichlorofluoromethane, 1,2,3-trichloropropane, vinyl chloride, benzene, bromobenzene, n-butylbenzene, sec-butylbenzene, tert-butylbenzene, chlorobenzene, 2-chlorotoluene, 4-chlorotoluene, 1,2-dichlorobenzene, 1,3-dichlorobenzene, 1,4-dichlorobenzene, ethyl benzene, hexachlorobutadiene, isopropylbenzene, p-isopropyltoluene, naphthalene, n-propylbenzene, styrene, toluene, 1,2,3-trichlorobenzene, 1,2,4-trichlorobenzene, 1,2,4-trimethylbenzene, 1,3,5-trichloromethylbenzen, p&m-xylene, o-xylene, methyl t-butyl ether, methyl isobutyl ketone, 1,2-dibromoethane, 1,2-dibromo-3-chloropropane, aldrin, dieldrin, chlordane, endrin, heptachlor, heptachlor epoxide, lindane, methoxychlor, toxaphene, proachlor, PCB's, 2,4-D, 2,4,5-T, silvex, dalapon, dicamba, dinoseb, pentachlorophenol, pichloram,alachlor, atrazine, simazine, hexachlorobenzene, hexachlorocyclopentadiene, benzo(a)pyrene, di (2-ethylhexyl) adipate, di (2-ethylhexyl) phthalate, aldicarb sulfoxide, aldicarb sulfone, oxamyl, methomyl, 3-hydroxycarbofuran, aldicarb, carbofuran, carbaryl, glyphosate, and Diquat were tested annually.

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TABLE OF DETECTED SUBSTANCES

Parameter	Violation Yes/No	Date of Sample	Level Detected (Average & Range)	Unit Measurement	MCLG	Regulatory Limit (MCL, TT, or AL)	Likely Source
Inorganic							
Alkalinity	no	1/1 - 12/31/15	44.3 20.0 - 88.4	mg/L as CaCO3	N/A	N/A	Naturally occurring
Antimony	no	5/21/15	0.25 0.40	ug/l	N/A	N/A	In ceramics, electronics and solder
Aluminum	no	5/21/15	0.20	mg/L	N/A	N/A	Naturally occurring
Barium	no	3/9& 5/21/2015	0.075 0.109 - 0.041	mg/L	2	MCL 2	Erosion of natural deposits.
Calcium	no	3/9/2015	46.7	mg/L	N/A	N/A	Naturally occurring
Chloride	no	3/9& 5/21/2015	52.45 24.8 - 80.1	mg/L	N/A	250	Naturally occurring or indicative of road salt contamination.
Chlorine, Free	no	1/1 - 12/31/15	0.81 0.58 - 2.55	mg/L	4	N/A	Water treatment additive used for disinfection
Chromium	no	5/21/2015	7.0	ug/L	100	100	Naturally occurring
Copper ¹	no	08/18/14	387 ¹ 74.5 - 401	ug/L	1300	1300	Corrosion of household plumbing systems; Erosion of natural deposits; leaching from wood preservatives.
Fluoride	no	1/1 - 12/31/15	0.37 0.12 - 0.63	mg/L	N/A	2.2	Erosion of natural deposits; Water additive that promotes strong teeth; Discharge from fertilizer and aluminum factories.
Hardness	no	3/9& 5/21/2015	89.8 11.2-169	mg/L as CaCO3	N/A	N/A	Naturally occurring
Iron	no	5/21/15	0.03	mg/L	N/A	300	Naturally occurring
Lead ²	no	6/21/2014	3.8 ² 0.0 - 4.9	µg/L	0	15	Corrosion of household plumbing systems; Erosion of natural deposits.
Magnesium	no	3/9/15	11.85 10.9-12.8	mg/L	N/A	N/A	Naturally occurring
Manganese	no	5/21/15	1.5	µg/L	N/A	300	Naturally occurring; Indicative of landfill contamination.
Nickel	no	3/9/2015	1.0	µg/L	N/A	N/A	Naturally occurring
PH	no	1/1 - 12/31/15	7.75 6.95- 8.23	N/A	N/A	N/A	N/A
Phosphate, Ortho	no	1/1 - 12/31/15	0.99 0.66- 1.64	mg/L	N/A	N/A	Water treatment additive to prevent corrosion
Sodium	no	3/9& 5/21/2015	24.9 16.3-33.4	mg/L	N/A	270 (20)	Naturally occurring or indicative of road salt contamination.
Sulfate	no	3/9& 5/21/2015	9.07 7.55-10.6	mg/L	N/A	250	Naturally occurring
Zinc	no	3/9/2015	0.02	mg/L	N/A	5	Naturally occurring
Microbiological							
Distribution Turbidity ³	no	1/1 - 12/31/15	0.40 0.05 - 0.37	NTU	N/A	MCL 5 NTU	Soil runoff and reservoir disturbance
Filtration ⁴ Turbidity	no	1/1 - 12/31/15	0.40 99.92%	NTU	N/A	TT=95% of samples<0.3 NTU	Soil runoff and reservoir disturbance
Total Coliform Bacteria	no	5/5/2015	1 Positive Sample	n/a	0	2 or more Positive Samples	Naturally occurring
Organic							
Haloacetic Acids ⁵	no	1/1/2015 - 12/31/2015	17 9.1 - 27	µg/L	N/A	60	By-product of drinking water disinfection needed to kill harmful organisms.
Trihalomethanes ⁶	no	1/1/2015- 12/31/2015	42.9 17.8 - 54.2	µg/L	N/A	80	By-product of drinking water disinfection needed to kill harmful organisms.

(Continued)

TABLE OF DETECTED SUBSTANCES (CONTINUED)

Parameter	Violation Yes/No	Date of Sample	Level Detected (Average & Range)	Unit Measurement	MCLG	Regulatory Limit (MCL, TT, or AL)	Likely Source
Radioactive							
Combined Radium 226 and Radium 228	no	9/9/15	0.3525	pCi/L	0	MCL Combined radium 226 & 228 5.0	Decay of natural deposits.
			0.610 0.470-0.610	pCi/L	0		Decay of natural deposits.
Gross Alpha activity	no	9/9/15	5.465 2.05-814	pCi/L	0	MCL 15 excl.U238	Decay of natural deposits.
Gross Beta activity	no	9/9/15	2.298 0.911-3.800	pCi/L	0	MCL 4 mrem/yr	Decay of natural deposits and human-made emissions
Total Uranium	no	9/9/15	6.32 2.74-101.10	µg/L	0	30	Decay of natural deposits and human-made emissions

¹ This concentration presented represents the 90th percentile of the 20 sites tested for copper in 2014. 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. This value was 387 µg/L. The action level was not exceeded at any of the sites tested.

² This concentration represents the 90th percentile of the 20 sites tested for lead in 2014. The action level for lead of 15µg/L was not was not exceeded at the 90th percentile. This value was 3.8 µg/L.

³ Turbidity is a measure of the cloudiness of the water. There are two regulations for turbidity. At least 95% of the samples collected must be below 0.50 NTU. All values measured must be below 5 NTU.

⁴ This is a quarterly composite sampling from both the Amawalk and Catskill water treatment plants.

⁵ This level represents the locational running annual average and the range of the following contaminants: monochloroacetic acid, monobromoacetic acid, dichloroacetic acid, trichloroacetic acid, dibromoacetic acid.

⁶ This level represents the locational running annual average and the range of the following contaminants: chloroform, bromodichloromethane, dibromochloromethane, bromoform.

What does this information mean?

As you can see by the table, our system had no violations. We have learned through our testing that some contaminants have been detected; however, these contaminants were detected below the level allowed by the State.

Is Our System Meeting Other Rules That Govern Operations?

During 2015, our system was in compliance with applicable State drinking water operating, monitoring and reporting requirements. However, Northern Westchester Joint Water Works was issued the following violation and we are required to report it to you.

“ On November 24, 2015 Westchester County Department of Health (W.C.H.D.) determined that the Northern Westchester Joint Water Works was in violation of Part 5, Subpart 5-1, sections 5-1.52 (table 8C) of the New York State Sanitary Code (NYSSC) for failure to collect “...the required samples for Nitrites/Nitrates for the compliance period beginning 1/1/2015 and ending 12/31/2015 were not analyzed between 04/01/2015 and 06/30/2015....” It must be noted that the required annual Nitrite/Nitrate samples were collected on 11/09/2015 and were found to be well below the Maximum Contaminate Level (MCL) of 1.0 mg/l and 10.0 mg/l respectively.

The 2015 results for Nitrite/nitrate were as follows:

	<u>Nitrite</u>	<u>Nitrate</u>	<u>Units</u>
Catskill	<0.01	0.08	mg/l
Amawalk	<0.01	0.05	mg/l
M.C.L.	1.0	10	mg/l

If you have any questions or would like additional information please contact Matthew Geho, Director of Operations-NWJWW at 914-737-3558 ext # 111 or matthewgeho@nwjww.com

Do I Need To Take Special Precautions?

Although our drinking water met or exceeded state and federal regulations, 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 (800-426-4791).

Information on Lead:

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. The Amawalk Heights District is 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 (1-800-426-4791) or at <http://www.epa.gov/safewater/lead>.

Information on Fluoride Addition.

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 0.7 to 1.2 mg/l (parts per million). 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 2015 fluoride **was not** continuously supplied due to modifications to the fluoride delivery system and treatment plant chemical upgrades. Fluoride was online at the Amawalk Treatment Facility during May – December.

Protecting Your Home Against Cross-Connections:

Under Part 5 Section 5-1.31 of the New York State Sanitary Code, the New York State Department of Health requires the Amawalk-Shenorock Water District to have a Cross Connection Control Program and to educate its customers in preventing cross connections in their homes.

Without proper protection devices, something as useful as your garden hose has the potential to poison your home's water supply. In fact, over half of the nation's cross-connections involve unprotected garden hoses.

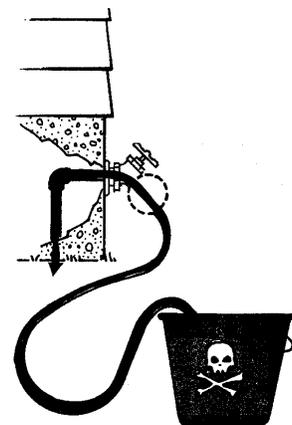
What is a "cross-connection?"

A cross-connection is a permanent or temporary piping arrangement, which can allow your drinking water to be contaminated if a backflow condition occurs.

What is "backflow" ?

It's just what it sounds like: the water is flowing in the opposite direction from its normal flow. With the direction of flow reversed, due to a change in pressures, backflow can allow contaminants to enter our drinking water system through cross-connections.

A potentially hazardous cross-connection occurs every time someone uses a garden hose sprayer to apply insecticides or herbicides to their lawn. Another cross-connection occurs when someone uses their garden hose to clear a stoppage in their sewer line.



Without a backflow prevention device between your hose and hose bibb (spigot or outside faucet), the contents of the hose and anything it is connected to can backflow into the piping system and contaminate your drinking water.

This hazardous situation sometimes can affect more than a single home. In 1977, an entire town in North Dakota had to be rationed drinking water from National Guard water trucks while the town's water distribution system was flushed and disinfected following contamination by DDT. Investigation determined that two residents spraying DDT had made direct cross-connections to their homes. A backflow condition had occurred, sucking the DDT through the home piping systems and out into the town's water distribution system.

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Backflows due to cross-connections are serious plumbing problems. They can cause sickness and even death. However, they can be avoided by the use of proper protection devices. Each spigot at your home should have a hose-bibb vacuum breaker installed. This is a simple, inexpensive device which can be purchased at any plumbing or hardware store. Installation is as easy as attaching your garden hose to a spigot.

Now you know how cross connections can occur and how to avoid and prevent them. If you know of a cross connection in your plumbing and need assistance in correcting the hazard, please contact this office immediately. For more information about cross connections, you may contact the Westchester County Department of Health, 145 Huguenot Street, New York 10801. (914) 813- 5000

Water Conservation:

Although our system has an adequate amount of water to meet present and future demands, there are a number of reasons why it is important to conserve water:

- ◆ Saving water saves energy and some of the costs associated with both of these necessities of life;
- ◆ Saving water reduces the cost of energy required to pump water and the need to construct costly new wells, pumping systems and water towers; and
- ◆ Saving water lessens the strain on the water system during a dry spell or drought, helping to avoid severe water use restrictions so that essential fire fighting needs are met.

How Can I Conserve My Water?

You can play a role in conserving water 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. Conservation tips include:

- ◆ 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. Repair 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 one of these otherwise invisible toilet leaks. Fix it and you save more than 30,000 gallons a year.

In order to maintain a safe and dependable water supply we continually making necessary improvements that will benefit all of our customers. The costs of these improvements may be reflected in the rate structure. Rate adjustments are necessary in order to address these improvements. We ask that all our customers help us protect our water sources, which are the heart of our community, our way of life and our children's future. Please call our office if you have questions.

PLEASE SHARE THIS REPORT WITH OTHERS!
TO OBTAIN ADDITIONAL COPIES, CALL THE AMAWALK-SHENOROCK WATER DISTRICT AT
(914) 248-5181