

2016 drinking water quality report

INC. VILLAGE OF BAYVILLE

PUBLIC WATER SUPPLY IDENTIFICATION NO. 2902816

ANNUAL WATER SUPPLY REPORT

MAY 2017

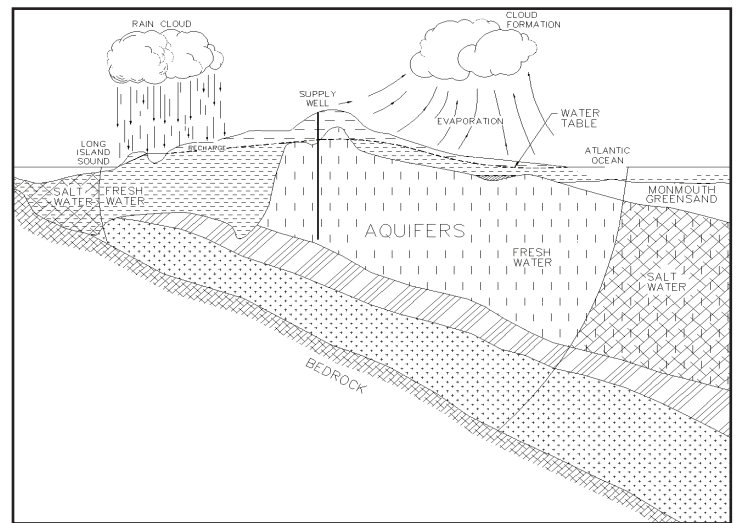
The Inc. Village of Bayville is pleased to present this year's Water Quality Report. The report is required to be delivered to all residents of our Village in compliance with Federal and State regulations. This report is designed to inform you about the quality of water and services we deliver to you every day. Our constant goal is to provide you with a safe and dependable supply of drinking water. We also want you to understand the efforts we make to continually improve the water treatment process and protect our water supply. The Board of Trustees and the Village Water Department are committed to ensuring that you and your family receive the highest quality water.

SOURCE OF OUR WATER

During 2016, the source of water for the Village is groundwater pumped from the two (2) active wells located throughout the Village that are drilled into the Lloyd aquifer beneath Long Island, as shown on the adjacent figure. A third well (Well No. 2-1) has recently been re-activated and will be used in 2017. Generally, the water quality of the aquifer is good-to-excellent.

In order to ensure that our tap water is safe to drink, the State and the EPA prescribe regulations that 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.

The population served by the Inc. Village of Bayville during 2016 was 6,723. The total amount of water withdrawn from the aquifer in 2016 was 289.0 million gallons, of which approximately 95 percent was billed directly to consumers.



THE LONG ISLAND AQUIFER SYSTEM

WATER TREATMENT

The Inc. Village of Bayville provides treatment at all of its wells to improve the quality of the water pumped prior to distribution to the consumer. The pH of the pumped water is adjusted upward to reduce the corrosive action between the water and water mains and in-house plumbing by the addition of sodium hydroxide. The Village adds a slight amount of chlorine to the water as a disinfecting agent to prevent the growth of bacteria in the distribution system.

WATER QUALITY

In accordance with State regulations, the Village of Bayville routinely monitors your drinking water for numerous parameters. We test your drinking water for coliform bacteria, turbidity, inorganic contaminants, lead and copper, nitrate, volatile organic contaminants, total trihalomethanes and synthetic organic contaminants. Over 130 separate parameters are tested for, in each of our wells numerous times per year. The table presented on page 3 depicts which parameters or contaminants were detected in the water supply. It should be noted that many of these parameters are naturally found in all Long Island drinking water and do not pose any adverse health effects.

WATER CONSERVATION MEASURES

The underground water system of Long Island has more than enough water for present water demands. However, saving water will ensure that our future generations will always have a safe and abundant water supply.

In 2016, the Inc. Village of Bayville continued to implement a water conservation program in order to minimize any unnecessary water use. The pumpage for 2016 was 4.8 percent less than in 2015. This can be attributed to the cooler and wetter weather conditions that occurred in 2016 compared to 2015.

Residents of the Village can also implement their own water conservation measures such as retrofitting plumbing fixtures with flow restrictors, modifying automatic lawn sprinklers to include rain sensors, repairing leaks in the home, installing water conservation fixtures/appliances and maintaining a daily awareness of water conservation in their personal habits. In addition, Nassau County Lawn Sprinkler Regulations are still in effect as follows:

- All water sprinkling is prohibited between 10 a.m. and 4 p.m.
- Even numbered addresses are allowed to sprinkle on even-numbered dates during the prescribed hours and odd-numbered addresses are allowed to sprinkle on odd-numbered dates during the prescribed hours.
- County law enforcement officers will assist water purveyors in enforcing the regulations through the issuance of a summons which will result in a fine.

Besides protecting our precious underground water supply, water conservation will produce a cost savings to the consumer in terms of both water and energy bills (hot water).

COST OF WATER AND SYSTEM IMPROVEMENTS

The Village utilizes a step billing schedule as shown in the table. The average consumer is being billed at \$2.22 per 1,000 gallons of water used, including the minimum charge.

The Village recently completed the improvements to Well and Pump Station No. 2-1, which allowed the well to be placed back into service in 2017. We have also made significant improvements to our wells and treatment systems to improve its operational reliability.

Quarterly Water Rates

Consumption (gallons)	Charges
0 to 5,000	\$27.50 minimum charge
5,001 to 10,000	\$1.19/thousand gallons
10,001 to 35,000	\$1.82/thousand gallons
35,001 to 70,000	\$2.12/thousand gallons
70,001 to 102,000	\$2.42/thousand gallons
102,001 to 137,000	\$2.73/thousand gallons
137,001 to 175,000	\$3.03/thousand gallons
175,001 to 215,000	\$3.63/thousand gallons
215,001 to 500,000	\$4.25/thousand gallons
Greater than 500,001	\$4.54/thousand gallons

CONTACTS FOR ADDITIONAL INFORMATION

We are pleased to report that our drinking water is safe and meets all Federal and State requirements. If you have any questions about this report or concerns about your water utility, please contact the Village Administrator, Maria Alfano-Hardy at (516) 628-1439, ext. 120 or the Nassau County Department of Health at (516) 227-9692. We want our valued customers to be informed about our water system. If you want to learn more, please attend any of our regularly scheduled Village Board meetings. They are normally held on the fourth Monday of each month at 7:30 p.m. at the Village Hall.

The Inc. Village of Bayville routinely monitors for different parameters and possible contaminants in your drinking water as required by Federal and State laws. All drinking water, including bottled drinking water, may be reasonably expected to contain at least small amounts of some impurities. It's important to remember that the presence of these impurities does not necessarily pose a health risk. For more information on contamination and potential health risks, please contact the USEPA Safe Drinking Water Hotline at (800-426-4791) or visit www.epa.gov/safewater.

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 to infection by Cryptosporidium, Giardia and other microbial pathogens are available from the Safe Drinking Water Hotline (800-426-4791).

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.

In order to ensure that tap water is safe to drink, the State and the EPA prescribe regulations that 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.

2016 DRINKING WATER QUALITY REPORT - TABLE OF DETECTED PARAMETERS

Contaminants	Violation (Yes/No)	Date of Sample	Level Detected (Maximum Range)	Unit Measurement	MCLG	Regulatory Limit (MCL or AL)	Likely Source of Contaminant
Inorganic Contaminants							
Copper	No	September 2014	0.23 - 0.35 0.28 ⁽¹⁾	ug/l	1.3	AL = 1.3	Corrosion of household plumbing systems; Erosion of natural deposits
Lead	No	September 2014	2.1 - 2.7 2.6 ⁽¹⁾	mg/l	0	AL = 15	Corrosion of household plumbing systems; Erosion of natural deposits
Sodium	No	08/30/16	3.9 - 9.6	mg/l	n/a	No MCL ⁽²⁾	Naturally occurring
Chloride	No	09/06/16	4.3 - 67.8	mg/l	n/a	MCL = 250	Naturally occurring
Nitrate	No	06/14/16	0.6 - 0.82	mg/l	10	MCL = 10	Runoff from fertilizer and leaching from septic tanks and sewage
Magnesium	No	06/14/16	1.1 - 1.3	mg/l	n/a	NONE	Naturally occurring
Calcium	No	06/14/16	2.6 - 3.0	mg/l	n/a	NONE	Naturally occurring
Barium	No	09/06/16	0.003	mg/l	2.0	MCL = 2.0	Naturally occurring
Radionuclides							
Gross Alpha	No	09/06/16	ND - 2.56	pCi/L	n/a	MCL = 15	Naturally occurring
Gross Beta	No	09/06/16	1.07 - 2.08	pCi/L	n/a	MCL = 15	Naturally occurring
Radium 226 & 228	No	06/14/16	0.435 - 0.567	pCi/L	n/a	MCL = 5 ⁽⁴⁾	Naturally occurring

Definitions:

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.

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).

ppt - parts per trillion

Non-Detects (ND) - Laboratory analysis indicates that the constituent is not present.

pCi/L - pico Curies per Liter is a measure of radioactivity in water.

⁽¹⁾ - During 2014, the Village collected 20 samples for lead and copper. The values reported for lead and copper represent the 90th percentile. 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. In our sampling program, the 90th percentile value is the third highest result.

The next round of samples will occur in 2017. 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. Inc. Village of Bayville 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>.

⁽²⁾ - No MCL has been established for sodium. However, 20 mg/l is a recommended guideline for people on high restricted sodium diets and 270 mg/l for those on moderate sodium diets.

⁽³⁾ - Iron is only a secondary water standard. Iron has no health effects. Therefore, exceeding the MCL represents a level at which adverse aesthetics effects start to occur.

⁽⁴⁾ -MCL for Radium is for Radium 226 and Radium 228 combined.

SOURCE WATER ASSESSMENT

The NYSDOH, with assistance from the local health department, has completed a source water assessment for this system, based on available information. Possible and actual threats to this drinking water source were evaluated. The source water assessment includes a susceptibility rating based on the risk posed by each potential source of contamination and how rapidly contaminants can move through the subsurface to the wells. The susceptibility of a water supply well to contamination is dependent upon both the presence of potential sources of contamination within the well's contributing area and the likelihood that the contaminant can travel through the environment to reach the well. The susceptibility rating is an estimate of the potential for contamination of the source water, it does not mean that the water delivered to consumers is, or will become contaminated. Please refer to section "Water Quality" and page 3 for a list of the contaminants that have been detected. The source water assessments provide resource managers with additional information for protecting source waters into the future.

Drinking water is derived from 3 wells (two (2) in 2016 plus Well No. 2-1 being placed back into service in 2017). The source water assessment has rated all of the wells as having a low susceptibility to potential sources of contamination. However, due to the highly sensitive characteristics of the aquifer, continued vigilance in compliance with water quality protection and pollution prevention programs as well as continued monitoring and enforcement will help to continue to protect groundwater quality.

A copy of the assessment, including a map of the assessment area, can be reviewed by contacting the Village Office.

Copies of the Supplemental Data Package, which includes the water quality data for each of our supply wells utilized during 2016, are available at Village Hall located at 34 School Street, Bayville, New York and the local Public Library.

We, at the Inc. Village of Bayville, work around the clock to provide top quality water to every tap throughout the community. We ask that all our customers help us protect our water supply which will improve our way of life and our children's future.

The Inc. Village of Bayville conducts over 3,000 water quality tests throughout the year, testing for over 130 different contaminants which have been undetected in our water supply including:

Arsenic	Metribuzin	Chloroform	1,3-Dichloropropane
Cadmium	Butachlor	Bromodichloromethane	Chlorobenzene
Chromium	2,4-D	Dibromochloromethane	1,1,1,2-Tetrachloroethane
Copper	2,4,5-TP (Silvex)	Bromoform	Bromobenzene
Fluoride	Dinoseb	Total Trihalomethanes	1,1,2,2-Tetrachloroethane
Mercury	Dalapon	Gross Alpha	1,2,3-Trichloropropane
Selenium	Picloram	Gross Beta	2-Chlorotoluene
Silver	Dicamba	Radium 226	4-Chlorotoluene
Color	Pentachlorophenol	Radium 228	1,2-Dichlorobenzene
Turbidity	Hexachlorocyclopentadiene	Dichlorodifluoromethane	1,3-Dichlorobenzene
Odor	bis(2-Ethylhexyl)adipate	Chloromethane	1,4-Dichlorobenzene
Manganese	bis(2-Ethylhexyl)phthalate	Vinyl Chloride	1,2,4-Trichlorobenzene
Ammonia	Hexachlorobenzene	Bromomethane	Hexachlorobutadiene
Nitrite	Benzo(A)Pyrene	Chloroethane	1,2,3-Trichlorobenzene
Detergents (MBAS)	Aldicarb Sulfone	Trichlorofluoromethane	Benzene
Sulfate	Aldicarb sulfoxide	Chlorodifluoromethane	Toluene
Free Cyanide	Aldicarb	1,1-Dichloroethene	Ethylbenzene
Antimony	Total Aldicarbs	Methylene Chloride	M,P-Xylene
Beryllium	Oxamyl	Trans-1,2-Dichloroethene	O-Xylene
Thallium	Methomyl	1,1-Dichloroethane	Styrene
Perchlorate	3-Hydroxycarbofuran	cis-1,2-Dichloroethene	Isopropylbenzene (Cumene)
Lindane	Carbofuran	2,2-Dichloropropane	N-Propylbenzene
Heptachlor	Carbaryl	Bromochloromethane	1,3,5-Trimethylbenzene
Aldrin	Glyphosate	1,1,1-Trichloroethane	Tert-Butylbenzene
Heptachloro Epoxide	Diquat	Carbon Tetrachloride	1,2,4-Trimethylbenzene
Dieldrin	Endothall	Carbon Tetrachloride	Sec-Butylbenzene
Endrin	1,2-Dibromoethane (EDB)	1,1-Dichloropropene	4-Isopropyltoluene (P-Cumene)
Methoxychlor	1,2-Dibromo-3-Chl.Propane	1,2-Dichloroethane	N-Butylbenzene
Toxaphene	Dioxin	Trichloroethene	Methyl Tert.Butyl Ether (MTBE)
Chlordane	Chloroacetic Acid	1,2-Dichloropropane	Zinc
Total PCBs	Bromoacetic Acid	Dibromomethane	Perfluorooctanoic Acid (PFOA)*
Propachlor	Dichloroacetic Acid	Trans-1,3-Dichloropropene	Coliform Bacteria
Atachlor	Trichloroacetic Acid	cis-1,3-Dichloropropene	
Atrazine	Dibromoacetic Acid	1,1,2-Trichloroethane	
Metolachlor	Total Haloacetic Acid	Tetrachloroethene	

* - The Village of Bayville tested its drinking water for PFOAs in 2015 due to the situation that occurred in the Village of Hoosick Falls, New York. We are pleased to report that PFOA was not detected in our water supply.