

2016 drinking water quality report

OYSTER BAY WATER DISTRICT
PUBLIC WATER SUPPLY IDENTIFICATION NO. 2902844

Board of Commissioners
Robert J. McEvoy, Chairman
Michael F. Rich, III, Secretary
Richard P. Niznik, Treasurer

ANNUAL WATER SUPPLY REPORT

MAY 2017

The Oyster Bay Water District is pleased to present to you this year's Water Quality Report. The report is required to be delivered to all residents of our District in compliance with Federal and State regulations. The Board of Commissioners is happy to report that our water is in full compliance with all Federal, State and County regulations. Our constant goal is to provide you with a safe and dependable supply of drinking water every day. We also want you to understand the efforts we make to continually improve the water treatment process and protect our water resources. The Board of Water Commissioners and the District employees are committed to ensuring that you and your family receive the highest quality water.

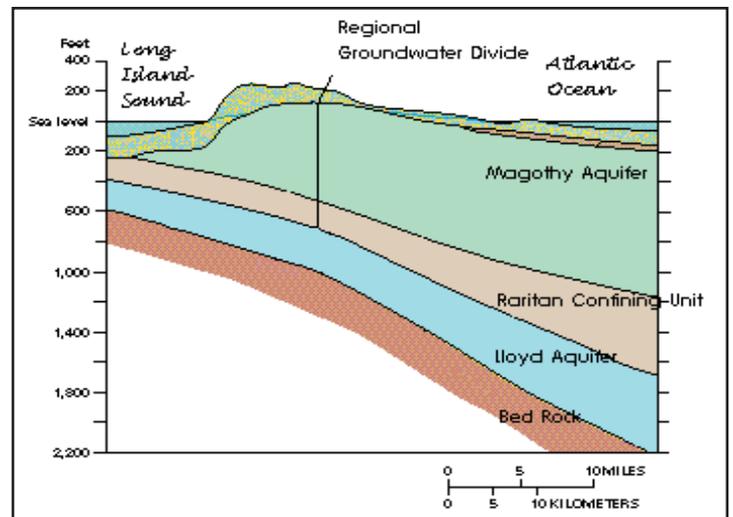
SOURCE OF OUR WATER

The source of water for the District is groundwater pumped from five (5) wells located throughout the community that are drilled into the Glacial and Magothy aquifers beneath Long Island, as shown on the enclosed figure. Generally, the water quality of the aquifers in Oyster Bay is excellent.

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 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 Oyster Bay Water District during 2016 was 8,500. The total amount of water withdrawn from the aquifer in 2016 was 456.2 million gallons, of which approximately 96 percent was billed directly to consumers.



THE LONG ISLAND AQUIFER SYSTEM

WATER TREATMENT

The Oyster Bay Water District provides treatment at all 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 corrosive action between the water and water mains and in-house plumbing by the addition of sodium hydroxide. As mandated by the New York State and Nassau County Health Departments, the District currently adds a slight amount of chlorine to the water as a disinfection agent to prevent the growth of bacteria in the distribution system. A granular activated carbon treatment system is used at Plant No. 2 – Shutter Lane.

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 concerning your water utility, please contact Operator of Record John Walsh (516) 922-4848 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 meetings. They are normally held on Thursday mornings at 9:00 a.m. at the Water District office.

The Oyster Bay Water District routinely monitors for different parameters and 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 constituents. It's important to remember that the presence of these constituents 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 1-800-426-4791 or www.epa.gov/safewater.

The USEPA established a Lead and Copper Rule that required all public water suppliers to sample and test for lead and copper at the tap. The first testing was required in 1992. All of our results were excellent indicating that the District's corrosion control treatment program was effective in preventing the leaching of lead and copper from your home's plumbing into your drinking water. Follow-up testing was last conducted in 2014 with the same excellent results. The next sampling program will occur in 2017. If present, elevated levels of lead can cause serious health problems, especially for pregnant women 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. Oyster Bay Water 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 or at <http://www.epa.gov/safewater/lead>.

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).

COST OF WATER

In order to reward customers who conserve water, the District utilizes step billing. The average residential consumer (domestic use) is being billed at \$1.00/1,000 gallons. To obtain a copy of the sprinkler system, or multi-user water rates, please contact the District office.

QUARTERLY WATER RATES - Residential

Consumption (gallons)	Charges
Up to 12,000	\$1.00/thousand gallons
12,001 - 24,000	\$1.55/thousand gallons
24,001 - 33,000	\$2.00/thousand gallons
33,001 - 60,000	\$2.50/thousand gallons
60,001 - 150,000	\$3.30/thousand gallons
Over 150,000	\$3.95/thousand gallons

WATER QUALITY

In accordance with State regulations, the Oyster Bay Water District 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 180 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 your drinking water. 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 affects.

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 Oyster Bay Water District continued to implement a water conservation program in order to minimize any unnecessary water use. The pumpage for 2016 was 2.6 percent more than in 2015. This can most likely be attributed to the hotter and drier weather conditions that occurred in 2016. The District also has implemented an Increase Water Rate Structure that promotes water conservation.

Residents of the District 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, consumers should be aware that the Nassau County Lawn Sprinkler Regulations are still in effect. 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). Utilizing the water conservation measures listed above can reduce your water use by 5%.

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	July 2014	ND-0.36 0.16 ⁽¹⁾	mg/l	1.3	AL = 1.3	Corrosion of household plumbing systems; Erosion of natural deposits
Lead	No	July 2014	ND - 2.4 1.6 ⁽¹⁾	ug/l	0	AL = 15	Corrosion of household plumbing systems; Erosion of natural deposits
Barium	No	06/28/16	0.002 - 0.01	mg/l	n/a	MCL = 200	Naturally occurring
Sodium	No	12/20/16	6.1 - 19.3	mg/l	n/a	No MCL ⁽²⁾	Naturally occurring
Magnesium	No	06/28/16	3.6 - 6.5	mg/l	n/a	None	Naturally occurring
Chloride	No	06/28/16	9.6 - 21.4	mg/l	n/a	MCL = 250	Naturally occurring
Calcium	No	06/28/16	8.4 - 15.0	mg/l	n/a	None	Naturally occurring
Nitrate	No	06/29/16	2.0 - 4.5	mg/l	10	MCL = 10	Runoff from fertilizer and leaching from septic tanks and sewage
Sulfate	No	06/28/16	ND - 14.3	mg/l	n/a	MCL = 250	Naturally occurring
Perchlorate	No	06/29/16	ND - 3.0	ug/l	0	AL = 18 ⁽³⁾	Fertilizer
Volatile Organic Contaminants							
Tetrachloroethene	No	03/30/16	ND - 1.54	ug/l	0	MCL = 5	Industrial/Commercial discharge
Disinfection By-Products							
Total Trihalomethanes (TTHMS)	No	09/27/16	ND - 6.9	ug/l	n/a	MCL = 80	Disinfection Byproducts
Radionuclides							
Gross Alpha	No	12/19/16	0.182 - 0.737	pCi/L	n/a	MCL = 15	Naturally occurring
Gross Beta	No	12/19/16	0.078 - 0.931	pCi/L	n/a	MCL = 50	Naturally occurring
Radium 226 & 228	No	12/19/16	ND - 0.664	pCi/L	n/a	MCL = 5 ⁽⁴⁾	Naturally occurring
Unregulated Contaminant Monitoring⁽⁵⁾							
1,4-Dioxane	No	10/12/16	ND - 0.45	ug/l	n/a	MCL = 50	Industrial discharge
Hexavalent Chromium	No	10/12/16	ND - 3.0	ug/l	n/a	None	Natural deposits

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).

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, we collected and analyzed 20 samples for lead and copper. The action levels for both lead and copper were not exceeded at any site tested. Resampling is scheduled to occur in 2017. 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 2nd highest result.

⁽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⁾ - Perchlorate is an unregulated contaminant. However, the State Health Dept. has established an action level of 18 ug/l.

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

⁽⁵⁾ - District voluntarily sampled all wells for compounds that are under consideration for possible future drinking water standards.

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. See section "Water Quality" for a list of the contaminants that have been detected (if any). The source water assessments provide resource managers with additional information for protecting source waters into the future.

Our drinking water is derived from five (5) wells. The source water assessment has rated one (1) of the wells as having an elevated susceptibility to industrial solvents. The elevated susceptibility to industrial solvents and nitrates is due primarily to the shallow depth of Well No. 1 and due to point sources of contamination related to commercial/industrial facilities and related activities in the assessment area. In addition, the high susceptibility to nitrates is also attributable to unsewered residential land use and related practices in the assessment area, such as fertilizing lawns.

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

WATER SYSTEM IMPROVEMENTS

The District is continuing with a Capital Improvement Program to rehabilitate existing equipment and facilities to ensure that the District is able to supply a safe and reliable source of drinking water and sufficient pumping capacity for fire flow protection. We are planning a few new capital improvement projects in 2017, including construction of a computerized control system and improvements to our chemical feed system at Plant No. 2 at Shutter Lane. Details of these projects are highlighted in the enclosed District Newsletter.

The Oyster Bay Water District 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	Metolachlor	Dibromoacetic Acid	Chlorobenzene
Cadmium	Metribuzin	Total Haloacetic Acid	1,1,1,2-Tetrachloroethane
Chromium	Butachlor	Bromodichloromethane	Bromobenzene
Mercury	2,4-D	Dibromochloromethane	1,1,2,2-Tetrachloroethane
Selenium	2,4,5-TP (Silvex)	Bromoform	1,2,3-Trichloropropane
Silver	Dinoseb	Fluoride	2-Chlorotoluene
Zinc	Dalapon	MTBE	4-Chlorotoluene
Iron	Picloram	N-Butylbenzene	1,2-Dichlorobenzene
Manganese	Dicamba	Sec-Butylbenzene	1,3-Dichlorobenzene
Color	Pentachlorophenol	Dichlorodifluoromethane	1,4-Dichlorobenzene
Turbidity	Hexachlorocyclopentadiene	Chloromethane	1,24-Trichlorobenzene
Odor	bis(2-Ethylhexyl)adipate	Vinyl Chloride	Hexachlorobutadiene
Ammonia	bis(2-Ethylhexyl)phthalate	Bromomethane	1,2,3-Trichlorobenzene
Nitrite	Hexachlorobenzene	Chloroethane	Benzene
Nickel	Benzo(A)Pyrene	Trichlorofluoromethane	Toluene
Detergents (MBAS)	Aldicarb Sulfone	Chlorodifluoromethane	Ethylbenzene
Free Cyanide	Aldicarb sulfoxide	1,1-Dichloroethene	M,P-Xylene
Antimony	Aldicarb	Methylene Chloride	O-Xylene
Beryllium	Total Aldicarb	Trans-1,2-Dichloroethene	Styrene
Thallium	Oxamyl	1,1-Dichloroethane	Isopropylbenzene (Cumene)
Lindane	Methomyl	cis-1,2-Dichloroethene	N-Propylbenzene
Heptachlor	3-Hydroxycarbofuran	2,2-Dichloropropane	1,3,5-Trimethylbenzene
Aldrin	Carbofuran	Bromochloromethane	Tert-Butylbenzene
Heptachloro Epoxide	Carbaryl	1,1,1-Trichloroethane	4-Isopropyltoluene (P-Cumene)
Dieldrin	Glyphosate	Carbon Tetrachloride	Total Coliform
Endrin	Diquat	1,2,4-Trimethylbenzene	
Methoxychlor	Endothall	1,1-Dichloropropene	
Toxaphene	1,2-Dibromoethane (EDB)	1,2-Dichloroethane	
Chlordane	1,2-Dibromo-3-Chl.Propane	1,2-Dichloropropane	
Total PCBs	Dioxin	Dibromomethane	
Propachlor	Chloroacetic Acid	Trans-1,3-Dichloropropene	
Alachlor	Bromoacetic Acid	cis-1,3-Dichloropropene	
Simazine	Dichloroacetic Acid	1,1,2-Trichloroethane	
Atrazine	Trichloroacetic Acid	1,3-Dichloropropane	

Copies of a Supplemental Data Package, which includes the water quality data for each of our supply wells utilized during 2016, are available at the Oyster Bay Water District office located at 45 Audrey Avenue, Oyster Bay, New York and the local Public Library.

We at Oyster Bay Water District 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 resources, which are the heart of our community, our way of life and our children's future.