

2016 drinking water quality report

CITY OF GLEN COVE WATER DEPARTMENT
PUBLIC WATER SUPPLY IDENTIFICATION NO. 2902826

ANNUAL WATER SUPPLY REPORT

MAY 2017

The City continues its commitment to provide our residents with drinking water that meets or exceeds quality standards while taking the necessary steps to improve our water delivery system infrastructure.

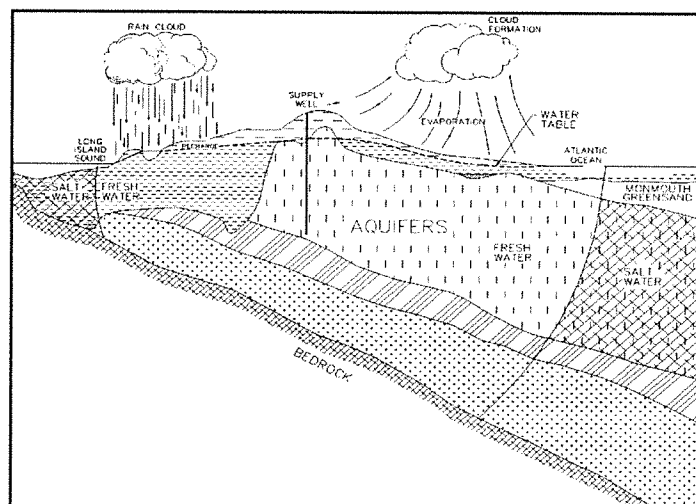
Reginald Spinello
Mayor

SOURCE OF OUR WATER

The source of water for the City is groundwater pumped from four (4) wells located throughout the community that are drilled into the aquifers beneath Long Island, as shown on the adjacent figure. Generally, the water quality of the aquifers is good to 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 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 LONG ISLAND AQUIFER SYSTEM

The population served by the City of Glen Cove during 2016 was 28,000. The total amount of water pumped by the City in 2016 was 1.47 billion gallons, of which approximately 79 percent was billed directly to consumers.

The remaining un-metered water is from uses such as municipal and public school facilities, fire fighting, hydrant flushing, main breaks and undetected service line and water main leaks.

WATER TREATMENT

The Water Department treats the water supply before it enters the distribution system. A small amount of chlorine is added to assure the water maintains its bacteria-free quality. Our water is also treated with sodium hydroxide to increase its pH to reduce its corrosivity before it enters the distribution system. This treatment reduces the leaching of copper and lead from household plumbing. Source water from the Kelly Street well is treated by air stripping to remove various volatile organic chemicals. Source water from the two (2) Duck Pond Road wells are treated by granular activated carbon filters to remove various organic chemicals and pesticides. All treatment is approved by and in strict accordance with Nassau County Department of Health standards. Our well at Seaman Road has been removed from service.

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 City of Glen Cove continued to implement a water conservation program in order to minimize any unnecessary water use. The pumpage for 2016 was approximately 3.9% less than the pumpage for 2015.

Water supply management has long been a practice in Glen Cove. Over the last 20 years, the city has initiated numerous programs geared to reducing water usage. Obviously, continued water conservation efforts will be required to maintain ample supplies.

Some of the major water conservation measures implemented by the City are:

Water Conservation Ordinances – local ordinances have long been in effect to restrict non-potable water use during periods of peak demand, such as Summer periods and fire emergencies. In 1987, the City, in an effort to promote conservation, amended its municipal ordinances and adopted stricter regulations related to:

- Water sprinkling (odd/even) hours are 5:00 a.m. to 9:00 a.m. and then again from 4:00 p.m. to midnight. There is NO watering permitted on the 31st of any month. Sprinkler systems must be equipped with a backflow device and rain sensor.
- Car washing – only self closing shut off valved hose permitted for use.
- Water saving plumbing fittings and fixtures are required on all new residential and commercial construction and in certain alterations and additions to existing construction.

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 entitled "Water Quality" 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 four (4) wells (Duck Pond (2), Nancy Court and Kelly Street). 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 obtained by contacting the City Water Dept.

WATER QUALITY

In accordance with State regulations, the City of Glen Cove 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 135 separate parameters are tested for in each of our wells numerous times per year. Over 5,000 tests are taken each year from the distribution system and supply wells. 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.

COST OF WATER

Our residential rate structure for each 3 month period is as follows: \$2.36 per 1,000 for the first 45,000 gallons, \$2.66 per 1,000 gallons for the next 45,000 gallons, and \$2.95 per 1,000 gallons for usage over 90,000 gallons.

The City of Glen Cove Water Department conducts over 5,000 water quality tests throughout the year, testing for over 130 different contaminants which have been undetected in our water supply including:

Arsenic	Alrazine	Trichloroacetic Acid	1,1,1,2-Tetrachloroethane
Cadmium	Metolachlor	Dibromoacetic Acid	Bromobenzene
Chromium	Metribuzin	cis-1,2-Dichloroethene	1,1,2,2-Tetrachloroethane
Mercury	Butachlor	Chloroform	1,2,3-Trichloropropane
Langlier Saturation Index	2,4-D	Bromodichloromethane	2-Chlorotoluene
Silver	2,4,5-TP (Silvex)	Dibromochloromethane	4-Chlorotoluene
N-Butylbenzene	Dinoseb	Bromoform	1,2-Dichlorobenzene
Ammonia	Dalapon	Methyl Tert. Butyl Ether (MTBE)	1,3-Dichlorobenzene
Color	Pictoram	Selenium	1,4-Dichlorobenzene
Turbidity	Dicamba	Dichlorodifluoromethane	1,2,4-Trichlorobenzene
Odor	Pentachlorophenol	Chloromethane	Hexachlorobutadiene
Nitrite	Hexachlorocyclopentadiene	Vinyl Chloride	1,2,3-Trichlorobenzene
E.coli	bis(2-Ethylhexyl)adipate	Bromomethane	Benzene
Total Alkalinity	bis(2-Ethylhexyl)phthalate	Chloroethane	Toluene
Tetrachloroethane	Hexachlorobenzene	Trichlorofluoromethane	Ethylbenzene
Total Dissolved Solids	Benzo(A)Pyrene	Chlorodifluoromethane	M,P-Xylene
Detergents (MBAS)	Aldicarb Sulfone	1,1-Dichloroethene	O-Xylene
Free Cyanide	Sec-Butylbenzene	Methylene Chloride	Styrene
Anlimony	Aldicarb	Trans-1,2-Dichloroethene	Isopropylbenzene (Cumene)
Beryllium	Total Aldicarbs	1,1-Dichloroethane	N-Propylbenzene
Thallium	Oxamyl	2,2-Dichloropropane	1,3,5-Trimethylbenzene
Lindane	Methomyl	Bromochloromethane	Tert-Butylbenzene
Heptachlor	3-Hydroxycarbofuran	1,1,1-Trichloroethane	1,2,4-Trimethylbenzene
Aldrin	Carbofuran	Carbon Tetrachloride	4-Isopropyltoluene (P-Cumene)
Heptachloro Epoxide	Carbaryl	1,1-Dichloropropene	
Dieldrin	Glyphosate	1,2-Dichloroethane	
Endrin	Diquat	Trichloroethene	
Methoxychlor	Endothall	1,2-Dichloropropane	
Toxaphene	1,2-Dibromoethane (EDB)	Dibromomethane	
Chlordane	1,2-Dibromo-3-Chl.Propane	Trans-1,3-Dichloropropene	
Total PCBs	Dioxin	cis-1,3-Dichloropropene	
Propachlor	Chloroacetic Acid	1,1,2-Trichloroethane	
Alachlor	Bromoacetic Acid	1,3-Dichloropropane	
Simazine	Dichloroacetic Acid	Chlorobenzene	

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	August 2014	ND - 0.38 0.29 ⁽¹⁾	mg/l	1.3	AL = 1.3	Corrosion of household plumbing systems; Erosion of natural deposits
Lead	No	August 2014	ND - 20.0 3.8 ⁽¹⁾	ug/l	1.3	AL = 15	Corrosion of household plumbing systems; Erosion of natural deposits
Barium	No	03/10/16	0.02 - 0.03	mg/l	n/a	MCL = 20	Naturally occurring
Sodium	No	07/21/16	12.0 - 43.0	mg/l	n/a	No MCL	Naturally occurring
Zinc	No	02/04/16	ND - 0.03	ug/l	n/a	MCL = 50	Naturally occurring
Nitrate	No	12/06/16	3.7 - 9.1	mg/l	n/a	MCL = 10	Naturally occurring
Sodium	No	03/10/16	12.0 - 20.0	mg/l	n/a	No MCL ⁽⁴⁾	Naturally occurring
Magnesium	No	03/10/16	5.2 - 8.2	mg/l	n/a	MCL = 100	Naturally occurring
Chloride	No	03/10/16	22.2 - 49.9	mg/l	n/a	MCL = 250	Naturally occurring
Total Hardness	No	03/10/16	52.9 - 86.3	mg/l	n/a	No MCL	Naturally occurring
pH	No	04/11/16	6.0 - 6.7	Units	n/a	No MCL	Naturally occurring
Calcium	No	03/10/16	13.0 - 22.0	mg/l	n/a	No MCL	Naturally occurring
Sulfate	No	03/10/16	15.7 - 35.4	mg/l	n/a	MCL = 250	Naturally occurring
Selenium	No	04/11/16	ND - 2.4	ug/l	n/a	MCL = 50	Naturally occurring
Perchlorate	No	02/04/16	ND - 2.3	ug/l	n/a	AL = 18 ⁽⁵⁾	Fertilizer
Synthetic Organic Contaminants							
Aldicarb Sulfoxide	No	08/18/16	ND - 0.6	ug/l	1	MCL = 4	Pesticide
Micro-Bacteriological							
Total Coliform	No	09/02/16	1 positive out of 244 samples	Positive or Negative	--	MCL = more than 5 percent positive samples per month	Commonly found in the environment
Disinfection By-Products							
Total Trihalomethanes	No	10/17/16	3.7 - 6.1	ug/l	n/a	MCL = 80	Disinfection By-Products
Haloacetic Acid (HAA5)	No	12/07/16	ND - 1.7	ug/l	n/a	MCL = 60	Disinfection By-Products
Radionuclides							
Gross Alpha	No	08/15/16	1.53 - 2.66	pCi/L	--	MCL = 15	Naturally occurring
Gross Beta	No	08/15/16	0.91 - 4.89	pCi/L	--	MCL = 50	Naturally occurring
Radium 226 & 228 Combined	No	08/15/16	1.3 - 2.07	pCi/L	--	MCL = 5 ⁽⁶⁾	Naturally occurring
Unregulated Contaminant Monitoring Rule⁽⁷⁾							
1,4-Dioxane	No	06/24/14	0.1	ug/l	n/a	MCL = 50	Industrial discharge
Chromium	No	04/01/14	0.5 - 1.0	ug/l	100	MCL = 100	Natural deposits
Strontium	No	08/07/14	ND - 146.0	ug/l	n/a	No MCL	Naturally occurring
Hexavalent Chromium	No	06/26/14	0.4 - 0.5	ug/l	n/a	No MCL	Natural deposits
Chlorate	No	06/24/14	24.0 - 170.0	ug/l	n/a	No MCL	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).

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 30 samples for lead and copper. The action levels for both lead and copper were not exceeded at any site tested. Resampling is scheduled for 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 4th highest result.

⁽²⁾ - Nitrate in drinking water at levels above 10 ppm is a health risk for infants of less than six months of age. High nitrate levels in drinking water can cause blue baby syndrome. Nitrate levels may rise quickly for short periods of time because of rainfall or agricultural activity. If you are caring for an infant you should ask advice from your health care provider.

⁽³⁾ - The Food and Nutrition Board of the National Research Council determined an estimated safe and adequate daily dietary intake of manganese to be 2,000-5,000 micrograms for adults. However, many peoples diets lead them to consume even higher amounts of manganese, especially those who consume high amounts of vegetables or are vegetarians. The infant population is of the greatest concern. It would be better if the drinking water were not used to make infant formula since it already contains iron and manganese. Excess manganese produces a brownish color in laundered goods and impairs the taste of tea, coffee and other beverages. Concentrations may cause a dark brown or black stain on porcelain plumbing fixtures. As with iron, manganese may form a coating on distribution pipes. These may slough off, causing brown blotches on laundered clothing or black particles in the water.

⁽⁴⁾ - 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.

⁽⁵⁾ - Perchlorate is an unregulated contaminant. However, the State Health Dept. has established an action level of 18 ug/l.

⁽⁶⁾ - MCL is for combined Radium 226 and Radium 228.

⁽⁷⁾ - UCMR3 - Unregulated Contaminant Monitoring Rule 3 is a Federal water quality sampling program where water suppliers sample and test their source water for 1 year. Results will be used by the USEPA to determine if the contaminants need to be regulated in the future.

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CONTACTS FOR ADDITIONAL INFORMATION

If you have any questions about this report or concerning your water utility, please contact the Water Department at (516) 676-2297 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, you can attend any of our regularly scheduled City Council meetings. They are normally held on the second and fourth Tuesday of each month at 7:30 p.m. at City Hall, unless otherwise posted.

The City of Glen Cove 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 contaminants. It's important to remember that the presence of these contaminants 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.

During 2014, the District collected 30 samples for lead and copper. 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. The City of Glen Cove 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>.

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).

WATER SYSTEM IMPROVEMENTS

The City of Glen Cove is committed to providing Glen Cove residents with the highest quality and best tasting water and to improve the overall efficiency of the system. With this in mind, the Department of Public Works had undertaken an internal audit of all water department facilities, mechanical systems and delivery infrastructure. Immediate needs for operational and mechanical improvements have been determined and the City will be performing major improvement projects for the 2017 period. Improvement projects will include upgrading the City's transmission main to provide service to the waterfront redevelopment project area, as well as constructing a new well at Duck Pond Road.