

2019 ANNUAL WATER QUALITY REPORT
OF THE
ROSLYN WATER DISTRICT
PUBLIC WATER SUPPLY ID# 2902851
TOWN OF NORTH HEMPSTEAD
NASSAU COUNTY, NEW YORK

Water Supply System Information

This document is prepared by the Roslyn Water District (PWS ID NO. 2902851) as prescribed by Part 5-1.72 of the New York State Sanitary Code (10NYCRR) and by the Federal Consumer Confidence Report Regulation (40 CFR part 141, subpart U). This report contains important information about your drinking water. Included are details about where your water comes from, what it contains, and how it compares to State standards. We are proud to report that during 2019 our system did not violate a maximum contaminant level or any other water quality standard.

The Roslyn Water District is a municipal corporation having its offices at 24 West Shore Road, Roslyn, N.Y. 11576. The District has 5,780 service connections and supplies drinking water to a population estimated at 17,900 people. It is managed by a Board of Commissioners consisting of three commissioners each elected to a separate three-year term. The person in charge of operating the water supply system is the Superintendent of the District, Richard J. Passariello, who can be reached by telephone at (516) 621-7770 to answer questions about this report.

The Board of Commissioners have regular scheduled meetings open to the public held at the District office on the first, second and third Thursdays of each month at 9:00 A.M. Consumers within the Roslyn Water District are given the opportunity to participate in discussions affecting drinking water quality at these public meetings.

Nassau County Department of Health has jurisdiction over the water system of the District. The Department of Health is located at 200 County Seat Drive, Mineola, New York 11501 and representatives can be reached by telephone at (516) 227-9692.

Water Supply Sources and Treatment

Our source of drinking water is groundwater drawn from seven individual wells drilled into the Magothy aquifer at depths ranging from 431 feet to 530 feet and from one well field containing eight wells connected to a common suction pump. The seven individual wells are located throughout the District and on separate sites consisting of approximately

one acre each. Two wells are in the Inc. Village of Roslyn Estates and five are located in the Inc. Village of East Hills.

Eight common suction wells ranging in depths from 260 feet to 555 feet are located on a well field in the Inc. Village of Roslyn. These wells consist of flowing artesian wells, seven of which are in the Magothy aquifer and one in the Lloyd aquifer. All eight wells are connected to a single turbine pump, which delivers the water directly into the distribution system at a rate of 1,100 gallon per minute.

Water is pumped directly from these wells into our distribution system at a rate for each well of between 1,000 and 1,200 gallons per minute. The distribution system includes three (3) storage tanks ranging in size from 1 million gallons in capacity to 3 million gallons, with a total storage capacity of 6 million gallons.

Water is treated at each well site before entering distribution as follows: addition of sodium hydroxide to adjust the pH (naturally occurring acidity in groundwater) to help prevent corrosion; addition of calcium hypochlorite is added as a precaution for disinfection.

One (1) well, located in the Inc. Village of Roslyn Estates, in addition to treatment for pH adjustment and disinfection, is treated by packed tower aeration followed by granular activated carbon for removal of organic contaminants 1,2-dibromoethane (EDB), 1,1-dichloroethane (1,1-DCA), tetrachloroethene (PCE), trichloroethene (TCE), 1,1,1-trichloroethane (TCA), 1,1-dichloroethene, dacthal (DCPA), dichlorodifluoromethane (Freon-12), chlorodifluoromethane (Freon-22), cis-1,2-dichloroethene (cis-1,2-DCE) and methyl tert-butyl ether (MTBE). These contaminants are generally removed to below the detection level before the water enters the distribution system.

In addition to treatment for pH adjustments and disinfection, a second well located in the Inc. Village of Roslyn Estates is treated by packed tower aeration for the removal of organic contamination. The chemicals treated at Plant No. 4 is 1,1-dichloroethane (1,1-DCA), 1,1-dichloroethene (1,1-DCE), 1,1,1-trichloroethane (TCA), dichlorodifluoromethane (Freon-12), chlorodifluoromethane (Freon-22). These contaminants are generally removed to below the detection level before the water enters the distribution system.

Another well, located in the Village of Roslyn, is also treated by granular activated carbon, in addition to treatment for pH adjustment and disinfection. The granular activated carbon treatment at this location is used for the adsorption of organic contaminants trichloroethene (TCE) and tetrachloroethene (PCE). These contaminants are generally removed to below the detection level before the water enters the distribution system.

Source Water Assessment

The New York State Department of Health, with assistance from the local health department and the consulting firm, CDM, has completed a source water assessment for our well system. Possible and actual contamination 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 "What Did We Find In Your Drinking Water" for a list of the contaminants that have been detected (if any). The source water assessments provide the District with additional information for protecting source waters into the future.

Drinking water is derived from 8 wells. The source water assessment has rated some of the wells as having a very high susceptibility to industrial solvents and most of the wells as having a high to very high susceptibility to nitrates. The elevated susceptibility to industrial solvents is due primarily to point sources of contamination related to commercial/industrial facilities and related activities in the assessment area. The elevated susceptibility to nitrates is due to unsewered residential land use and related practices, such as fertilizing lawns, in the assessment area.

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

What Did We Find In Your Drinking Water?

In accordance with State and County regulations, we routinely monitor your drinking water for numerous contaminants. We test your drinking water for coliform bacteria, physical and inorganic constituents like lead, copper and nitrate; principal organic contaminants, total trihalomethanes, radiological, and specific organic contaminants/pesticides. The following table depicts only those contaminants, which were detected in your drinking water during 2019.

It should be noted that any 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 Environmental Protection Agency's (EPA's) Safe Drinking Water Hotline (800) 426-4791 or the Nassau County Health Department at (516) 227-9692.

Table of Detected Contaminants							
Parameters or Contaminants	Violation (Yes/No)	Date of Sample	Level Detected (Range)	Unit Measurement	MCLG	Regulatory Limit (MCL or AL)	Likely Source of Contaminant
Inorganic Contaminants							
Copper	No	June, July & August 2017	0.019 – 0.3 0.082 ⁽¹⁾	mg/l	1.3	AL = 1.3	Corrosion of galvanized pipes; Erosion of natural deposits
Lead	No	June, July & August 2017	ND – 4.0 1.3 ⁽¹⁾	ug/l	0	AL = 15	Corrosion of household plumbing systems; Erosion of natural deposits
Alkalinity	No	01/23/19	3.8 – 91.3	ug/l	n/a	No MCL	Naturally occurring
Total Dissolved Solids	No	01/23/19	36.0 – 212.0	mg/l	n/a	No MCL	Naturally occurring
Barium	No	01/23/19	0.0045 – 0.039	mg/l	n/a	MCL = 2.0	Naturally occurring
Iron	No	01/23/19	ND – 47.0	ug/l	n/a	MCL = 300	Naturally occurring
Sodium	No	01/23/19	4.2 – 33.4	mg/l	n/a	No MCL ⁽²⁾	Naturally occurring
Chloride	No	03/28/19	3.1 – 47.9	mg/l	n/a	MCL = 250	Naturally occurring
Nitrate	No	07/25/19	1.4 – 7.4	mg/l	10	MCL = 10	Runoff from fertilizer and leaching from septic tanks and sewage
Sulfate	No	01/23/19	ND – 35.5	mg/l	n/a	MCL = 250	Naturally occurring
Calcium	No	01/23/19	2.9 – 24.5	mg/l	n/a	No MCL	Naturally occurring
Magnesium	No	01/23/19	1.3 – 14.6	mg/l	n/a	No MCL	Naturally occurring
Nickel	No	03/23/16	ND – 1.8	ug/l	n/a	No MCL	Naturally occurring
Radiological							
Gross Alpha	No	03/18/19	0.26 – 3.09	pCi/L	n/a	MCL = 15	Erosion of natural deposits
Gross Beta	No	03/08/19	0.552 – 3.37	pCi/L	n/a	MCL = 50	Erosion of natural deposits
Radium 226/228	No	03/18/19	0.375 – 2.246	pCi/L	n/a	MCL = 5 ⁽³⁾	Erosion of natural deposits
Total Uranium	No	03/18/19	0.13 – 1.5	ug/l	n/a	MCL = 30	Erosion of natural deposits

Table of Detected Contaminants (continued)							
Synthetic Organic Contaminants							
Dacthal (DCPA)	No	09/17/19	ND – 8.5	ug/l	n/a	MCL = 50	Herbicide
Disinfection By-Products							
Dibromochloromethane	No	03/22/19	ND – 0.71	ug/l	n/a	MCL = 80	Disinfection By-Product
Total Trihalomethanes (THMs)	No	07/11/19	ND – 0.72	ug/l	n/a	MCL = 80	Disinfection By-Product
Unregulated Contaminant Monitoring Rule – Phase 3 (UCMR3)⁽⁴⁾							
1,4-Dioxane	No	01/23/19	ND – 0.61	ug/l	n/a	HA = 35	Industrial Discharge
Chlorate	No	09/12/19	41.9 – 52.5	ug/l	100	No MCL	Natural deposits
Strontium	No	02/10/15	0.64 - 96.8	ug/l	n/a	HA = 4000	Naturally occurring
Hexavalent Chromium	No	09/26/19	0.11 – 0.8	ug/l	n/a	No MCL	Natural deposits and industrial discharge
Cobalt	No	02/10/15	ND- 10.2	ug/l	n/a	No MCL	Naturally occurring
Vanadium	No	02/10/15	ND - 2.9	ug/l	n/a	No MCL	Naturally occurring
Perfluoroheptanoic Acid (PFHpA)	No	04/25/19	ND – 4.71	ng/l	n/a	MCL = 50,000	Industrial discharge
Perfluorooctanoic Acid (PFOA)	No	04/25/19	ND – 13.3	ng/l	n/a	HA = 70 ⁽⁵⁾	Industrial discharge
Perfluorononanoic Acid (PFNA)	No	04/25/19	ND – 7.5	ng/l	n/a	MCL = 50,000	Industrial discharge
Perfluorobutanesulfonic Acid (PFBS)	No	04/25/19	ND = 1.89	ng/l	n/a	MCL = 50,000	Industrial discharge
Perfluorohexanesulfonic Acid (PFHxS)	No	04/25/19	ND – 7.6	ng/l	n/a	MCL = 50,000	Industrial discharge
Perfluorooctanesulfonic Acid (PFOS)	No	04/25/19	ND – 12.6	ng/l	n/a	HA = 70 ⁽⁵⁾	Industrial Discharge ⁽⁶⁾
Unregulated Contaminant Monitoring Rule – Phase 4 (UCMR4)⁽⁴⁾							
Manganese	No	11/12/19	ND – 33.2	ug/l	n/a	MCL = 300 ⁽⁷⁾	Naturally occurring
HAA5	No	11/12/19	ND – 1.39	ug/l	n/a	MCL = 60	Disinfection By-Product
HAA6Br	No	11/12/19	ND – 2.50	ug/l	n/a	No MCL	Disinfection By-Product
HAA9	No	11/12/19	ND – 2.50	ug/l	n/a	No MCL	Disinfection By-Product

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.

Health Advisory (HA) - An estimate of acceptable drinking water levels for a chemical substance based on health effects information; a health advisory is not a legally enforceable Federal standard, but serves as technical guidance to assist Federal, State and local officials.

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).

Nanograms per liter (ng/l) - Corresponds to one part of liquid in one trillion parts of liquid (parts per trillion - ppt).

pCi/L - pico Curies per Liter

ppt – parts per trillion – Corresponds to one part of liquid in one trillion parts of liquid.

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

⁽¹⁾ - During 2017 we collected and analyzed 30 samples for lead and copper. The low to high result plus the 90% percentile level is presented in the table. The action levels for both lead and copper were not exceeded at any site tested. Resampling is scheduled for 2020.

90th Percentile Value: 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.

- ⁽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 moderately sodium diets.
- ⁽³⁾ - Combined Radium 226 and 228 has an MCL of 5.
- ⁽⁴⁾ - UCMR - Unregulated Contaminant Monitoring Rule 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.
- ⁽⁵⁾ - No MCL has been established for PFOA/PFOS. A health advisory of 70 ppt has been established by the USEPA.
- ⁽⁶⁾ - PFOS/PFOA has been used to make carpets, leathers, textiles, fabrics for furniture, paper packaging, and other materials that are resistant to water, grease, or stains. It is also used in firefighting foams at airfields. Many of these uses have been phased out by its primary U.S. manufacturer; however, there are still some ongoing uses.
- ⁽⁷⁾ - If iron and manganese are present, the total concentration of both should not exceed 500 ug/l.

What Does This Information Mean?

A review of the table indicates that our system has no violations. We have learned through our testing that some contaminants were detected; however, these contaminants were detected below the level prescribed by the State.

Although nitrate was detected below the MCL, it was detected at 7.4 mg/l which is greater than one-half of the MCL of 10 mg/l. Therefore, we are required to present the following information on nitrate in drinking water:

“Nitrate in drinking water at levels above 10 mg/l 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 for advice from your health care provider.”

During 2017, the District collected 30 samples for lead and copper. None of the samples analyzed exceeded the action levels. The next round of samples will occur in 2020. 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. Roslyn 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 your 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>.

Description of Water Used

During 2019, a total of 1,215,815,000 gallons of water was pumped from the District's Wells. Of that total, 41,744,000 gallons were supplied under contract to the Glenwood Water District and 8,291,000 gallons were supplied under contract to the Albertson Water District. Metered water sales to District consumers including Glenwood residents and a

portion of Albertson residents account for is 1,108,856,000 gallons. This leaves an unaccounted-for total of 106,959,000 gallons. This is the amount of water used during the year for flushing hydrants, firefighting, main breaks and service line leaks. It represents 8.8% of the total water produced.

Water Source Restrictions

Our water service to customers in 2019 continued without interruption or restriction due to contamination of water quality.

Water Conservation Measures

The Roslyn Water District has implemented a water conservation program, portions of which are contained in the Ordinances of the District including regulations of lawn irrigation systems, which require all systems to have time clock controllers and a rain or soil moisture sensor. Sprinkling of lawns and gardens can only be performed between the hours of 4:00 p.m. and 10:00 a.m. for a maximum of 2-hour duration on alternate days; on odd days for odd numbered premises and even days for even numbered premises, and even days for premises with no numbers. Consumers are required by law to comply with these regulations. Consumers can reduce water by promptly repairing leaks as soon as they are disclosed. A leak of one drop per second wastes 2,400 gallons per year. Consumers can also reduce water use by installing aerators on faucets, displacement devices in toilet tanks and automatic shut-off nozzles on garden hoses. During remodeling, if old plumbing fixtures are replaced, the law requires that new fixtures must be of the approved water saving type. Each customer should reduce overall water use by at least ten (10) percent.

Facility Modifications

We constantly work at improving and upgrading our facilities. During the past year, we have completed or are in the process of completing the following projects:

- Birch Drive Booster Station Upgrade – **In Progress**
- AOP Pilot Study – Plant No. 8 – **Completed**
- AOP Pilot Study – Plant No. 4 – **Completed**
- SCADA System Upgrades – **In Progress**

Annual Average Charge for Water

Our water rate structure is designed to promote conservation; the more you use, the more you pay. The average consumer pays a minimum quarterly charge of \$11.40 for 12,000 gallons. Our water rate is \$0.95 per 1,000 gallons for the first 21,000 gallons consumed; \$1.19 per 1,000 gallons for the next 21,000 gallons; \$1.78 for the next 66,000 gallons and \$2.55 per 1,000 gallons for quarterly use over 108,000 gallons. The average annual cost for metered water for a residential user in 2019 was \$226.97 or 62 cents per day. The average tax levy per residence is \$320.54.

Educational Information

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. More information about contaminants and potential health effects can be obtained by calling the EPA's Safe Drinking Water Hotline (1-800-426-4791) 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 of 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 which limit the amount of certain contaminants in water provided by public water systems. The State Health Departments and the Food and Drug Administration's (FDA's) regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

Reporting of Non Detected Contaminants

From the drinking water compliance samples collected from the system, the following inorganic contaminants were analyzed for but not detected in any of the samples analyzed:

Ammonia	Turbidity	Mercury	Selenium
Arsenic	Color	Nitrite	Perchlorate
Antimony	Cyanide Free	Silver	
Beryllium	Manganese	Magnesium	
Thallium	Fluoride	Nitrogen	
Cadmium	Foaming Agents	Odor	

There were no detections of the following principal organic contaminants in the samples analyzed:

Benzene	1,4-Dichlorobenzene	Styrene
Bromobenzene	1,2-Dichloroethane	1,1,1,2-Tetrachloroethane
Bromochloromethane	cis-1,2-Dichloroethene	1,1,2,2-Tetrachloroethane
Bromodichloromethane	trans-1,2-Dichloroethene	Toluene
Bromomethane	1,2-Dichloropropane	1,2,3-Trichlorobenzene
N-Butylbenzene	1,3-Dichloropropane	1,2,4-Trichlorobenzene
sec-Butylbenzene	2,2-Dichloropropane	1,1,1-Trichloroethane
tert-Butylbenzene	1,1-Dichloropropene	1,1,2-Trichloroethane
Carbon Tetrachloride	cis-1,3-Dichloropropene	Trichloroethene
Chlorobenzene	trans-1,3-Dichloropropene	Trichlorofluoromethane
Chloroethane	Ethylbenzene	1,2,3-Trichloropropane
Chloromethane	Hexachlorobutadiene	1,2,4-Trimethylbenzene
2-Chlorotoluene	Isopropylbenzene	1,3,5-Trimethylbenzene
4-Chlorotoluene	4-Isopropyltoluene	m,p-Xylene
1,2-Dibromoethane	(Cymene)	o-Xylene
1,2-Dichlorobenzene	Methylene Chloride	Vinyl chloride
1,3-Dichlorobenzene	N-Propylbenzene	Chlorodifluoromethane

There were no detections of the following synthetic organic contaminants, including pesticides and herbicides, in the samples analyzed:

Alachlor	Heptachlor	Butachlor
Aldicarb	Heptachlorepoxyde	Carbaryl
Adicarb Sulfoxide	Lindane	Dalapon
Aldicarb Sulfone	Methoxychlor	Bis (2-ethylhexyl) adipate
Altrazine	Total PCB's	Bis (2-ethylhexyl) phthalates
Carbofuran	Pentachlorophenol	Dicamba
Chlordane	Toxaphene	Dieldrin
1,2-Dibromomethane	2,4,5-TP (Silvex)	Dinoseb
2,4-D	Aldrin	Glyphosate
Endrin	Benzo(a)pyrene	Hexachlorobenzene

Hexachlorocyclopentadiene	Oxamyl	Dioxin
3-Hydroxycarbofuran	Picloram	Endothall
Methomyl	Propachlor	1,2-Dibromo-3-
Metolachlor	Simazine	chloropropane
Metribuzin	Diquat	

There were no detections of the following bacteriological contaminants in the samples analyzed:

Total Coliform
E.coli

Annual Water Quality Report Supplement

A supplement to this Water Quality Report has been prepared which contains the analytical results of water quality monitoring from the individual wells in the District. This report is available at the District office.

Thank you for allowing us to continue to provide your family with quality drinking water this year. We ask that all our consumers help us protect our water sources which are the heart of our community and our way of life. Please call our office if you have questions.

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