

2016 ANNUAL WATER QUALITY REPORT

Locust Valley Water District

226 Buckram Road, Locust Valley

Public Water Supply Identification No: 2902833

In accordance with Title Three of Article Eleven of the New York State Public Health Law and the 1996 United States Environmental Protection Agency (USEPA) Safe Drinking Water Act regulations, the following is the 2016 Annual Water Quality Report of the Locust Valley Water District.

Established in 1922, the Locust Valley Water District, with over 2,518 residential and commercial service connections, supplies a population of approximately 7,500 through 56 miles of interconnected pipeline. The district serves Locust Valley, Lattingtown and sections of Mill Neck, Matinecock and Glen Cove.

As defined by the United States Geological Survey (USGS), the district's water source is groundwater from the Lloyd, North Shore and Upper Glacier Aquifers in the Locust Valley, Lattingtown and Matinecock area. With a total pumping capacity of 10.2 million gallons per day, six wells, located on six separate well fields, and two 1-million-gallon storage tanks adequately supply consumer and fire fighting demands.

In 2016, Well #8, located on Duck Pond Road in Matinecock, was limited in use as perchlorate, an unregulated contaminant, remained above an action level set by the New York State Department of Health (NYSDOH). No distribution samples exceeded the maximum contaminant levels as

set by the NYSDOH. The district monitors more frequently than required by State standards to insure the quality of the community's drinking water supply.

With drought-like weather conditions prevalent throughout the year, annual consumption was near a record level with 743.779 million gallons of water withdrawn from the aquifers. The district's average demand was 2.032 million gallons per day with a peak demand of 5.566 million gallons per day.

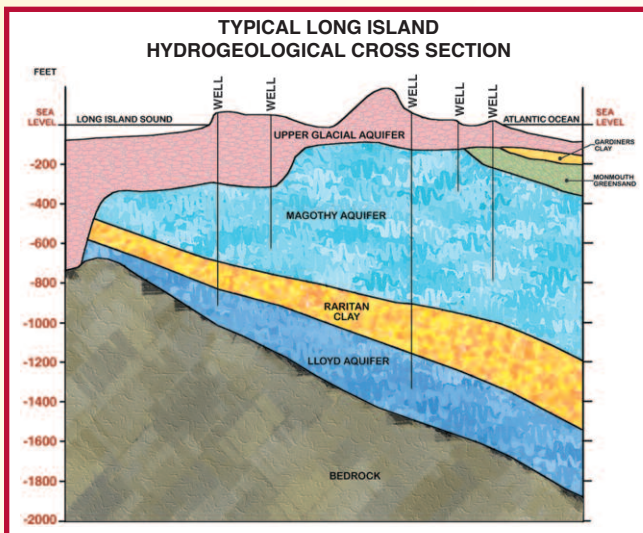
Consumer meters registered 90.5 percent of the water demand. The remaining 9.5 percent is attributed to unaccountable demands such as water main and service leaks, water main and hydrant flushing, well construction, fire fighting and training, road maintenance and aging water meters. On average, consumers this year paid a total of \$742 for water, excluding taxes.

The district routinely monitors the drinking water quality to insure its safety. Tests were performed for coliform bacteria, inorganic compounds, nitrates/nitrites, perchlorate, volatile organic compounds, trihalomethanes, haloacetic acids, radiological and synthetic organic compounds. It is for this reason that the district and Nassau County Department of Health (NCDOH) do not recommend the use of unregulated private wells for domestic consumption.

Drinking water, including bottled water, may reasonably be expected to contain at least a small amount 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 USEPA's Safe Drinking Water Hotline at 1-800-426-4791 or by looking online at www.epa.gov/safewater or www.health.state.ny.us.

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 human activities. Contaminants that may be present in source water include: microbial contaminants; inorganic contaminants; pesticides and herbicides; organic chemical

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Aquifer System

LOCUST VALLEY WATER DISTRICT
2016 WATER QUALITY TESTING RESULTS - TABLE OF DETECTED PARAMETERS

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	07/17/14	ND - 0.24 0.19 ⁽¹⁾	mg/l	1.3	AL = 1.3	Corrosion of galvanized pipes; erosion of natural deposits
Lead	No	07/17/14	ND - 1.7 1.4 ⁽¹⁾	ug/l	0	AL = 15	Corrosion of household plumbing systems; erosion of natural deposits
Barium	No	09/07/16	0.02 - 0.1	mg/l	2	MCL = 2.0	Naturally occurring
Zinc	No	09/07/16	ND - 0.05	mg/l	n/a	MCL = 5.0	Naturally occurring
Sodium	No	09/13/16	6.1 - 24.0	mg/l	n/a	No MCL ⁽²⁾	Naturally occurring
Chloride	No	09/07/16	ND - 25.3	mg/l	n/a	MCL = 250	Naturally occurring
Nitrate	No	08/15/16	2.1 - 4.7	mg/l	10	MCL = 10	Runoff from fertilizer and leaching from septic tanks and sewage
Total Alkalinity	No	08/07/16	16.4 - 31.1	mg/l	n/a	No MCL	Naturally occurring
Sulfate	No	08/30/16	ND - 29.3	mg/l	n/a	MCL = 250	Naturally occurring
Calcium	No	08/30/16	8.0 - 18.0	mg/l	n/a	No MCL	Naturally occurring
Nickel	No	08/17/16	ND - 1.6	ug/l	n/a	MCL = 100	Naturally occurring
Magnesium	No	08/30/16	3.3 - 7.4	mg/l	n/a	No MCL	Naturally occurring
Perchlorate	No	09/12/16	ND - 6.3	ug/l	n/a	AL = 18 ⁽³⁾	Fertilizer, matches, road flares, and fireworks
Radiological							
Gross Alpha	No	04/11/16	ND - 0.63	pci/L	n/a	MCL = 15	Erosion of natural deposits
Gross Beta	No	08/30/16	0.27 - 1.07	pci/L	n/a	MCL = 50	Erosion of natural deposits
Radium 226 & 228	No	04/11/16	0.276 - 1.003	pci/L	n/a	MCL = 5 ⁽⁴⁾	Erosion of natural deposits
Volatile Organic Contaminants							
Tetrachloroethene	No	03/11/16	ND - 2.19	ug/l	0	MCL = 5	Industrial discharge
<i>cis</i> -1,2-Dichloroethene	No	09/06/16	ND - 0.67	ug/l	0	MCL = 5	Industrial discharge
Trichloroethene	No	07/11/16	ND - 0.73	ug/l	0	MCL = 5	Industrial discharge
1,1-Dichloroethane	No	07/11/16	ND - 0.57	ug/l	0	MCL = 5	Industrial discharge
Disinfection By-Products							
Total Trihalomethanes (THMs)	No	09/13/16	ND - 2.41	ug/l	n/a	MCL = 80	Disinfection by-product
Unregulated Contaminant Monitoring Rule and Follow-Up Sampling⁽⁵⁾							
1,4-Dioxane	No	11/30/16	ND - 0.32	ug/l	0	No MCL	Industrial Discharge
1,1-Dichloroethane	No	03/17/14	ND - 0.4	ug/l	0	MCL = 5	Industrial Discharge
Chromium	No	03/17/14	ND - 1.5	ug/l	100	MCL = 100	Natural Deposits
Hexavalent Chromium	No	03/17/15	0.5 - 1.7	ug/l	n/a	No MCL ⁽⁶⁾	Natural Deposits
Molybdenum	No	03/17/14	ND - 2.0	ug/l	0	No MCL	Naturally occurring
Strontium	No	03/17/14	24.7 - 95.7	ug/l	1	No MCL	Naturally occurring
Chlorate	No	03/17/14	ND - 24.0	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.

Nephelometric Turbidity Unit (NTU) - A measure of the clarity of water. Turbidity in excess of 5 NTU is just noticeable to the average person.

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).

Picocuries per liter (pCi/L) - a measure of radioactivity in water.

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

(1) - During 2014 we collected and analyzed 20 samples for lead and copper. 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 2017.

(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 New York State Dept. of Health has established an action level of 18 ug/l.

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

(5) - 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 (2014). Results will be used by the USEPA to determine if the contaminants need to be regulated in the future. The District conducted follow up sampling in 2016 and the results of the recent sampling are shown if greater than the 2014 testing.

(6) - MCL of 100 ug/l is for Total Chromium. There is no MCL for Hexavalent Chromium.

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contaminants; and radioactive contaminants.

To ensure that tap water is safe to drink, the State and the USEPA 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 NYSDOH's source water assessment for this system, based on available information, evaluated possible and actual threats to the drinking water source. Source water assessments provide resource managers with additional information for protecting source waters into the future. The 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.

The district's drinking water is derived from six (6) wells. The source water assessment has rated two (2) of the wells as having a very high susceptibility to industrial solvents and a high to very high susceptibility to nitrates, and one well having a high susceptibility to microbial contamination. The very high susceptibility to industrial solvents is due primarily to point sources of contamination related to transportation routes, industrial facilities and gas stations in the assessment area. The high susceptibility to nitrate and microbial contamination is attributable to unsewered high density residential land use and related activities 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 water district, as noted below.

The tables on page 4 indicate the detected contaminants found in the analysis of the water system samples required by the USEPA, NYSDOH and NCDOH from January 1, 2016 to December 31, 2016. The district also takes eight (8) bacteriological samples per month at designated points throughout the service area. A yearly supplement containing water quality data for the district's six (6) wells is available at the district office, on the district website or can be mailed to consumers upon request.

The district's distribution water met all federal and state microbiological, chemical and radiological quality requirements. As indicated through district monitoring and test-

ing, some constituents have been detected. The USEPA and the NYSDOH have determined that your water is safe at these levels.

During 2016, the district, using calcium hypochlorite, maintained the State required minimum of 0.2 parts per million of chlorine throughout the distribution system. To reduce the natural corrosiveness of the water found in this region, the district also added Sodium Hydroxide to the water to raise its pH before entering the distribution system. This treatment has allowed for the Lead and Copper testing program to be under reduced monitoring in accordance with federal and state requirements. The 2014 sampling yielded overall results below mandated action levels with 90th percentile levels of 1.4 ug/l for lead and 0.19 mg/l for copper.

If present, elevated lead levels 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 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 a minimum of 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 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 people such as those with cancer undergoing chemotherapy; those who have undergone organ transplants; people with HIV, AIDS or other immune system disorders; some elderly and infants can be particularly at risk for infections and should seek advice from their health care providers 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. For additional information please contact the NCDOH at (516) 227-9692 or at www.nassaucountyny.gov.

In 2016, having bond authorization from the Town of Oyster Bay for infrastructure improvements, the district completed construction of two monitoring wells, one near Well 9 on Horse Hollow Road, the other at Well 8 on Duck Pond Road as part of a USGS source water study required by NYSDEC. The District also began the re-drilling and rehabilitation of Well 5, originally installed in 1934, on

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Buckram Road. Various hydrant and valve replacements were also completed throughout the District.

To conserve the district's water supply, lawn irrigation is restricted by Nassau County Conservation Ordinance 248A-1987. Water for irrigation accounts for over 60 percent of the district's annual production. Considerable cost savings are available if consumers adhere to good irrigation and landscaping practices. Other conservation measures include correcting leaking fixtures, installing water saving devices and daily conscientious water use. For further conservation information, consumers can contact the Cornell Cooperative Extension at 1-516-433-7970 or www.cce.cornell.edu/nassau, the New York State Public Service Commission at 1-518-474-7080 or at www.askPSC.com or the American Water Works Association at 1-800-926-7337 or www.awwa.org.

The following tables are the 2017 rate structures of the Locust Valley Water District:

INSIDE DISTRICT (QUARTERLY)

0 – 25,000	\$2.00 / 1,000 GALLONS (minimum charge \$20.00)
25,001 – 50,000	\$2.40 / 1,000 GALLONS
50,001 – 100,000	\$2.80 / 1,000 GALLONS
OVER 100,001	\$3.20 / 1,000 GALLONS
ANNUAL TAX RATE \$12.97 / \$100 OF ASSESSED VALUATION	

OUTSIDE DISTRICT (QUARTERLY)

0 – 25,000	\$3.00 / 1,000 GALLONS (minimum charge \$30.00)
25,001 – 50,000	\$3.40 / 1,000 GALLONS
50,001 – 100,000	\$3.80 / 1,000 GALLONS
OVER 100,000	\$4.20 / 1,000 GALLONS
NO PROPERTY TAX ASSESSMENT	

The Board of Water Commissioners welcomes all consumers with ideas for improvement. Public meetings are held on the second and fourth Wednesday of the month at 5:00 p.m. in the district office at 226 Buckram Road, Locust Valley.

For a copy of this report or further information about your drinking water supply system, please visit the district's informational website at www.locustvalleywater.com.

If there are any questions regarding the Annual Water Quality Report or Sample Supplement for 2016, please contact Superintendent Charles Savinetti at the district office at (516) 671-1783, Monday through Friday, 8 a.m. to 4:30 p.m.

Board of Water Commissioners

Anker Johansen
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WATER CYCLE

