

2016 drinking water quality report

CITY OF LONG BEACH WATER DEPARTMENT
PUBLIC WATER SUPPLY IDENTIFICATION NO. 2902834

ANNUAL WATER SUPPLY REPORT

MAY 2017

The City of Long Beach is pleased to present to you this year's Water Quality Report. The report is required to be delivered to the customers of our City in compliance with Federal and State regulations. We also want you to understand the efforts we make to continually improve the water treatment process and protect our water resources. The City Manager, City Council and the Water Department employees are committed to ensuring that you and your family receive the highest quality water.

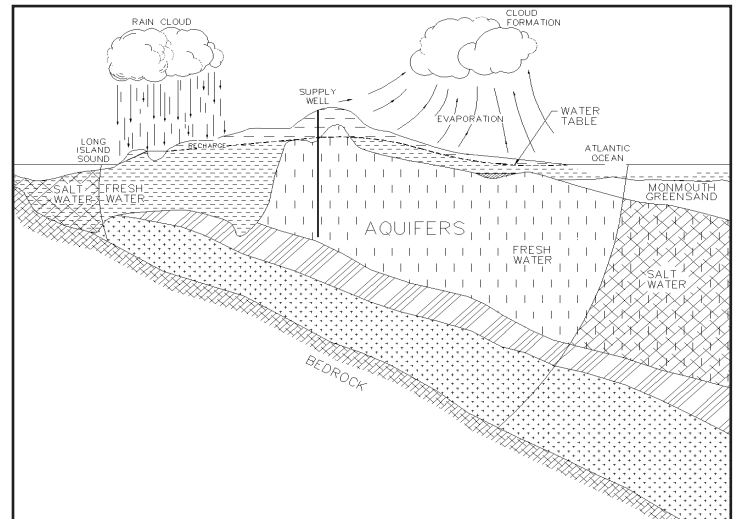
SOURCE OF OUR WATER

The source of water for the City is groundwater pumped from eight (8) wells located throughout the community that are drilled into the Lloyd aquifer beneath Long Island, as shown on the adjacent figure. 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 City of Long Beach during 2016 was 35,000. The total amount of water pumped by the City in 2016 was 1.03 billion gallons, of which approximately 77 percent was billed directly to consumers.

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.



THE LONG ISLAND AQUIFER SYSTEM

WATER TREATMENT

The City of Long Beach provides treatment at the Park Place treatment plant to improve the quality of the water, prior to the distribution of water to the consumer.

Treatment consists of the following:

- Aeration to oxidize and convert iron to ferric or insoluble state in order to be treated and removed.
- Addition of lime to raise pH and minimize the corrosivity of the water and reduce the leaching of lead and copper from household plumbing.
- Addition of alum to aid in coagulation and sedimentation.
- Sedimentation to remove the majority of iron.
- Filtration to remove remaining iron.
- The addition of small amounts of chlorine for the disinfection of the distribution system.

SPECIAL NOTE

Should a City resident have a special medical condition that the Water Department and/or City Emergency Services should know about, please contact the Long Beach Fire Dept. at 516.431.2434, so that you can be added to the Medical Priority List.

WATER CONSERVATION MEASURES

WATER QUALITY

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 Long Beach continued to implement a water conservation program in order to minimize any unnecessary water use. The pumpage for 2016 was approximately the 10% less in 2015. This can be attributed to the differing weather conditions.

Water supply management has long been a practice in Long Beach. 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 Metering - In 1976, water metering devices were first installed in residential and commercial buildings throughout the City. Prior to that time, water use was uncontrolled which resulted in frivolous waste. With the initiation of a user fee, a significant reduction in overall water consumption was realized.

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:

- Lawn sprinkling - 7:00 p.m. to 9:00 a.m. daily with even numbered houses watering on even calendar dates and odd numbers on odd dates.
- 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.

In accordance with State regulations, the City of Long Beach 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

Effective January 2017, the City will be utilizing a unit price billing rate with the residential consumer being billed at \$4.37 per 1,000 gallons, based on the following rate schedule:

Consumption (gallons)	Charges
0 to 12,000	\$4.37/thousand gallons (\$52.44 minimum charge)
12,001 to 150,000	\$4.67/thousand gallons
150,001 to 300,000	\$4.74/thousand gallons
300,001 to 600,000	\$4.96/thousand gallons
600,001 and above	\$5.45/thousand gallons

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 eight (8) wells. 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.

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

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/September 2014	ND ⁽¹⁾	mg/l	1.3	AL = 1.3	Corrosion of household plumbing systems; Erosion of natural deposits
Lead	No	August/September 2014	ND - 2.5 ND ⁽¹⁾⁽²⁾	ug/l	1.3	AL = 15	Corrosion of household plumbing systems; Erosion of natural deposits
Barium	No	12/06/16	0.02 - 0.048	mg/l	n/a	MCL = 2	Naturally occurring
Fluoride	No	12/27/16	ND - 4.3	mg/l	n/a	MCL = 10	Naturally occurring
Iron ⁽³⁾	No	04/26/16	ND - 230	ug/l	n/a	MCL = 300	Naturally occurring
Manganese ⁽³⁾	No	05/24/16	ND - 63.0	ug/l	n/a	MCL = 300	Naturally occurring
Sodium	No	12/20/16	ND - 10.4	mg/l	n/a	No MCL ⁽⁴⁾	Naturally occurring
Zinc	No	12/06/16	ND - 0.17	mg/l	n/a	MCL = 5	Naturally occurring
Magnesium	No	12/06/16	0.7 - 1.3	mg/l	n/a	MCL = 100	Naturally occurring
Nickel	No	12/06/16	1.0 - 16.0	ug/l	n/a	MCL = 100	Naturally occurring
Chloride	No	08/23/16	ND - 6.9	mg/l	n/a	MCL = 250	Naturally occurring
Calcium	No	12/27/16	0.9 - 13.1	mg/l	n/a	No MCL	Naturally occurring
Beryllium ⁽⁵⁾	No	04/13/16	ND - 2.8	ug/l	n/a	MCL = 4	Naturally occurring
Sulfate	No	12/06/16	ND - 201	mg/l	n/a	MCL = 250	Naturally occurring
Nitrate	No	12/27/16	ND - 4.3	mg/l	n/a	MCL = 10	Nitrogen from fertilizer, sewage
Volatile Organic Contaminants							
Total Trihalomethanes	No	10/11/16	ND - 5.4	ug/l	n/a	MCL = 80	Disinfection By-Products
Radionuclides							
Gross Alpha	No	12/28/16	0.3 - 2.4	pCi/L	--	MCL = 15	Naturally occurring
Gross Beta	No	12/28/16	1.41 - 4.94	pCi/L	--	MCL = 50	Naturally occurring
Radium 226 & 228 Combined	No	12/28/16	0.38 - 1.31	pCi/L	--	MCL = 5 ⁽⁶⁾	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⁾ - Lead. 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. [Water Supply Name] 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>.

⁽³⁾ - Iron and Manganese levels presented represent samples taken after the iron removal treatment facility and in distribution system.

⁽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⁾ - Beryllium levels presented represent samples taken after treatment.

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

CONTACTS FOR ADDITIONAL INFORMATION

If you have any questions about this report or concerning your water utility, please contact Water Department Supervisor Jack Scully at (516) 431-5288 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 first and third Tuesday of each month at 7:00 p.m. at City Hall, unless otherwise posted.

The City of Long Beach 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.

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 is continuing with its water system improvement program. The City is continuing with its water main replacement program. The City also requests, as part of our security program, that all residents report to the Police and Water Department any unauthorized use or suspicious activities involving our fire hydrants and our water supply facilities.

Additional copies of this report and a Supplemental Data Package, which includes the water quality data for each of our supply wells utilized during 2016, are available at City Hall and the local public library.

City of Long Beach
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