

Annual Drinking Water Quality Report for 2016
Village of Larchmont Water Department
(Public Water Supply ID#5903433)

INTRODUCTION

To comply with State regulations, we issue an annual report describing the quality of your drinking water. The purpose of this report is to raise your understanding of drinking water and awareness of the need to protect our drinking water sources. Last year, we conducted tests for over 135 contaminants. We detected none of those contaminants at a level higher than the State allows. This report provides an overview of last year's water quality. Included are details about where your water comes from, what it contains, and how it compares to State standards.

If you have any questions about this report or concerning your drinking water, please contact Henry Oswald Chief Operator at the Village of Larchmont Water Department at 914-834-4893. We want you to be informed about your drinking water. If you want to learn more, please attend any of our regularly scheduled meetings of our Board of Trustees. The Larchmont Village Board meets at 7:30 pm every third Monday of the month at 120 Larchmont Avenue, Larchmont, New York. The public is invited to attend these meetings.

WHERE DOES OUR WATER COME FROM

In general, 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 Department's and the FDA's regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

Our water supply is a blend of the Catskill and Delaware watersheds of the New York City water system obtained through a connection at Shaft 22 of the Delaware Aqueduct in Yonkers and delivered to Larchmont via the Westchester Joint Water Works Larchmont Pump Station. During 2016 our water system did not experience any restrictions of our water source.

WATER TREATMENT

Shaft 22 water is fluoridated and chlorinated at the Kensico Reservoir and goes through UV treatment at the New York City UV Plant at Grasslands. The Westchester Joint Water Works provides additional chlorination at its Larchmont Station. In addition caustic soda is added to increase PH and blended poly-orthophosphate is added as a corrosion inhibitor at that point.

Although surface waters in general are highly sensitive to microbial contaminants, NYSDOH's

assessment found no noteworthy risks to water quality.

SOURCE WATER ASSESSMENT PROGRAM

The NYSDOH has evaluated the susceptibility of water supplies statewide to potential contamination under the Source Water Assessment Program (SWAP), and their findings are summarized in the paragraph(s) below. It is important to stress that these assessments were created using available information and only estimate the potential for source water contamination. Elevated susceptibility ratings do not mean that source water contamination has or will occur for the Water Works. The Village of Larchmont provides Treatment and regular monitoring to ensure the water delivered to consumers meets all applicable standards.

New York City Watershed Protection

Westchester Joint (Water Works) obtains its water from the New York City water supply system. The New York City Department of Environmental Protection (DEP) implements a series of programs to evaluate and protect source water quality within these watersheds. Their efforts focus on three important program areas: the enforcement of strengthened Watershed Rules and Regulations; the acquisition and protection of watershed lands; and implementation partnership programs that target specific sources of pollution in the watersheds.

Due to these intensive efforts, the SWAP methodologies applied to the rest of the state were not applied for the Water Works. Additional information on the water quality and protection efforts in these New York City watersheds can be found at DEP's web site www.nyc.gov/dep/watershed.

Specifically, the Water Works obtains its water from the Catskill and Delaware watersheds west of the Hudson River. The reservoirs in this mountainous rural area are relatively deep with little development along their shorelines. The main water quality concerns associated with land cover is agriculture, which can contribute microbial contaminants, pesticides, and algae producing nutrients. There are also some potential contaminations concerns associated with residential lands and associated wastewater discharges. However, advanced treatments which reduce contaminants are in place for most of these discharges. There are also a number of other discrete facilities, such as landfills, chemical bulk storages, etc. that have the potential to impact local water quality, but large significant water quality problems associated with these facilities are unlikely due to the size of the watershed and surveillance and management practices.

Facts & Figures

The Village of Larchmont Water Department is a public utility that supplies water to the incorporated area of the Village of Larchmont. It purchases its water supply from Westchester Joint Water Works on a wholesale basis. The water is purchased through four interconnections and the Larchmont Pump Station at which the pressure is reduced from 110 psi to a working pressure of 65-70 psi.

Our water system serves a retail population of 6,485 persons through 1740 service connections.

In 2016, the Water Department purchased 405,596,000 gallons. Average daily water usage is 885,525 gallons. Unaccounted-water, consisting of water lost due to leaks and main breaks, under-registration of meters, use at fires, hydrant flushing and theft of service amounted to 82.1 MG or 20.31% of production.

COST OF WATER

The Village of Larchmont Board of Trustees set the water rates for the Village of Larchmont. The current blended rate is \$6.41 per 100 cubic feet (748 gallons). This rate has not changed since 2015.

ARE THERE CONTAMINANTS IN OUR DRINKING WATER?

As the State regulations require, we routinely test your drinking water for numerous contaminants. These contaminants include: total coliform, turbidity, inorganic compounds, nitrate, nitrite, lead and copper, volatile organic compounds, total trihalomethanes and synthetic organic compounds. The table presented herein depicts which compounds were detected in your drinking water. Analytical test results for 2016 are listed below.

All 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 contaminant and potential health effects can be obtained by calling the EPA's Safe Drinking Water Hotline (1-800-426-4791) or the Westchester County Health Department at 914-813-5000.

**Larchmont
ANALYTICAL TESTING RESULTS
2016**

Definitions:

Action Level (AL): The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.
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.
Maximum Residual Disinfectant Level (MRDL): The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.
Maximum Residual Disinfectant Level Goal (MRDLG): The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLG's do not reflect the benefits of the use of disinfectants to control microbial contamination.
Milligrams per liter (mg/l): Corresponds to one part of liquid in one million parts of liquid (parts per million - ppm).
Non Detect (ND): The contaminant was not detected in the water by laboratory analysis.
No Determined Limit (NDL): No level has been established for drinking water.
Nephelometric Turbidity Unit (NTU): A measure of the clarity of water. Turbidity in excess of 5 NTU is just noticeable to the average person.
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 the radioactivity in water.
Locational Running Annual Average (LRAA): The average value of multiple samples taken over the latest twelve month period at a particular location.
Treatment Technique (TT): A required process intended to reduce the level of a contaminant in drinking water.
UCMR3: Unregulated Contaminant Monitoring Rule Three

Contaminant	Violation Yes/No	Date of Sample	Level Detected Max (Range)	Unit Measurement	MCLG	Regulatory Limit MCL,TT,AL Highest level allowed	Likely Source of Contamination
Regulated Inorganic Contaminants							
Barium	No	10/25/2016	0.019 (0.016 - 0.019)	mg/l	2	2	Erosion of natural deposits.
Chloride	No	10/25/2016	11.4 (10.5 - 11.4)	mg/l	-	250	Naturally occurring; road salt
Fluoride	No	2016	0.82 (0.49 - 0.82)	mg/l	-	2.2	Erosion of natural deposits; Water additive which promotes strong teeth.
Cyanide	No	10/25/2016	0.004 (0.003 - 0.004) (g)	mg/l	-	0.2	discharge from industrial chemical factories.
Manganese	No	10/25/2016	25.2 (16.8 - 25.2) (a)	ug/l	-	300	Naturally occurring
Nitrate	No	10/25/2016	0.101 (0.083 - 0.101)	mg/l	10	10	Runoff from fertilizer use; Leaching from septic tanks; sewage; Erosion of natural deposits
Sodium	No	10/25/2016	9.3 (8.2 - 9.3) (b)	mg/l	-	NDL	Naturally occurring; road salt
Sulfate	No	10/25/2016	4.37 (4.34 - 4.37)	mg/l	250	250	Erosion of natural deposits
Turbidity - Entry Point (Purchase Booster Station)	No	2016	1.10 (0.77 - 1.10) (c)	NTU	N/A	5	Soil runoff
Zinc	No	10/25/2016	0.0045 (LOQ - 0.0045)	mg/l	-	5	Naturally occurring
Microbiological Contaminants							
Total Coliform - Distribution	No	2016	3 Total / 4% February samples		0	5% in one month	Naturally present in the environment
Contaminants Monitored Under Interim Enhanced Surface Water Treatment Rule (Stage 2 Disinfection Byproducts)							
Total Trihalomethanes:							
Larchmont Shore Club	No	2016	28 (d) (25) - 27 (e)	ug/l	0	80	Byproduct of drinking water chlorination
Tony's Nursery	No	2016	25 (d) (16 - 25) (e)	ug/l	0	80	Byproduct of drinking water chlorination
Haloacetic Acid 5 (HAA5):							
Larchmont Shore Club	No	2016	13 (d) (4 - 9) (e)	ug/l	0	60	Byproduct of drinking water chlorination
Tony's Nursery	No	2016	28 (d) (14 - 28) (e)	ug/l	0	60	Byproduct of drinking water chlorination
Radiological Compliance							
Gross Alpha	No	2010	0.04 +/- 0.3 (d)	pCi/L	-	<15	Erosion of natural deposits
Gross Beta	No	2010	0.51 +/- 0.44 (d)	pCi/L	-	<5	Erosion of natural deposits
Radium 226	No	2010	0.06 +/- 0.05 (d)	pCi/L	-	<5	Erosion of natural deposits
Radium 228	No	2010	0.02 +/- 0.32 (d)	pCi/L	-	<5	Erosion of natural deposits
Lead and Copper Rule Sampling Results							
Lead	No	June-Sept.2016	2.8 (f) (ND-9)	ug/l	0	AL: 15	Corrosion of household plumbing systems; Erosion of natural deposits
Copper	No	June-Sept.2016	221.0 (f) (ND-347)	ug/l	0	AL: 1,300	Corrosion of household plumbing systems; Erosion of natural deposits
UCMR3 Detects(h)							
Chromium	No	7/10/2014	0.31	ug/l	-	NDL	Erosion of natural deposits
Strontium	No	7/10/2014	19.7	ug/l	-	NDL	Naturally occurring mineral
Undetected Conventional Physical And Chemical Parameters							
Antimony, Arsenic, Beryllium, Bromate, Cadmium, Chlorite, Chromium, Ethylene glycol, Iron, Mercury, Selenium, Silver, Thallium, Nitrite, Nickel, Propylene glycol, Lead and Color							
Undetected Organic (Principal, Specified and Unspecified) Contaminants							
Carbamate pesticides (EPA method 531.1), Pesticides (EPA method 508), Endothall, Glyphosate, MTBE, Nitrobenzene, Herbicides (EPA method 515.1), Microextractables (EPA method 504.1) Volatile organic compounds (EPA method 524.2), Organic chemicals (EPA method 525.2).							

(a) If iron and manganese are present, the total concentration of both should not exceed 500 ug/l
 (b) Water with > 20 mg/l of sodium should not be consumed by those on a severely restricted sodium diet. Water with >270 mg/l of sodium should not be consumed by people on a moderately restricted diet.
 (c) Turbidity is a measure of cloudiness of the water. We test it because it is a good indicator of water quality. The highest monthly average turbidity measurement for the year (1.10 NTU) occurred in March 2016. High turbidity can hinder the effectiveness of disinfectants. Inadequately treated water may contain disease-causing organisms. These organisms include bacteria, viruses and parasites which can cause symptoms such as nausea, cramps, diarrhea, and associated headaches. MCL is the average of two consecutive days.
 (d) This level represents the highest locational running annual average calculated from the data collected.
 (e) This represents the range for this sampling location for 2016.
 (f) The level presented represents the 90th percentile of the 20 sites tested. 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 values detected at your water system. In the case of lead, 20 samples were collected at your water system and the 90th percentile value was 9.0 ug/l, the 4th highest value of the samples taken. In the case of copper, 20 samples were collected from your water system and the 90th percentile value was 347.0 ug/l, the 4th highest value of the samples taken. Of the 20 sites tested, 2 sites exceeded the action level for lead and none exceeded the action level for copper.
 (g) Detected but below the MCL.
 (h) For further information related to the UCMR3 results please contact Henry Oswald Chief Operator at (914) 834-4893

WHAT DOES THIS INFORMATION MEAN

As you can see by the table, our system had no violations. We have learned through our testing that some contaminants have been detected; however, these contaminants were detected below the level allowed by the State.

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 Village of Larchmont Water Department 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>.

IS OUR WATER SYSTEM MEETING OTHER RULES THAT GOVERN OPERATIONS?

During 2016, as shown in the attached table of the Analytical Testing Results our system was in compliance with the applicable state limits. Under the federal Surface Water Treatment Rule, surface supplies such as that used by the City of New York require filtration unless certain rigid requirements can be met. New York City's filtration avoidance of its Catskill-Delaware supply was renewed in November 2002. This filtration avoidance is ongoing and is anticipated to remain in effect into the future. This filtration avoidance applies to the Shaft 22 aqueduct connection.

In 2016 the Village of Larchmont Water Department was in violation of not having published its Annual Water Quality Report by the required date as described in Part 5, Subpart 5-1.72 of the New York State Sanitary Code (NYSSC), and Chapter 873, Article VII of the Laws of Westchester County. The Village of Larchmont Water Department has worked closer with Westchester Joint Water Works this year to start the process in a timely matter to avoid any delays.

The Village of Larchmont Water Department in 2015 was in violation for not having an effective cross connection control program as required by the provisions of Part 5, Subpart 5-1, 5-1.31(a)(3) of the New York State Sanitary Code (NYSSC), and Chapter 873, Article VII of the Laws of Westchester County. The Village of Larchmont Water Department has recently completed a water meter replacement project and billing software upgrade. The Village as part of this upgrade has integrated its cross connection program to provide automated updates and alerts to customers to ensure test reports and other information is provided to the Village in a timely manner. With this work the Village is now in compliance.

INFORMATION CRYPTOSPORIDIUM & GIARDIA

Cryptosporidium is a microbial pathogen found in surface water and groundwater under the influence of surface water. Although filtration removes *Cryptosporidium*, the most commonly used filtration methods cannot guarantee 100 percent removal. During 2016, as part of their routine sampling The City of New York Department of Environmental Protection – Bureau of Water Supply collected a total of fifty-two (52) routine samples from the Kensico Reservoir effluents and tested them for *Cryptosporidium* oocysts. Of the fifty-two (52) routine samples, eight (8) samples were positive for *Cryptosporidium*. Therefore, testing indicates the presence of *Cryptosporidium* in our source water. Current test methods do not allow us to determine if the organisms are dead or if they are capable of causing disease. The method also cannot distinguish among different species of *Cryptosporidium*, only a few of which can infect humans. Ingestion of *Cryptosporidium* may cause cryptosporidiosis, a gastrointestinal infection. Symptoms of infection include nausea, diarrhea, and abdominal cramps. Most healthy individuals can overcome the disease within a few weeks. However, immuno-compromised people are at greater risk of developing a life-threatening illness. We encourage immuno-compromised individuals to consult their health care provider regarding appropriate precautions to take to avoid infection. *Cryptosporidium* must be ingested to cause disease, and it may be spread through means other than drinking water.

Giardia is another microbial pathogen present in varying concentrations in many surface waters and groundwater under the influence of surface water. *Giardia* is removed/inactivated through a combination of filtration and disinfection or by disinfection alone. During 2016, as part of their routine sampling, The City of New York Department of Environmental Protection – Bureau of Water Supply collected a total of fifty-two (52) routine samples from the Kensico Reservoir effluents and tested them for *Giardia* cysts. Of the fifty-two (52) routine samples, nineteen (19) were positive for *Giardia*. Current test methods do not allow us to determine if the organisms are dead or if they are capable of causing disease. Ingestion of *Giardia* may cause giardiasis, an intestinal illness. People exposed to *Giardia* may experience mild or severe diarrhea, or in some instances, no symptoms at all. Fever is rarely present. Occasionally, some individuals will have chronic diarrhea over several weeks or a month, with significant weight loss. Giardiasis can be treated with anti-parasitic medication. Individuals with weakened immune systems should consult with their health care providers about what steps would best reduce their risks of becoming infected with giardiasis. Individuals who think that they may have been exposed to *Giardia* should contact their health care providers immediately. The *Giardia* parasite is passed in the feces of an infected person or animal and may contaminate water or food. Person to person transmission may also occur in day care centers or other similar settings where hand washing practices are poor. Additional information on *Cryptosporidium* and *Giardia* can be found on NYCDEP's website at www.nyc.gov/html/dep/html/drinking_water/pathogen.shtml.

Do I Need to Take Special Precautions?

Although our drinking water met or exceeded state and federal regulations, 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).

Information on Fluoride Addition

Our system is one of the many drinking water systems in New York State that provides drinking water with a controlled, low level of fluoride for consumer dental health protection. According to the United States Centers for Disease Control, fluoride is very effective in preventing cavities when present in drinking water at an optimal level of 0.7 mg/l (parts per million). To ensure that the fluoride supplement in your water provides optimal dental protection, the State Department of Health requires that we monitor fluoride levels on a daily basis. Fluoride is added to your water by the NYCDEP for the Shaft 22 Delaware Aqueduct connection.

NYCDEP is one of the many water suppliers in the United States that treat drinking water with a controlled, low level of fluoride for the protection of its consumers dental health. New York City's drinking water has been treated with low levels of fluoride since 1966. According to the United States Department of Health and Human Services, fluoride is effective in preventing cavities when present in drinking water at an optimal level of 0.7 mg/L. To improve dental protection, DEP continuously monitors fluoride levels. During 2016, DEP provided continuous fluoride treatment on the Catskill/Delaware supply, except for two brief outages. In total, only 4.8 percent of the water produced by Catskill/Delaware supply was not fluoridated.

INFORMATION FOR NON-ENGLISH SPEAKING RESIDENTS

Spanish

Este informe contiene información muy importante sobre su agua beber. Tradúzcalo ó hable con alguien que lo entienda bien.

WHY SAVE WATER

Water is a precious resource. Although the New York City system can provide adequate quantities of water for the City and the suburbs to the north, including the service area of the Larchmont Water Department, during periods of above-normal rainfall, there are years when the usage exceeds the safe yield of the supply. During droughts this can cause serious problems, including the need to restrict water usage. Therefore, by conserving today you can ensure an adequate supply of water for tomorrow. We must use water wisely. Observe the following practices and you will not only conserve water; you will save money as well.

- Use your water meter to check for leaks. Read your meter before going to bed and before you use water in the morning. If there is any registration on the meter, you probably have a leak.

- Use low flow shower heads - save 2 gallons per minute or more
- Repair leaky faucets - a 1/16" leak can waste 100 gallons a day
- Don't flush toilets unnecessarily - use a wastebasket for tissues, etc.
- Check for toilet leaks by adding a little food dye in the toilet tank. If it shows up in the bowl you have a leak
- Use of a toilet dam or installation of a low flush model toilet will reduce your water usage
- Run your dishwasher and washing machine only with a full load
- Water your lawn early in the morning to reduce evaporation loss
- Don't cut the lawn too short - longer grass saves water
- Mulch your trees and plants to retain moisture

SYSTEM IMPROVEMENTS

During 2016, a total of thirty (30) leaks (23-service line & 7-water main) throughout the distribution system were repaired amounting to the elimination of approximately 198 gallons per minute (gpm) of leakage from the system. Twenty one (21) lead service lines that were found due to leaks were replaced in various parts of the Village.

The Village has completed its water meter replacement for the entire village and is currently completing the upgrades to its pump station and new 650,000 gallon water storage tank. The amount of borrowed funds being reinvested into the capital assets of the water distribution system's infrastructure has been increased to \$3.6 million from \$2.7 million, or an increase of \$900,000. The amortization period before the bonds will be ultimately be retired is approximately 14.58 years at an average rate of 2.245%.

CLOSING

Thank you for allowing us to continue to provide your family with quality drinking water this year. We ask that all our customers 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.