

Annual Drinking Water Quality Report for 2010
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 10 of those contaminants, and found 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 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 Board of Trustees of the Village of Larchmont meets at 8:00 pm every first and third Monday of the month at 120 Larchmont Avenue, Larchmont, New York. The public is invited to attend these meetings.

GENERAL INFORMATION

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 at which the pressure is reduced from 110 psi to a working pressure of 65-70 psi.

The Larchmont Water Department services a retail population of 6,485 persons through 1740 service connections. In 2010, the Water Department purchased 392,000 million gallons (mg) 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 11.3 mg or 3.00% of production.

COST OF WATER

The Village of Larchmont Board of Trustees and Mayor set the water rates for the Village of Larchmont. The current rate is \$2.95 per 100 cubic feet (748 gallons). This equates to a charge of \$3.45 per 1,000 gallons. Assuming the average annual usage is 100,000 gallons, the equivalent of 13,369 cubic feet of 134 hundred cubic feet, the annual cost would be \$360.96.

SOURCE OF SUPPLY

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 obtained from the Catskill and Delaware watersheds of the New York City water system through a connection at Shaft 22 of the Delaware Aqueduct in Yonkers. The water furnished from Shaft 22 is a blend of water from the Catskill and Delaware watersheds.

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 Water Works provides Treatment and regular monitoring to ensure the water delivered to consumers meets all applicable standards.

NEW YORK CITY WATERSHED

The 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 of the Hudson. 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 contamination 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.

SUMMARY

Although surface waters in general are highly sensitive to microbial contaminants, NYSDOH's assessment found no noteworthy risks to water quality.

WATER TREATMENT

Shaft 22 water is fluoridated and chlorinated by New York City at Kensico Reservoir. Caustic soda is added at Shaft 22 to increase the pH of the water. The Westchester Joint Water Works provides additional chlorination at its Larchmont Station and adds a blended poly-orthophosphate as a corrosion inhibitor at that point.

WHAT IS 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.

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.

Fluoride

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. Fluoride is added to your water by Westchester Joint Water Works before it is delivered to us. According to the United States Centers for Disease Control, fluoride is very effective in preventing cavities when present in drinking water at an optimal range from 0.8 to 1.2 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 Westchester Joint Water Works monitor fluoride levels on a daily basis. During (2010) monitoring showed fluoride levels in your water were in the optimal range *75 % of the time*.

LEAD

The Water Works' initial sampling and monitoring program in 1992 demonstrated that samples for lead were above the action level established by the Lead and Copper Rule. The Water Works subsequently created a program to optimize corrosion control for the piping within the distribution system and the piping within your home or business. This program consists of raising the pH of the water to about 7.5 to make it less corrosive to pipe materials, and of adding a blend of poly-orthophosphate to the water. The poly-orthophosphate blend used at the Larchmont and Rye Lake Stations inhibits corrosion by creating a coating on pipe walls and helping to prevent lead and copper from entering the water. The Water Works activated this treatment process in September of 1999. At the Lake Street Station, the zinc orthophosphate performs a similar function. As a result these actions the Village has not exceeded the action level for 2010.

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 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>.”

OTHER RULES GOVERNING OUR OPERATION

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.

Information on Cryptosporidium and Giardia

Cryptosporidium (a protozoan) 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 2010, as part of routine and enhanced monitoring, NYC collected 104, 50 liter volume, samples from their Catskill and Delaware Aqueduct effluents at the Kensico Reservoir and analyzed them for Cryptosporidium oocysts. In these samples, 5 Cryptosporidium oocysts were detected. 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 (a protozoan) 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 2010, as part of routine and enhanced monitoring, NYC collected 104, 50 liter volume, samples from their Catskill and Delaware Aqueduct effluents at the Kensico Reservoir, and analyzed them for Giardia cysts. In these samples, 185 Giardia cysts were detected. Therefore, testing indicates the presence of Giardia 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. 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?

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).

CONSERVATION

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

CONSERVATION

During 2010, a total of twenty one (21) leaks (13-service line & 8-main line) throughout the distribution system were repaired amounting to the elimination of approximately 131 gallons per minute (gpm) of leakage from the system. In addition, three (3) lead service lines were replaced in various parts of the Village.

SYSTEM IMPROVEMENTS

There were no major system upgrades or projects in 2010.

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.

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.

Micrograms per liter (ug/l): Corresponds to one part of liquid in one billion parts of liquid (parts per billion - ppb).

Milligrams per liter (mg/l): Corresponds to one part of liquid in one million parts of liquid (parts per million - ppm).

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

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.

Treatment Technique (TT): A required process intended to reduce the level of a contaminant in drinking water.

Picocuries per liter (pCi/L): A measure of the radioactivity in water.

Table of Detected Contaminants

Contaminant	Violation Yes/No	Date of Sample	Level Detected		Unit	MCLG	Regulatory Limit (MCL, TT or AL)	Likely Source of Contamination
			Larchmont	Rye Lake				
Regulated Inorganic Contaminants								
Barium	No	10/4/2010	0.012	0.017	mg/l	2	2	Erosion of natural deposits
Chlorides	No	10/4/2010	8.0	9.9	mg/l	n/a	250	Naturally occurring or indicative of road salt contamination.
Fluoride	No	10/4/2010	1.020	1.020	mg/l	n/a -	2.2	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories
Iron	No	10/4/2010	31	26	ug/l	n/a	300(a)	Erosion of natural deposits
Manganese	No	10/4/2010	28.3	32.7	ug/l	n/a	300 (a)	Erosion of natural deposits
Nitrate	No	10/4/2010	0.64	0.120	mg/l	10	10	Runoff fro fertilizer use; Leaching from septic tanks; sewage; Erosion of natural deposits
Sodium	No	10/4/2010	6.34	7.0	mg/l	n/a	See health effects (b)	Naturally occurring; Road salt; Water softeners; Animal waste.
Sulfate	No	10/4/2010	4.5	4.7	mg/l	n/a	250	Naturally occurring.
Turbidity – entry Point	No	12/1/2010	1.7	2.3	NTU	n/a	TT≤5 (c)	Soil runoff
Turbidity – distribution	No	2010	.080 to 1.50		NTU	n/a	TT≤5 (c)	Soil runoff
Zinc	No	10/4/2010	0.010	0.005	mg/l	n/a	5	Naturally occurring
Water Quality Parameters								
Alkalinity	No	10/4/2010	13.4	13.4	mg/l	-	NDL	Erosion of natural deposits
Calcium	No	10/4/2010	5.2	5.3	mg/l	-	NDL	Erosion of natural deposits
Free Cl2 Res.- Distribution	No	2010	0.3 to 1.4		mg/l	n/a	4.0	Water additive used to control microbes.
Corrosivity	No	10/4/2010	-2.47	-2.33	Langelier index	-	NDL	
pH	No	2010	7.1	7.3	-	-	-	
Temperature		2010	2.9 to 20.8	2.0 to 20.7	Degree C	-	NDL	
Total Dissolved Solids	No	10/4/2010	44.4	47.2	mg/l	-		Metals and salts naturally occurring in the soil; organic matter
Hardness	No	10/4/2010	17	18	mg/l	-	-	

Disinfection Byproducts							
TTHM's	No	2010	40 (e)	ug/l	n/a	80	By-product of drinking water chlorination needed to kill harmful organisms. TTHMs are formed when source water contains large amounts of organic matter.
Haloacetic Acid 5 (HAA5)	No	2010	27 (e)	ug/l	n/a	60	Byproduct of drinking water disinfection needed to kill harmful organisms.
Radiological Compliance							
Gross Alpha	No	2010	-0.04	pCi/L	0	15	Erosion of natural deposits
Gross Beta	No	2010	0.51	pCi/L	0	50(d)	Erosion of natural deposits
Combined Radium 226 and 228	No	2010	0.04	pCi/L	0	5	Erosion of natural deposits
Lead and Copper Rule Sampling Results							
Lead	No	6/09 to 8/09	90 th Percentile (f) 11.5 Range: ND-63.3	ug/l	0	AL-15	Corrosion of household plumbing systems; Erosion of natural deposits
Copper	No	6/09-8.09	90 th Percentile (f) 499 Range: 18.7 - 1050	ug/l	1300	AL-1,300	Corrosion of household plumbing systems; Erosion of natural deposits

- (a) If iron and manganese are present, the total concentration of both should not exceed 500 ppb.
- (b) Water with >20 mg/l of sodium should not be consumed by those on a severely restricted sodium diet. Water with >250 mg/l of sodium should not be consumed by people on a moderately restricted diet.
- (c) Turbidity is a measure of cloudiness of water. We monitor it because it is a good indicator of water quality. 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. This level represents the annual quarterly average calculated from the data collected.
- (d) The State considers 50 pCi/L to be a level of concern for beta particles .
- (f) The level presented represents the 90th percentile of the 23 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, 23 samples were collected at our water system and the 90th percentile value was the 3rd highest value (11.5 ug/l). The action level for lead was exceeded at one of the sites tested. In the case of copper, 23 samples were collected from your water system and the 90th percentile value was the third highest value (499 ug/l). The action level for copper was exceeded at none of the sites tested.

The Westchester County Health Department also monitored our system for ethylene and propylene-glycol, deicing agents in the aviation industry. All tests indicated levels below the detectable limit. The bacteria E. coli was not found in the distribution system. In addition we monitored entry point samples for inorganic contaminants that were not detected. These include; antimony, arsenic, cadmium, chromium, cyanide, lead, mercury, nitrite, selenium and thallium. Organic contaminants that were tested for but not detected in the source water include; carbamate pesticides (EPA method 531.1), chlorine pesticides (EPA method 508), dioxin, diquat, endothall, glyphosate, herbicides (EPA method 515.1), microextractables (EPA method 504.1), volatile organic compounds and organic chemicals (EPA method 525.2).