

Annual Drinking Water Quality Report
Lyndhurst Water Department
For the Year 2015
Public Water System ID # NJ0232001

2016 Consumer Confidence Report (CCR)
This Report Contains Important Information about Your Water

Dear Customer

This report contains important information about your drinking water. The Township of Lyndhurst is pleased to provide you with important information about your drinking water. The Lyndhurst Water Department owns, operates and maintains all the water related equipment within the Township. We purchase our water from Passaic Valley Water Commission (PVWC). Both the Township of Lyndhurst and PVWC strive to provide you with water that meets or surpasses all health and safety standard set by the United States Environmental Protection Agency (EPA) and the New Jersey Department of Environmental Protection. (NJDEP).

In 2013, the Lyndhurst Water Department took 240 samples to insure the safety of the water delivered to your tap. All these samples were within NJDEP guidelines/state standards. The Lyndhurst Water Department also tested for iron, manganese, copper and lead and were well within safe drinking water standards.

The Lyndhurst Water Department continues to replace the water mains and service lines to your homes. This will meet and maintain State regulations with regard to copper and lead. Lyndhurst and PVWC regularly test water samples to be sure that your water meets the safety standards. PVWC also tests for several other substances as noted on the Water Quality Table. All the test results are on file with the NJDEP, the agency that monitors and regulates drinking water quality in our state. The EPA and NJDEP establish these regulations. They also require water suppliers to mail the Consumer Confidence Report (CCR) to customers on an annual basis. Please read it carefully and contact the Lyndhurst Health Department at 201-804-2499 or the Lyndhurst Water Department at 201-804-2493 if you have questions about your water, your water service or public meetings relative to water service. Or, you can call the EPA Safe Drinking Water Hotline at 800-426-4791. If you have any question about drinking water as it relates to your personal health, we suggest that you contact your health care provider.

General Information

Rivers, lakes, streams, ponds, reservoirs, springs and wells are sources for both tap water and bottled water. As water travels over the surface of land or through the ground, it dissolves naturally occurring minerals and in some cases, radioactive material, and picks up substances resulting from the presence of animals or from human activity.

Contaminants that may be present in source water include:

- Microbial contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.
- Inorganic contaminants, such as salts and metals, which can be naturally occurring or the result from urban storm water runoff, and residential uses.
- Pesticides and herbicides, which may come from a variety of sources such as agriculture, urban storm water runoff, industrial or domestic wastewater discharges, oil and gas production, mining or farming.
- Organic, chemical contaminants, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production and can also, come from gas stations, urban storm water runoff, and septic systems.
- Radioactive contaminants, which can be naturally occurring or be the result of oil and gas production and mining activities.

In order to ensure that tap water is safe to drink, the EPA prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. Food and Drug Administration regulations establish limits for contaminants in bottled water, which must provide the same protection for public health.

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. However, the presence of a contaminant does not necessarily indicate that the water poses a health risk.

Health and Educational Information

Some people may be more vulnerable to contaminants 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 about drinking water from their health providers. EPA/CDC guidelines on the appropriate means to lessen the risk of infections by cryptosporidium and other microbial contaminants are available from the EPA's Safe Drinking Water Hotline at 800-426-4791.

Special Considerations Regarding Children, Pregnant Women, Nursing Mothers, and Others

Children may receive a slightly higher amount of a contaminant present in the water than do adults, on a body weight basis, because they may drink a greater amount of water per pound of body weight than do adults. For this reason reproductive or developmental effects are used for calculating a drinking water standard, especially if these effects occur at lower levels than other health effects of concern. If there is insufficient toxicity information for a chemical (for example, lack of data on reproductive or developmental effects), an extra uncertainty factor may be incorporated into the calculation of the drinking water standard, thus making the standard more stringent, to account for the additional uncertainties regarding these effects. In the case of lead and nitrate, effects on infants and children are the health endpoints upon which the standard is based.

Sources of Supply

The Lyndhurst water supply obtains its entire water supply from the Passaic Valley Water Commission (PVWC). Sources of supply include the Passaic River, and treated water that is supplied by the North Jersey District Water Supply Commission (NJDWSC). NJDWSC obtains water its supply from the Wanaque Reservoir.

Treatment

Water produced by the PVWC is treated at their water treatment plant in Little Falls. The NJDWSC supply is treated at their water treatment plant in Wanaque. The treatment at these plants includes pretreatment, sedimentation, filtration and disinfection.

The Borough of Lyndhurst, PVWC and the NJDWSC Water Quality Tables below list all the drinking water contaminants that were detected during calendar year 2013. The presence of these contaminants in the water does not necessarily indicate that the water poses a health risk. Unless otherwise noted, the data presented in this table is from January 1, 2013 through December 31, 2013. The NJDEP requires us to monitor for certain contaminants less than once per year because the concentrations of these contaminants are not expected to vary significantly from year to year. Some of the data, though representative of the water quality, may be more than one year old.

ADDITIONAL INFORMATION

The Safe Drinking Water Act regulations allow monitoring waivers to reduce or eliminate monitoring requirements for asbestos, volatile organic chemicals and synthetic organic chemicals. Our system received monitoring waivers for asbestos and we are not required to monitor for synthetic organic chemicals.

The MCL's listed in the following tables are set at very stringent levels. To understand the possible health effects described for many regulated contaminants, a person would have to drink two liters of water every day at the MCL level for a lifetime to have a one-in-a-million chance of having the described health effect.

**Table 1
Lyndhurst Water Department - Water Quality Report**

Microbiological Contaminants

Regulated Contaminant	Units	COMPLIANCE ACCHIEVED	MCLG	MCL	Highest Level	Source of Contamination
Total Coliform Bacteria	NA	Yes	0	Not more than 1 positive sample per month	1*	Coliform are bacteria that are naturally present in the environment and are used as an indicator that other, potentially harmful bacteria may be present.

*The Lyndhurst Water Department collects 20 routine total coliform samples per month. Lyndhurst Water recorded a single positive sample for total coliform in the month of June. That sample was negative for e-coli. In conformance with the rules a repeat sample was collected from the same location and 2 additional check samples were taken upstream and downstream of the location of the positive sample within 24 hours and retested. All repeat and check samples were negative therefore the system remained in compliance.

REGULATED DISINFECTANTS and DISINFECTION BYPRODUCTS

Stage 2 Disinfection Byproducts, Note: Stage 2 DBP compliance is based on the locational running average (LRAA) calculated at each monitoring location.

Regulated Contaminant	UNIT	COMPLIANCE ACCHIEVED	LRAA Limit	Range Detected	Source of Contamination/ and Comments
Total Trihalomethanes (TTHM) Stage 1	PPB	Yes	80	38.6 – 75.34	Byproduct of water disinfection. / TTHM compliance is based on Locational Running Annual Average.
Haloacetic Acids (HAA5) Stage 1	PPB	Yes	.60	14.9 – 30.45	Byproduct of water disinfection. / HAA5 compliance is based on Locational Running Annual Average.

Disinfectants

Regulated Contaminant	Units	COMPLIANCE ACCHIEVED	MRDLG	MRDL	Highest Detected	Range Detected	Source of Contamination
Chlorine as CL2 (Running avg.)	PPM	Yes	4	4	1.09	0.14 – 1.09	Chlorine is used as a drinking water disinfectant.

Secondary Contaminants

Regulated Contaminant	Units	COMPLIANCE ACCHIEVED	RUL	Highest Detected	Range Detected	Source of Contamination
Iron	PPM	Yes	.3	<0.2	NA	Erosion of natural deposits, discharge of drilling waste and discharge from metal refineries.
Manganese	PPM	Yes	0.05	<0.01	NA	Erosion of natural deposits.

PASSAIC VALLEY WATER COMMISSION (PVWC) PWS ID NJ1605002

2015 WATER QUALITY DATA

Some people may be more vulnerable to contaminants 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 about drinking water from their health care providers. EPA/CDC guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the Safe Drinking Water Hotline (800-426-4791).

Water Quality Results - Table of Contaminants Detected in 2015

PRIMARY CONTAMINANTS	Compliance Achieved	MCLG	MCL	Water Treatment Plant Results				TYPICAL SOURCE
				PVWC Little Falls WTP PWS ID NJ1605002	NJDWSC Wanaque WTP PWS ID NJ1613001	Jersey City MUA Jersey City WTP PWS ID NJ0906001	Newark Water Pequannock WTP PWS ID NJ0714001	
TURBIDITY AND TOTAL ORGANIC CARBON				Highest Result (Range of Results)				
Turbidity, NTU	Yes	NA	TT = 1	0.53 (0.02 - 0.53)	0.28 (0.11 average)	0.22 (0.06 - 0.22)	0.45 (0.02 - 0.45)	Soil runoff.
	Yes	NA	TT = percentage of samples <0.3 NTU (min 95% required)	99.97%	100%	100%	97.3%	
Total Organic Carbon, %	Yes	NA	TT = % removal; or removal ratio	Percent (%) Removal	Removal Ratio			Naturally present in the environment.
				46 - 72 (25 - 45 required)	1.0 (RAA) (0.94 - 1.0)	1.25 (Lowest RAA) 1.00 - 1.63	NA	
INORGANIC CONTAMINANTS				Highest Result (Range of Results)				
Barium, ppm	Yes	2	2	0.027 (0.016 - 0.027)	0.013	0.02	0.0061	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits.
Chromium, ppb	Yes	100	100	0.57 (ND - 0.57)	ND	ND	ND	Discharge from steel and pulp mills; erosion of natural deposits.
Fluoride, ppm	Yes	4	4	0.09 (ND - 0.09)	ND	ND	0.066	Erosion of natural deposits.
Nickel, ppb	NA	NA	NA	1.98 (1.63 - 1.98)	ND	ND	ND	Erosion of natural deposits.
Nitrate, ppm	Yes	10	10	3.7 (0.89 - 3.7)	0.503	0.44 (0.16 - 0.44)	ND	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.
Selenium, ppb	Yes	50	50	0.69 (ND - 0.69)	ND	ND	ND	Discharge from petroleum and metal refineries; Erosion of natural deposits. Discharge from mines.

DETECTED UNREGULATED CONTAMINANTS – UCMR3 DATA

Contaminant	Jersey City Average (Range of Results)	Unregulated contaminants are those for which EPA requires monitoring but has not established drinking water standards. The purpose of unregulated contaminant monitoring is to assist EPA in determining the occurrence of unregulated contaminants in drinking water and whether future regulation is warranted.
Chlorate, ppb	106 (64 - 160)	
Chromium, ppb	ND (ND - 0.31)	
Chromium-6, ppb	0.059 (ND - 0.088)	
Strontium, ppb	94 (87 - 100)	
Vanadium, ppb	ND (ND - 0.22)	

SOURCE WATER ASSESSMENT

NJDEP has prepared Source Water Assessment reports and summaries for all public water systems. The Source Water Assessment for the PVWC system (PWS ID 1605002), NJDWSC system (PWS ID 1613001), Jersey City system (PWS ID 0906001), and Newark system (PWS ID 0714001) can be obtained by accessing NJDEP's source water assessment web site at <http://www.state.nj.us/dep/swap> or by contacting NJDEP's Bureau of Safe Drinking Water at 609-292-5550. If a system is rated highly susceptible for a contamination category, it does not mean a customer is – or will be – consuming contaminated water. The rating reflects the potential for contamination of a source water, not the existence of contamination. Public water systems are required to monitor for regulated contaminants and to install treatment if any of those contaminants are detected at frequencies and concentrations above allowable levels. The source water assessments performed on the intakes for each system lists the following susceptibility ratings for a variety of contaminants that may be present in source waters:

Intake Susceptibility Ratings	Pathogens	Nutrients	Pesticides	Volatile Organic Compounds	Inorganic Contaminants	Radionuclides	Radon	Disinfection Byproduct Precursors
PVWC 4 Surface Water	4-High	4-High	1-Medium, 3-Low	4-Medium	4-High	4-Low	4-Low	4-High
NJDWSC 5 Surface Water	5-High	5-High	2-Medium, 3-Low	5-Medium	5-High	5-Low	5-Low	5-High
Jersey City 1 Surface Water	High	Medium	Low	Medium	Medium	Low	Low	High
Newark 1 Surface Water	High	Low	Low	Low	High	Low	Low	High

CRYPTOSPORIDIUM

Cryptosporidium is a microbial pathogen found in surface water throughout the United States. Although filtration removes *Cryptosporidium*, the most commonly-used filtration methods cannot guarantee 100 percent removal. Our monitoring indicates the presence of these organisms in our source water. Current test methods do not allow us to determine if the organisms are viable or capable of causing disease. Ingestion of *Cryptosporidium* may cause cryptosporidiosis, an abdominal 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, infants and small children, and the elderly are at greater risk of developing life-threatening illness. We encourage immuno-compromised individuals to consult their doctor regarding appropriate precautions to take to avoid infection. *Cryptosporidium* must be ingested to cause disease, and it may spread through means other than drinking water.

PVWC, NJDWSC, Jersey City, and Newark started the second round of source water monitoring in accordance with the requirements of EPA's Long Term 2 Enhanced Surface Water Treatment Rule. This monitoring will continue through the spring of 2017. The data collected in 2015 is presented in the Source Water Pathogen Monitoring table below.

SOURCE WATER PATHOGEN MONITORING

Contaminant	PVWC Source Waters		NJDWSC Source Water	Jersey City Source Water	Newark Source Water	Typical Source
	Passaic River	Pompton River				
<i>Cryptosporidium</i> , Oocysts/L	0 - 0.372	0 - 0.78	ND	ND	ND	Microbial pathogens found in surface waters throughout the United States.
<i>Giardia</i> , Cysts/L	0 - 0.372	0 - 0.744	0 - 0.1	ND	0 - 0.18	

SECONDARY PARAMETERS – TREATMENT PLANT EFFLUENT

Contaminant	N.J. Recommended Upper Limit (RUL)	PVWC Little Falls WTP PWSID NJ1605002		NJDWSC Wanaque WTP PWSID NJ1613001		Jersey City Jersey City WTP PWSID NJ0906001		Newark Pequannock WTP PWS ID NJ0714001	
		Range of Results	RUL Achieved	Result	RUL Achieved	Range of Results	RUL Achieved	Result	RUL Achieved
ABS/LAS, ppb	500	ND - 110	Yes	70	Yes	ND	Yes	-	-
Alkalinity, ppm	NA	45 - 66	NA	41	NA	34 - 64	Yes	30	Yes
Aluminum, ppb	200	11 - 27	Yes	50	Yes	ND - 95	Yes	35	Yes
Chloride, ppm	250	124 - 188	Yes	80	Yes	93 - 134	Yes	42	Yes
Color, CU	10	ND	Yes	1	Yes	5 - 10	Yes	3	Yes
Corrosivity	Non-Corrosive	Non-Corrosive	Yes	Non-Corrosive	Yes	-	-	-	-
Hardness (as CaCO ₃), ppm	250	108 - 142	Yes	72	Yes	84 - 113	Yes	57	Yes
Hardness (as CaCO ₃), grains/gallon	15	6 - 8	Yes	4	Yes	5 - 7	Yes	3	Yes
Iron, ppb	300	ND	Yes	7	Yes	ND - 15	Yes	13	Yes
Manganese, ppb	50	3 - 8	Yes	ND	Yes	ND - 204 (13 average)	Yes**	27	Yes
Odor, TON	3	4 - 14	No	ND	Yes	ND - 1C	Yes	-	-
pH	6.5 to 8.5 (optimum range)	7.99 - 8.15	Yes	8.34	Yes	6.76 - 7.72	Yes	8.08	Yes
Sodium, ppm	50	75 - 281	No*	47	Yes	46 - 79	No*	22	Yes
Sulfate, ppm	250	43 - 89	Yes	11	Yes	12	Yes	11	Yes
Total Dissolved Solids, ppm	500	321 - 450	Yes	159	Yes	189 - 344	Yes	127	Yes
Zinc, ppb	5,000	2 - 5	Yes	ND	Yes	ND - 40	Yes	ND	Yes

*Compliance with the Manganese RUL is based on the average of all results.

* PVWC AND JERSEY CITY FINISHED WATER EXCEEDS SODIUM RUL

PVWC and Jersey City's finished water was above New Jersey's Recommended Upper Limit (RUL) of 50 ppm for sodium in 2015. Possible sources of sodium include natural soil runoff, roadway salt runoff, upstream wastewater treatment plants, and a contribution coming from chemicals used in the water treatment process. For healthy individuals the sodium intake from water is not important, because a much greater intake of sodium takes place from salt in the diet. However, sodium levels above the recommended upper limit may be a concern to individuals on a sodium-restricted diet. If you have any concerns please contact your health care provider.

ADDITIONAL PVWC TREATMENT PLANT MONITORING RESULTS

Contaminant	Little Falls WTP Effluent Average (Range)	Test results presented in this table were collected in 2015 as part of a study to determine the general occurrence of chlorate. Currently, there is no drinking water standard for chlorate to compare the results to and thus they are presented for informational purposes only. PVWC continues to participate in and support these types of regulatory and research efforts to maintain a position of leadership in drinking water supply.
Chlorate, ppb	174 (88 - 373)	

DEFINITIONS of TERMS and ACRONYMS

ABS/LAS: Alkylbenzene Sulfonate and Linear Alkylbenzene Sulfonate (surfactants)

AL: Action Level; the concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

CDC: United States Centers for Disease Control and Prevention

CU: Color unit

Disinfection By-product Precursors: A common source is naturally-occurring organic material in surface water. Disinfection by-products are formed when the disinfectants (usually chlorine) used to kill pathogens react with dissolved organic material (DBP precursors) present in surface water.

EPA: United States Environmental Protection Agency

Inorganic Contaminants: Contaminants such as salts and metals, which can be naturally occurring or result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining or farming. These contaminants may be present in source water.

MCL: Maximum Contaminant Level; the highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.

MCLG: Maximum Contaminant Level Goal; 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.

Microbial Contaminants/Pathogens: Disease-causing organisms such as bacteria, protozoa, and viruses, which may come from sewage treatment plants, septic systems, agricultural livestock operations and wildlife. Common sources are animal and human fecal wastes. These contaminants may be present in source water.

MRDL: Maximum Residual Disinfectant Level; 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.

MRDLG: Maximum Residual Disinfectant Level Goal; 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.

NA: Not applicable

ND: Not detected above the minimum reporting level.

NJDEP: New Jersey Department of Environmental Protection

NJDWSC: North Jersey District Water Supply Commission

NTU: Nephelometric Turbidity Unit

Nutrients: Compounds, minerals and elements that aid growth, which can be either naturally occurring or man-made. Examples include nitrogen and phosphorus.

Organic Contaminants/Volatile Organic Compounds: Compounds containing carbon, including synthetic and volatile organic chemicals, which are products or by-products of industrial processes or petroleum production. They are typically used as solvents, degreasers, and gasoline components. These compounds may be present in source water as a result of releases from gas stations, fuel storage tanks, industrial facilities, stormwater runoff, and other sources. Examples include benzene, methyl tertiary butyl ether (MTBE), and vinyl chloride.

Pesticides (Herbicides, Insecticides, Fungicides, and Rodenticides): Man-made chemicals used to control pests, weeds, and fungus. Common sources include manufacturing centers of pesticides, and where they are used in agricultural, industrial, commercial, and residential environments. Examples include herbicides such as atrazine, and insecticides such as chlordane.

ppb: parts per billion (approximately equal to micrograms per liter)

ppm: parts per million (approximately equal to milligrams per liter)

PWS ID: Public Water System Identification

PVWC: Passaic Valley Water Commission

RAA: Running Annual Average

Radioactive Contaminants/Radionuclides: Radioactive substances that are both naturally occurring and man-made; may be present in source water naturally or as a result of oil and gas production and mining activities. Examples include radium, radon and uranium.

Radon: Colorless, odorless, cancer-causing gas that occurs naturally in the environment.

RUL: Recommended Upper Limit; the highest level of a constituent of drinking water that is recommended in order to protect aesthetic quality.

RUL Achieved: A "YES" entry indicates the State-recommended upper limit was not exceeded. A "NO" entry indicates the State-recommended upper limit was exceeded.

TON: Threshold Odor Number

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

Turbidity: *Turbidity is a measure of the cloudiness of the water, and is monitored as an indicator of water quality. High turbidity can hinder the effectiveness of disinfectants.*

WTP: Water Treatment Plant

ADDITIONAL INFORMATIONAL RESOURCES

EPA Drinking Water website: www.epa.gov/safewater

NJDEP Water Supply website: www.nj.gov/dep/watersupply

American Water Works Association (AWWA) website: www.awwa.org

EPA Safe Drinking Water Hotline: 800-426-4791

NJDEP Bureau of Safe Drinking Water: 609-292-5550

AWWA New Jersey Section website: www.njawwa.org

Health Note

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 the water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the EPA Safe Drinking Water Hotline at 800-426-4791.

Bottled Water or Tap Water?

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 activity. Contaminants that may be present in source water include:

Microbial contaminants such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations and wildlife.

Inorganic contaminants, such as salts and metals which can be naturally occurring or result from urban storm water runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.

Pesticides and herbicides, which may come from a variety of sources such as agriculture, urban storm water runoff and residential uses.

Organic chemical contaminants, including synthetic and volatile organic chemicals, which are byproducts of industrial processes and petroleum production and can also come from gas stations, urban storm water runoff and septic systems.

Radioactive contaminants, which can be naturally occurring or be the result of oil and gas production and mining activities.

In order to ensure that tap water is safe to drink, EPA prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. Food and Drug Administration regulations establish limits for contaminants in bottled water which must provide the same protection for public health. So, what's the bottom line? If bottled and tap water meet the federal standards, they are both safe to drink. However, your tap water is substantially less expensive than bottled water