



PASSAIC VALLEY WATER COMMISSION

2017 Water Quality Report

Issued May 2018

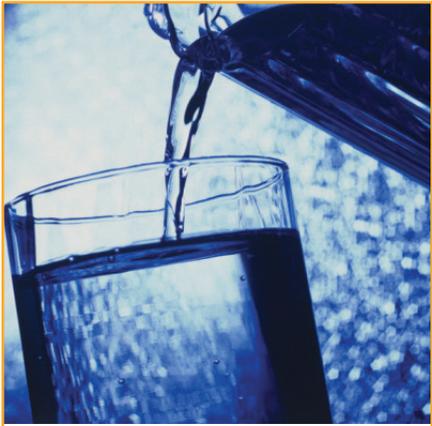
Passaic Valley Water Commission (PVWC) is pleased to provide our customers in Paterson, Clifton, Passaic, Prospect Park and Woodland Park with this annual Water Quality Report. PVWC is a public drinking water supplier owned by the cities of Paterson, Clifton and Passaic, and also owns and operates the Alan C. Levine Little Falls Water Treatment Plant (WTP). For a majority of PVWC customers finished water from the Little Falls WTP is blended with finished water obtained from North Jersey District Water Supply Commission's (NJDWSC) Wanaque WTP. After treatment the finished water is then pumped through underground pipes to the cities of Paterson, Clifton, Passaic, Prospect Park, Lodi, North Arlington, a section of Woodland Park and to over 22 wholesale customers in Passaic, Bergen, Essex, Hudson and Morris Counties. Emergency interconnections with other water purveyors exist throughout the distribution system.

PVWC holds monthly open public meetings. For dates, times and locations of these meetings, or for additional copies of this report contact our Customer Service Department at 973-340-4300, or customerservice@pvwc.com.



ANNUAL WATER QUALITY REPORT

PVWC is required to distribute an annual Water Quality Report, or Consumer Confidence Report, to each customer as a result of amendments made in 1996 to the Safe Drinking Water Act. This report provides a summary of information collected during the calendar year 2017 regarding compliance monitoring required by both the United States Environmental Protection Agency (EPA) and the New Jersey Department of Environmental Protection (NJDEP), as well as additional water quality monitoring data.



The quality of the water delivered to your service area is represented by the combined data sets provided for PVWC's Little Falls WTP, NJDWSC's Wanaque WTP, Jersey City's WTP and Newark's Pequannock WTP, and in the combined distribution system in the cities of Paterson, Clifton, Passaic, Prospect Park and a section of Woodland Park. Water from Jersey City and Newark was used to supplement the water supply in our system during parts of 2017. **PVWC's water met all primary health-based standards in 2017.**



SOURCE WATER

PVWC withdraws water from the Passaic River in Totowa, New Jersey and treats it at the Little Falls WTP. In the event of water quality issues in the Passaic River, PVWC can also withdraw water from either the Pompton River or the Point View Reservoir (which is filled from the Pompton River). A water quality monitoring station is operated by the U.S. Geological Survey on the Passaic River shortly upstream of the Little Falls WTP intake and just downstream of the Passaic River's confluence with the Pompton River. This monitoring station provides continuous data for important water quality parameters, and helps provide advanced warning of adverse changes in water quality. PVWC also conducts a surface water monitoring program at various stream and river locations throughout the Passaic River watershed.

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.nj.gov/dep/watersupply/swap/index.html> or by contacting NJDEP's Bureau of Safe Drinking Water at 609-292-5550 or watersupply@dep.nj.gov. 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 list 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

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.

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

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.

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.

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.

Radiological 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.

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.

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 water systems completed the second round of source water monitoring in accordance with the requirements of EPA's Long Term 2 Enhanced Surface Water Treatment Rule. The data collected in 2017 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 - 0.878	0 - 0.093	0 - 0.1	0	0	Microbial pathogens found in surface waters throughout the United States.
<i>Giardia</i> , Cysts/L	0 - 2.047	0 - 1.209	0 - 0.4	0 - 0.27	0	

WATER TREATMENT

The Little Falls WTP is a multiple-stage advanced-technology treatment system designed and operated to provide a high degree of disinfection (for pathogenic microorganisms that can cause disease), removal of a variety of potential chemical contaminants, and treatment for aesthetic concerns such as taste, odor, and color. The treatment system uses four primary means for dealing with these contaminants, including two particle removal systems (high-rate sand-ballasted coagulation/flocculation/sedimentation, and filtration with granular activated carbon and sand) and two chemical disinfection systems (primary disinfection with ozone, and residual disinfection with chlorine).



The treatment system is designed and operated to handle the various water quality contaminants that may be present in a highly-developed watershed such as the Passaic River basin. The system underwent an \$80 million upgrade during the past decade, including addition of a high-rate sedimentation process and ozone disinfection. Fluoride is not added to the water, but there are low levels present naturally (fluoride is a natural mineral).

The NJDWSC's Wanaque WTP draws its water from the Wanaque Reservoir in Wanaque, New Jersey. The water treatment plant uses conventional treatment comprised of coagulation/flocculation/sedimentation, gravity filtration through sand and anthracite, and chlorine disinfection.

UNCOVERED DRINKING WATER STORAGE RESERVOIRS

PVWC operates three open drinking water reservoirs in Woodland Park and Paterson to provide storage capacity (the Great Notch Reservoir, New Street Reservoir, and Stanley Levine Reservoir). The treated water from the Little Falls WTP is pumped to these reservoirs, and that water is then withdrawn for distribution to PVWC's customers. Unfortunately, since these reservoirs are uncovered, they are subject to bacteriological and chemical contamination from wildlife and other natural and man-made causes, and thus the high quality of this already-treated water from the Little Falls WTP may be compromised. While the water withdrawn from the reservoirs is rechlorinated onsite to provide further disinfection, chlorine is not considered very effective against all pathogenic microorganisms such as Giardia and Cryptosporidium.

Federal law requires that all uncovered drinking water reservoirs in the U.S. must either be covered or treatment applied beyond chlorination to ensure adequate disinfection. PVWC has entered into an Administrative Consent Order (ACO) with the NJDEP for closing these reservoirs in accordance with federal and state regulations. Those plans when implemented will help maintain the high quality of water that is provided by the Little Falls WTP and thus provide appropriate protection of public health.

Administrative Consent Order (ACO) Compliance Requirement	Explanation	Length	Steps Taken to Meet the Compliance Requirement	Health Effects
Uncovered finished water reservoirs.	Three of our finished water reservoirs are not covered. Their discharge is disinfected, but not filtered. A feasibility study to identify the best practical solution to address the uncovered finished water reservoirs was completed and approved by the NJDEP. Final plans to address the three reservoirs have been included in an Administrative Consent Order (ACO).	Determined by the State as per the ACO.	Water systems with uncovered finished water reservoirs are required to eliminate or cover these reservoirs, treat the discharge from these reservoirs, or be in compliance with a state-approved schedule to eliminate or cover the reservoirs or provide treatment by April 1, 2009. We have executed an Administrative Consent Order with the NJDEP wherein PVWC was required to develop a plan and implementation schedule to eliminate, cover or provide treatment for our uncovered reservoirs. A three-phase plan to address the reservoirs was developed and is being implemented. The first phase, which includes new tanks at the Levine Reservoir, has been designed and is in the NJDEP permit review process. The second phase, which addresses New Street Reservoir, will proceed after Levine has been completed. Similarly, the third and final phase, which addresses the Great Notch Reservoir, will commence upon the completion of New Street.	Inadequately protected or inadequately treated water may contain disease causing organisms. These organisms can cause symptoms such as diarrhea.

Many public drinking water supplies contain a phosphate-based corrosion inhibitor to minimize leaching of lead into the drinking water from household plumbing systems and lead service lines. **However, the phosphate can promote algal growth when exposed to sunlight, and thus PVWC cannot add corrosion inhibitor to the water supply that goes into the uncovered drinking water reservoirs.** PVWC is currently in compliance with the Federal and State requirements for lead (see notice elsewhere in this CCR regarding lead). However, the water supply is still susceptible to leaching lead from plumbing and lead service lines. PVWC has implemented a phased approach for adding corrosion inhibitor to the water leaving the reservoirs. As of December 2017, PVWC was able to add corrosion inhibitor at four locations to provide coverage to parts of the system. Once the uncovered reservoirs are addressed, we will be able to add corrosion inhibitor to the entire water system, thus providing further protection of public health. Other steps PVWC is taking include testing the system on a weekly and monthly basis for parameters that indicate how the corrosion control treatment systems are working, replacing PVWC-owned lead service lines, and continuing our multi-faceted lead public awareness campaign to keep you informed.

INFORMATION ABOUT DRINKING WATER CONTAMINANTS

SOURCE OF CONTAMINANTS FOR TAP AND BOTTLED 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 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 result from urban stormwater 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 stormwater runoff, and residential uses.
- **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 stormwater 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.

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 contaminants and potential health effects can be obtained by calling the Environmental Protection Agency's Safe Drinking Water Hotline (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 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 additional uncertainties regarding these effects. In the cases of lead and nitrate, effects on infants and children are the health endpoints upon which the standards are based.

TECHNICAL DATA TABLES

The data presented in the tables in this Water Quality Report are from the most recent testing conducted in accordance with the regulations. The data tables present concentrations of contaminants detected at the effluent of the treatment plants and in the pipes within the distribution system, typical sources of various contaminants that may be found in drinking water, status of compliance with primary and secondary drinking water standards, and related health information if compliance was not achieved. The State allows us to monitor for some contaminants less than once per year because the concentrations of these contaminants do not change frequently. As such, some of the data, though representative, are more than one year old.

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).

2017 Water Quality Results - Table of Detected Contaminants									PVWC PWS ID NJ1605002	
WATER TREATMENT PLANT EFFLUENT RESULTS										
PRIMARY CONTAMINANTS	Compliance Achieved	MCLG	MCL	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	TYPICAL SOURCE		
TURBIDITY AND TOTAL ORGANIC CARBON				Highest Result and Range of Results						
Turbidity, NTU*	Yes	NA	TT = 1	0.22 (0.02 - 0.22)	1 (0.06 average)	0.21 (0.06 - 0.21)	0.42 (0.01 - 0.42)	Soil runoff.		
	Yes	NA	TT = percentage of samples <0.3 NTU (min 95% required)	100%	99.5%	100%	99.87%			
	*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.									
Total Organic Carbon, %	Yes	NA	TT = % removal or Removal Ratio	Percent (%) Removal	Removal Ratio	Percent (%) Removal	NA	Naturally present in the environment.		
				52 - 78 (25-50 required)	1.1 (RAA) 1.0 - 1.5	44 - 57 (37.5-46.7 required)				
INORGANIC CONTAMINANTS				Highest Result (Range of Results)						
Barium, ppm	Yes	2	2	0.027 (0.016 - 0.027)	0.019	0.019	0.008	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits.		
Chromium, ppb	Yes	100	100	ND	ND	1.3	ND	Discharge from steel and pulp mills; erosion of natural deposits.		
Fluoride, ppm	Yes	4	4	0.110 (ND - 0.110)	ND	ND	0.12	Erosion of natural deposits.		
Nickel, ppb	NA	NA	NA	3.12 (1.69 - 3.12)	ND	1.5	ND	Erosion of natural deposits.		
Nitrate, ppm	Yes	10	10	4.33 (0.67 - 4.33)	0.516	0.35 (0.06 - 0.35)	ND	Runoff from fertilizer use; Leaching from septic tanks, sewage; erosion of natural deposits.		
RADIOLOGICAL CONTAMINANTS				Highest Result						
Combined radium, pCi/L	Yes	0	5	NA	NA	0.14 (2014 Data)	1.5	Erosion of natural deposits.		
DISTRIBUTION SYSTEM RESULTS										
PRIMARY CONTAMINANTS	Compliance Achieved	MCLG	MCL	PVWC PWS ID NJ1605002				TYPICAL SOURCE		
DISINFECTION BYPRODUCTS				Highest LRAA and Range of Results						
Haloacetic Acids (HAA5), ppb	Yes	NA	60	28 (8 - 35)				By-product of drinking water disinfection.		
Total Trihalomethanes (TTHM), ppb	Yes	NA	80	51 (11 - 70)				By-product of drinking water disinfection.		
Some people who drink water containing trihalomethanes in excess of the MCL over many years may experience problems with their liver, kidneys or central nervous systems and may have an increased risk of getting cancer.										
DISINFECTANTS		MRDLG	MRDL	Highest RAA and Range of Results						
Chlorine, ppm	Yes	4	4	1.2 (ND - 8.2)				Water additive used to control microbes.		
LEAD AND COPPER		MCLG	Action Level	90th Percentile						
Copper, ppm	Yes	1.3	1.3	0.086 (0 out of 138 samples exceeded AL Jan-Jun)				Corrosion of household plumbing systems.		
				0.0748 (0 out of 141 samples exceeded AL Jul-Dec)						
Lead, ppb	Yes	0	15	9.6 (7 out of 138 samples exceeded AL Jan-Jun)				Corrosion of household plumbing systems.		
				13.9 (10 out of 141 samples exceeded AL Jul-Dec)						

Infants and children who drink water containing lead in excess of the action level could experience delays in their physical or mental development. Children could show slight deficits in attention span and learning abilities. Adults who drink this water over many years could develop kidney problems or high blood pressure.

WAIVER INFORMATION

The Safe Drinking Water Act regulations allow monitoring waivers to reduce or eliminate the monitoring requirements for asbestos, volatile organic chemicals, and synthetic organic chemicals. A monitoring waiver for synthetic organic chemicals for the 2017-2019 monitoring period was granted to the Newark water system. Monitoring waivers for synthetic organic chemicals for PVWC, NJDWSC and Jersey City Water for the 2017-2019 monitoring period are currently under review by NJDEP.

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 - 80	Yes	ND	Yes	ND	Yes	-	-
Alkalinity, ppm	NA	36 - 79	NA	49	NA	37 - 65	NA	26	NA
Aluminum, ppb	200	17 - 33	Yes	50	Yes	ND - 240	No	83	Yes
Chloride, ppm	250	88 - 217	Yes	104	Yes	89 - 128	Yes	45	Yes
Color, CU	10	ND	Yes	2	Yes	ND - 5	Yes	2	Yes
Corrosivity	Non-Corrosive	Non Corrosive	Yes	Non Corrosive	Yes	Corrosive	No	-	-
Hardness (as CaCO ₃), ppm	250	88 - 186	Yes	89	Yes	83 - 111	Yes	53	Yes
Hardness (as CaCO ₃), grains/gallon	15	5 - 11	Yes	5	Yes	5 - 6	Yes	3	Yes
Iron, ppb	300	ND	Yes	17	Yes	ND - 89	Yes	14	Yes
Manganese, ppb	50	2 - 5	Yes	ND	Yes	ND - 340	No^	25	Yes
Odor, TON	3	6 - 12	No	ND	Yes	ND	Yes	1	Yes
pH	6.5 to 8.5 (optimum range)	7.68 - 8.20	Yes	8.1	Yes	6.95 - 7.46	Yes	7.29	Yes
Sodium, ppm	50	60 - 129	No*	45	Yes	45 - 69	No*	23	Yes
Sulfate, ppm	250	35 - 86	Yes	12	Yes	12	Yes	11	Yes
Total Dissolved Solids, ppm	500	280 - 592	No	129	Yes	188 - 294	Yes	111	Yes
Zinc, ppb	5,000	3 - 8	Yes	11	Yes	ND - 50	Yes	ND	Yes

* 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 2017. 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.

^ JERSEY CITY FINISHED WATER EXCEEDS MANGANESE RUL

Jersey City's finished water was above New Jersey's Recommended Upper Limit (RUL) of 50 ppb for manganese in 2017. **The Recommended Upper Limit (RUL) for manganese is based on staining of laundry. Manganese is an essential nutrient, and toxicity is not expected from high levels which would be encountered in drinking water.**

DISTRIBUTION SYSTEM RESULTS – SECONDARY CONTAMINANTS

Contaminant	RUL	Annual Average	Range	RUL Achieved
Iron, ppb	300	170	ND - 770	Yes*
Manganese, ppb	50	9	3 - 41	Yes

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

ADDITIONAL PVWC TREATMENT PLANT MONITORING RESULTS

Detected Contaminants, ppb	Little Falls WTP Effluent Range of Results	
Chlorate	(56 - 515)	Test results presented in this table were collected in 2017 as part of a study to determine the general occurrence of these contaminants. PVWC continues to participate in, and support these types of regulatory and research efforts to maintain a position of leadership in drinking water supply. There are currently no drinking water standards for some of these contaminants although EPA has established health advisory levels for some of these to provide an estimate of acceptable drinking water levels based on health effects information. The results observed in 2017 were below EPA established health advisory levels. *NJDEP is considering a maximum contaminant level of 0.014 ppb for Perfluorooctanoic acid (PFOA).
1,4-Dioxane	(0.083 - 0.21)	
Perfluorobutanesulfonic acid	(ND - 0.013)	
Perfluoroheptanoic acid	(ND - 0.0026)	
Perfluorohexanesulfonic acid	(ND - 0.0038)	
Perfluorohexanoic acid	(ND - 0.0183)	
Perfluorooctanesulfonic acid, (PFOS)	(ND - 0.0139)	
Perfluorooctanoic acid, (PFOA)*	(ND - 0.0176)	

Health advisory levels are non-enforceable and non-regulatory and provide technical information to state agencies and other public health officials on health effects, analytical methodologies, and treatment technologies associated with drinking water contamination.

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

EPA: United States Environmental Protection Agency

HAAs: Haloacetic Acids (sum of five compounds)

LRAA: Locational running annual average

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.

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 contaminants.

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

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.

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.

TTHM: Total Trihalomethanes (sum of four compounds)

ADDITIONAL INFORMATIONAL RESOURCES

PVWC website: www.pvwc.com

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

PVWC Customer Service Department: 973-340-4300

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

For water saving tips and water conservation ideas please visit our website www.pvwc.com and select Water Saving Tips and Education from the Water Quality pull down menu.



IMPORTANT INFORMATION ABOUT LEAD IN YOUR DRINKING WATER

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. Passaic Valley Water Commission 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 at 800-426-4791 or at <http://www.epa.gov/safewater/lead>.

HEALTH EFFECTS OF LEAD

Lead can cause serious health problems if too much enters your body from drinking water or other sources. It can cause damage to the brain and kidneys, and can interfere with the production of red blood cells that carry oxygen to all parts of your body. The greatest risk of lead exposure is to infants, young children, and pregnant women. Scientists have linked the effects of lead on the brain with lowered IQ in children. Adults with kidney problems and high blood pressure can be affected by low levels of lead more than healthy adults. Lead is stored in the bones, and it can be released later in life. During pregnancy, the child receives lead from the mother's bones, which may affect brain development.

SOURCES OF LEAD

Lead is a common metal found in the environment. Drinking water is one possible source of lead exposure. The main sources of lead exposure are lead-based paint and lead-contaminated dust or soil,

and some plumbing materials. In addition, lead can be found in certain types of pottery, pewter, brass plumbing fixtures, food, and cosmetics. Other sources include exposure in the work place and exposure from certain hobbies (lead can be carried on clothing or shoes). Lead is found in some toys, some playground equipment, and some children's metal jewelry.

Lead is not present in the water supplied to you. When water has been in contact with pipes or plumbing that contains lead for several hours, the lead may enter the drinking water. This means the first water drawn from the tap in the morning, or later in the afternoon after returning from work or school, can contain fairly high levels of lead. Homes built before 1985 are more likely to have plumbing containing lead or lead solder. New homes may also have lead. Even brass faucets, fittings, and valves, including those advertised as "lead-free," may contain some lead.

The Reduction of Lead in Drinking Water Act of 2011, changed the definition of "lead-free" from not more than 8%, to a weighted average of not more than 0.25% lead when used with respect to wetted surfaces of pipes, pipe fittings, plumbing fittings, and fixtures. Visit the National Sanitation Foundation (NSF) website at www.nsf.org to learn more about lead-containing plumbing fixtures.

The EPA estimates that 10 to 20 percent of a person's potential exposure to lead may come from drinking water. Infants who consume mostly formula mixed with lead-containing water can receive 40 to 60 percent of their exposure to lead from drinking water. Don't forget about other sources of lead such as lead paint, lead dust, and lead in soil. Wash your children's hands and toys often as they can come into contact with dirt and dust containing lead.

STEPS YOU CAN TAKE TO REDUCE YOUR EXPOSURE TO LEAD IN YOUR WATER

1. Run your water to flush out lead. Run your cold water for 30 seconds to 2 minutes or until it becomes cold or reaches a steady temperature before using it for drinking or cooking, if it hasn't been used for several hours. This flushes lead-containing water from the pipes. Flushing usually uses less than one or two gallons of water and costs less than 30 cents per month.

2. Use cold water for cooking and preparing baby formula. Do not cook with or drink water from the hot water tap; lead dissolves more easily into hot water. Do not use water from the hot water tap to make baby formula.

3. Do not boil water to remove lead. Boiling water will not reduce lead.

4. Look for alternative sources or treatment of water. You may want to consider purchasing bottled water or a water filter. If purchasing a water filter, read the package to be sure the filter is approved to reduce lead. You can also contact NSF International at 800-NSF-8010 or visit their website at www.nsf.org for information on performance standards for water filters. Be sure to maintain and replace a filter device in accordance with the manufacturer's instructions to protect water quality.

5. Test your water for lead. Call PVWC at 973-340-4300 to find out how to get your water tested for lead, or for a list of local laboratories that are certified for testing lead.

6. Get your child's blood tested. Contact your local health department or healthcare provider to find out how you can get your child tested for lead if you are concerned about exposure. Your family doctor or pediatrician can perform a blood test for lead and provide you with information about the health effects of lead.

7. Identify and replace plumbing fixtures containing lead. A licensed plumber can check to see if your home's plumbing contains lead solder, lead pipes, or pipe fittings that contain lead. Your local building/code department can provide you with information about building permit records that should contain the names of plumbing contractors who plumbed your home.

8. Find out whether your service line is made of lead. PVWC maintains records of PVWC-owned materials, such as service lines (water main to curb box), located in the distribution system. Contact our Customer Service Department at 973-340-4300 for service line materials records.

You should also determine whether or not the service line that comes from the curb box to your home is made of lead. The best way to determine if the service line to your home is made of lead is by either hiring a licensed plumber to inspect the line or by contacting the plumbing contractor who installed the line. You may be able to identify the plumbing contractor by checking the city's record of building permits, which should be maintained in the files at your local building department.

FOR MORE INFORMATION

Contact us at **973-340-4300**, customerservice@pvwc.com or visit our website at www.pvwc.com. For more information on reducing lead exposure around your home/building and the health effects of lead, visit EPA's resources below, or contact your health care provider.

EPA's Safe Drinking Water Hotline:
800-426-4791

National Lead Information Center:
800-424-LEAD (5323)

EPA Website:
www.epa.gov/lead

For additional copies of this notice please contact PVWC at 973-340-4300, customerservice@pvwc.com or visit our website.



Passaic Valley Water Commission
1525 Main Avenue • P.O. Box 230
Clifton, NJ 07011

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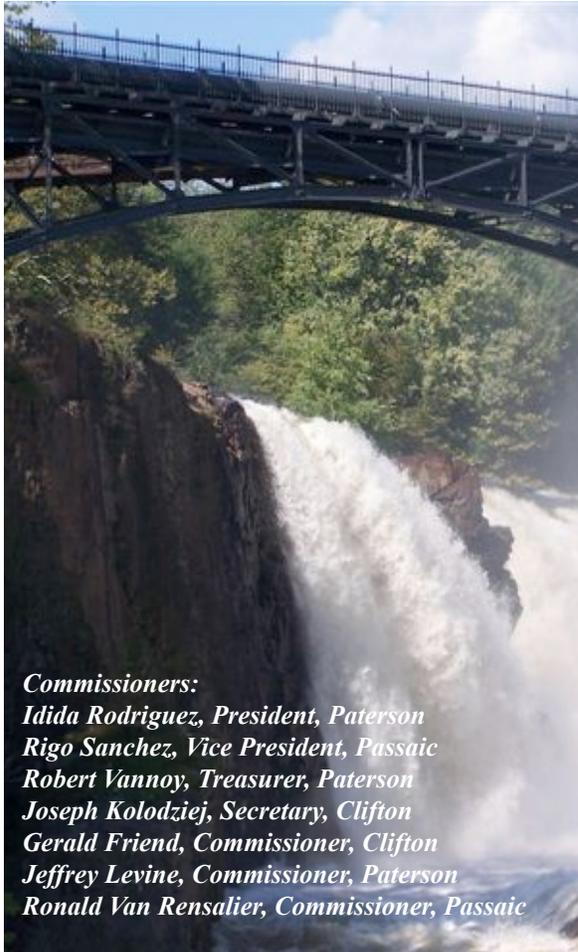
This report contains information about your drinking water. If you do not understand it, please have someone translate it for you.

Este informe contiene informacion muy importante sobre su agua beber. Traduzcalo o hable con alguien que lo entienda bien.

આ અહેવાલ માં તમારા પીવાના પાણી વિષે
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આનો અનુવાદ કરો અથવા જેને સમજાવો પડતી
ભાષા તેની સાથે આપ કરો

للعلومات في هذا التقرير تحتوي على
معلومات مهمة عن مياه الشرب التي
تشرىها. من فضلك اذا لم تفهم هذه
للعلومات اطلب من يترجمها لك.

PV



Commissioners:
Idida Rodriguez, President, Paterson
Rigo Sanchez, Vice President, Passaic
Robert Vannoy, Treasurer, Paterson
Joseph Kolodziej, Secretary, Clifton
Gerald Friend, Commissioner, Clifton
Jeffrey Levine, Commissioner, Paterson
Ronald Van Rensalier, Commissioner, Passaic

Dear Passaic Valley Water Commission Consumer,

On behalf of the Passaic Valley Water Commission, I'd like to present our Annual Water Quality Report. This report provides an overview of the drinking water provided to you during 2017.

Overall, the lead levels in our water system are below the EPA action levels. However, homes and businesses in the City of Paterson, most of Prospect Park and some areas of Clifton are at a higher risk of elevated lead levels in the drinking water.

These areas receive drinking water from the Levine and New Street reservoirs. Those reservoirs are "open reservoirs" meaning we store drinking water there after it has been treated, but before it is delivered to consumers. Unfortunately, open reservoirs prevent us from using treatment to keep lead from leaching into your drinking water.

We are concerned about the risks this presents to infants, pregnant women, and young children. The only viable alternative is to store the treated water in enclosed water tanks. We are working as quickly as we can to construct tanks that will eliminate the need to store drinking water in open reservoirs.

Until construction is completed, we encourage you to take a few simple steps to reduce the risk of lead in your drinking water. We've devoted a full-page to lead in this report which provides information on lead and ways you can reduce your exposure to lead in your drinking water.

If you have questions about this report, water quality, water pressure, billing, construction projects or other inquiries, please contact our Customer Service Department at 973-340-4300. Our hours of operation, including the payment window, are Monday through Friday, excluding State holidays, from 7:30 a.m. to 6:00 p.m.; our phone lines are open until 6:30 p.m. Or email us at customerservice@pvwc.com. Additional information, including important news and alerts, is on our website at www.pvwc.com. For emergencies, call 973-340-4300, anytime.

Sincerely,
Idida Rodriguez
President, PVWC Board of Commissioners