



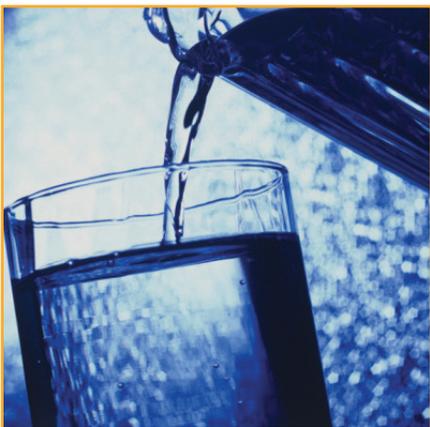
## PASSAIC VALLEY WATER COMMISSION

# 2016 Water Quality Report

Issued April 2017

*Passaic Valley Water Commission (PVWC) is pleased to provide our Post Brook customers 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 Post Brook Public Water System (PWS).*

*PVWC holds monthly open public meetings. For dates, times and locations of these meetings, or for additional copies of this report please call our Customer Service Department at 973-340-4300.*



## 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 2016 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 data sets provided for the Nosenzo Pond Wells, and in the Post Brook distribution system. **The water delivered to Post Brook met all primary health-based standards in 2016.**



## SOURCE WATER AND TREATMENT

The Post Brook PWS is currently supplied by two groundwater wells (the Nosenzo Pond wells), which are located within the Post Brook community in a well house designed and constructed by PVWC. The well water is disinfected with chlorine (liquid sodium hypochlorite), and is also treated with a phosphate-based sequestrant to keep manganese dissolved in the water. The West Milford Municipal Utilities Authority (MUA) groundwater supply is available as an emergency backup to the Nosenzo Pond wells.

## SOURCE WATER ASSESSMENT

The NJDEP has prepared Source Water Assessment reports and summaries for all public water systems. The Source Water Assessment for the Post Brook Water System (PWS ID 1615008) 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 assessment performed on the Post Brook wells lists the following susceptibility ratings for a variety of contaminants that may be present in source waters:

Source Susceptibility Rating	Pathogens	Nutrients	Pesticides	Volatile Organic Compounds	Inorganics	Radionuclides	Radon	Disinfection Byproduct Precursors
Post Brook's 2 Wells	Medium	Medium	Low	Low	Low	Medium	High	Medium

## WATER QUALITY LABORATORY

PVWC operates an advanced water quality laboratory. The laboratory is staffed with highly trained, degreed professionals and is certified by the NJDEP to conduct a wide variety of microbiological and chemical analyses. The laboratory provides sampling, monitoring and analytical testing services for the Little Falls Water Treatment Plant, PVWC drinking water reservoirs and all the PVWC distribution systems in Passaic and Bergen Counties, including the Post Brook water system. Its mission is to help ensure that our Customers' water quality is consistently high and that compliance with all Federal and State regulations for drinking water is met. Of particular concern is ensuring the bacteriological and chemical quality of the water is maintained while it is delivered to our customers. The laboratory also provides sampling and testing services to other water systems, many of whom purchase PVWC water for distribution to their communities.



## INFORMATION ABOUT DRINKING WATER CONTAMINANTS

### SOURCE OF CONTAMINANTS FOR TAP AND BOTTLED WATER

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 EPA's Safe Drinking Water Hotline at 800-426-4791. 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. 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.



### 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 detected contaminants at the effluent of the Nosenzo Pond wells, and in the Post Brook distribution system, typical sources of various contaminants that may be found in drinking water, the 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).

**Water Quality Results - Table of Detected Contaminants - 2016** **POST BROOK PWS ID NJ1615008**

PRIMARY CONTAMINANTS	COMPLIANCE ACHIEVED	MAXIMUM CONTAMINANT LEVEL GOAL (MCLG)	MAXIMUM CONTAMINANT LEVEL (MCL)	NOSENZO POND WELLS PWSID NJ1615008 TP007017	TYPICAL SOURCE
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**INORGANIC CONTAMINANTS**

Barium, ppm	Yes	2	2	0.043	Erosion of natural deposits.
Fluoride, ppm	Yes	4	4	0.52	Erosion of natural deposits.
Nickel, ppb	NA	NA	NA	1.77	Erosion of natural deposits.
Selenium, ppb	Yes	50	50	0.88	Discharge from petroleum and metal refineries; erosion of natural deposits; discharge from mines.
Thallium, ppb	Yes	0.5	2	0.32	Leaching from ore-processing sites; Discharge from electronics, glass, and drug factories.

**RADIOLOGICAL CONTAMINANTS - 2012 Data**

Combined Radium, pCi/L	Yes	0	5	0.94	Erosion of natural deposits.
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PRIMARY CONTAMINANTS	COMPLIANCE ACHIEVED	MCLG	MCL	DISTRIBUTION SYSTEM SAMPLES	TYPICAL SOURCE
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**DISINFECTION BYPRODUCTS - STAGE 2** **LRAA**

Haloacetic Acids-5 (HAA5), ppb	Yes	NA	60	5	Byproduct of drinking water chlorination.
Total Trihalomethanes (TTHM), ppb	Yes	NA	80	19	Byproduct of drinking water chlorination.

**DISINFECTANTS**

Chlorine, ppm	Yes	MRDLG=4	MRDL=4	0.79 Highest RAA (Range 0.27 - 1.02)	Water additive used to control microbes.
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**LEAD AND COPPER** **MCLG** **Action Level** **90th Percentile (2015 Data)**

Lead, ppb	Yes	0	15	3.03 (0 of 8 samples exceeded AL)	Corrosion of household plumbing systems.
Copper, ppm	Yes	1.3	1.3	0.23 (0 of 8 samples exceeded AL)	Corrosion of household plumbing systems.

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.

NJDEP granted the Post Brook Water System an asbestos monitoring waiver for the 2011-2019 compliance cycle.

## NOSENZO POND WELLS EFFLUENT – SECONDARY PARAMETERS

Parameters	Recommended Upper Limit (RUL)	Nosenzo Pond Wells	RUL Achieved
ABS/LAS, ppb	500	150	Yes
Alkalinity, ppm	NA	87	NA
Aluminum, ppb	200	2	Yes
Chloride, ppm	250	325	No
Corrosivity	Non-Corrosive	Non-Corrosive	Yes
Hardness (as CaCO <sub>3</sub> ), ppm	250	560	No
Hardness, grains/gallon	15	33	No
Manganese, ppb	100	302 (75 - 410)**	No*
Odor, TON	3	5	No
pH (optimum range)	6.5 to 8.5	7.2	Yes
Sodium, ppm	50	32 (29 - 34)**	Yes
Sulfate, ppm	250	16	Yes
Total Dissolved Solids, ppm	500	717	No

\*\*values are “average (range)” where multiple values are provided

### \*Post Brook Water System Exceeds Recommended Upper Limit for Manganese

The groundwater that is used to supply the Post Brook system contains a variety of natural minerals, including manganese. The NJDEP 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. PVWC adds a sequestering agent (a chemical additive) to the water from the Post Brook groundwater wells to bind with the manganese and keep the manganese dissolved so that it does not stain laundry. In 2016 the groundwater supply entering the Post Brook water system exceeded the RUL of 100 ppb for manganese for water systems that use a sequestrant.

## RADON

Contaminant	Nosenzo Pond Wells Effluent 2012 Concentration
Radon-222, pCi/L	1260

Radon is a radioactive gas that you can't see, taste, or smell. It is found throughout the U.S. Radon can move up through the ground and into a home through cracks and holes in the foundation. Radon can build up to high levels in all types of homes. Radon can also get into indoor air when released from tap water from showering, washing dishes, and other household activities. Compared to radon entering the home through soil, radon entering the home through tap water will in most cases be a small source of radon in indoor air. Radon is a known human carcinogen. Breathing air containing radon can lead to lung cancer. Drinking water containing radon may also cause increased risk of stomach cancer. If you are concerned about radon in your home, test the air in your home. Testing is inexpensive and easy. You should pursue radon removal for your home if the level of radon in your air is 4 picocuries per liter of air (pCi/L) or higher. There are simple ways to fix a radon problem that aren't too costly. For additional information, call the State Radon Program 800-648-0394 or call EPA's Radon Hotline 800-767-7236.

### Table of Monitored Contaminants Not Detected in 2016

Nosenzo Pond Wells	Antimony, Arsenic, Beryllium, Cadmium, Chromium, Color, Cyanide, Iron, Mercury, Nitrate, Silver, Volatile Organic Compounds and Zinc.
Post Brook Distribution System	Total coliform and <i>E. coli</i> bacteria.

# 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

**Disinfection Byproduct Precursors:** A common source is naturally occurring organic matter in surface water. Disinfection byproducts are formed when the disinfectants (chlorine) used to kill pathogens react with dissolved organic material present in surface water.

**EPA:** United States Environmental Protection Agency

**HAA5:** Haloacetic Acids (sum of five compounds)

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

**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.

**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. MRDLGs 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

**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.

**pCi/L:** picocuries per liter (a measure of radioactivity)

**ppb:** parts per billion (approximately equal to a microgram per liter, µg/L)

**ppm:** parts per million (approximately equal to a milligram per liter, mg/L)

**PVWC:** Passaic Valley Water Commission

**PWS ID:** Public Water System Identification

**RAA:** Running annual average

**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.

**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.

**TTHM:** Total Trihalomethanes (sum of four compounds)

**TON:** Threshold Odor Number

## ADDITIONAL INFORMATIONAL RESOURCES

PVWC website: [www.pvwc.com](http://www.pvwc.com)

EPA Drinking Water website: [www.epa.gov/safewater](http://www.epa.gov/safewater)

NJDEP Water Supply website: [www.nj.gov/dep/watersupply](http://www.nj.gov/dep/watersupply)

American Water Works Association (AWWA) website: [www.awwa.org](http://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](http://www.njawwa.org)



# 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](http://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](http://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](mailto:customerservice@pvwc.com) or visit our website at [www.pvwc.com](http://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](http://www.epa.gov/lead)

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



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

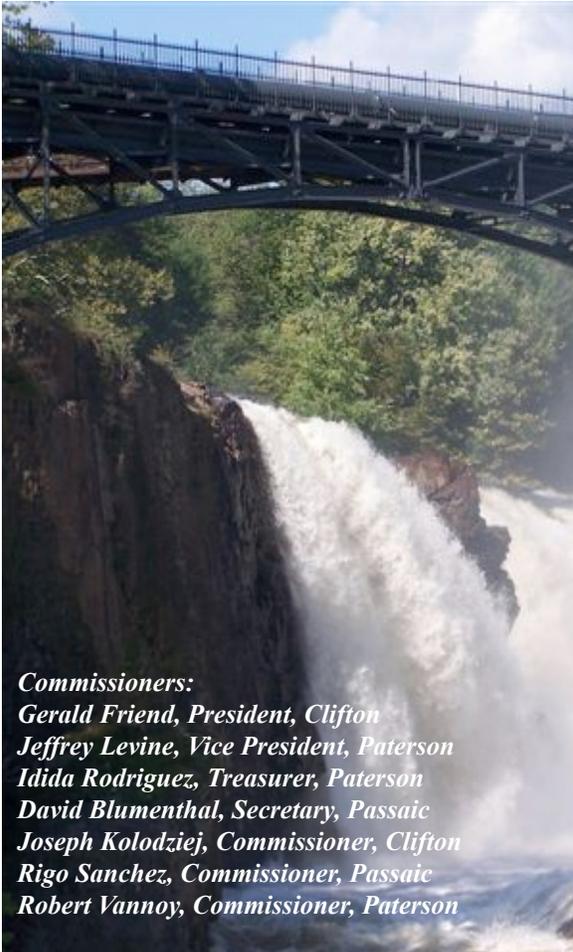
This report contains information about your drinking water. If you do not understand it, please have someone translate it for you.

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  
આગત્ય ની જાણકારી આપવા માં આવી છે.  
અનેકે અજુકાદ કરો અથવા જેને સમજાવવા પડતી  
દોષ તેની સાથે યાત 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.

PB



**Commissioners:**

*Gerald Friend, President, Clifton*  
*Jeffrey Levine, Vice President, Paterson*  
*Idida Rodriguez, Treasurer, Paterson*  
*David Blumenthal, Secretary, Passaic*  
*Joseph Kolodziej, Commissioner, Clifton*  
*Rigo Sanchez, Commissioner, Passaic*  
*Robert Vannoy, Commissioner, Paterson*

**Dear Passaic Valley Water Commission Consumer,**

In demonstration of our commitment to you, our consumer, Passaic Valley Water Commission (PVWC) is pleased to present our Annual Water Quality Report. This report provides an overview of the high-quality drinking water provided to you during 2016.

Since our inception in 1927, PVWC has been, and continues to be, committed to providing drinking water to the citizens, businesses and industries of northeast New Jersey, at the highest quality, service and reliability, all at a competitive price. PVWC maintains a 50-year strategic capital improvement program that is used to identify necessary investments to our above-ground infrastructure including treatment facilities, pumping and storage systems, as well as for our buried infrastructure such as transmission mains, piping and valves. Strategic capital improvements are key to maintaining the financial viability and long-term sustainability of our system for the ultimate protection of public health and public safety.

If you have any questions related to 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 walk-up payment window, are Monday through Friday, excluding State holidays, from 7:30 a.m. to 6:00 p.m.; our phone lines are open an extra half hour until 6:30 p.m. Or contact us via email at [customerservice@pvwc.com](mailto:customerservice@pvwc.com). Additional information about PVWC, including important news and alerts, can be found on our website at [www.pvwc.com](http://www.pvwc.com). For emergencies, call 973-340-4300, 24 hours per day/7 days per week.

**Sincerely,**  
**Gerald Friend**  
**President, PVWC Board of Commissioners**