



# Paulsboro Water Department

PWS ID Number 0814001

## Annual Drinking Water Quality Report for the Year 2016

We are pleased to present to you this year's Annual Drinking Water Quality Report. This report is designed to inform you about the quality water and services we deliver to you every day. Our constant goal is to provide you with a safe and dependable supply of drinking water. We want you to understand the efforts we make to continually improve the water treatment process and protect our water resources. We are committed to ensuring the quality of your water.

The New Jersey Department of Environmental Protection (NJDEP) has completed and issued the Source Water Assessment Report and Summary for this public water system, which is available at [www.state.nj.us/dep/swap](http://www.state.nj.us/dep/swap) or by contacting NJDEP's Bureau of Safe Drinking Water at (609) 292-5550.

The source water assessment performed on our three sources determined the following:

### Paulsboro Water Department – PWSID # 0814001

The Paulsboro Water Department is a public community water system consisting of 3 wells. This system source water comes from the middle Potomac-Raritan-Magothy aquifer.

### Susceptibility Ratings for Paulsboro Water Department Sources

The table below illustrates the susceptibility ratings for the seven-contaminant categories (and radon) for each source in the system. The table provides the number of wells and intakes that rated high (H), medium (M), or low (L) for each contaminant category. The seven-contaminant categories are defined following the susceptibility table.

**If a system is rated highly susceptible for a contaminant category, it does not mean a customer is or will be consuming contaminated drinking water.** The rating reflects the potential for contamination of source water, not the existence of contamination.

Sources	Pathogens			Nutrients			Pesticides			Volatile Organic Compounds			Inorganics			Radio-nuclides			Radon			Disinfection Byproduct Precursors			
	H	M	L	H	M	L	H	M	L	H	M	L	H	M	L	H	M	L	H	M	L	H	M	L	
Wells -3			3	3				1	2	3			2	1		3				3			1	2	
GUDI - 0																									
Surface water intakes - 0																									

**Pathogens:** Disease-causing organisms such as bacteria and viruses. Common sources are animal and human wastes.

**Nutrients:** Compounds, minerals and elements that aid growth, that are both naturally occurring and man-made. Examples include nitrogen and phosphorus.

**Volatile Organic Compounds:** Man-made chemicals used as solvents, degreasers, and gasoline components. Examples include benzene, methyl tertiary butyl ether (MTBE), and vinyl chloride.

**Pesticides:** Man-made chemicals used to control pests, weeds, and fungus. Common sources include land application and manufacturing centers of pesticides. Examples include herbicides such as atrazine, and insecticides such as chlordane.

**Inorganics:** Mineral-based compounds that are both naturally occurring and man-made. Examples include arsenic, asbestos, copper, lead, and nitrate.

**Radionuclides:** Radioactive substances that are naturally occurring and man-made. Examples include radium and uranium.

**Radon:** Colorless, odorless, cancer-causing gas that occurs naturally in the environment. For more information go to <http://www.nj.gov/dep/rpp/radon/index.htm> or call (800) 648-0394.

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

## **We are pleased to report that our drinking water is safe and meets federal and state requirements.**

The Paulsboro Water Department routinely monitors for constituents in your drinking water according to federal and state laws. This table represents only the detected constituents for the monitoring period of January 1 to December 31, 2013. As water travels over the land or underground, it can pick up substances or contaminants such as microbes, inorganic and organic chemicals, and radioactive substances. All drinking water, including bottled drinking water, may be reasonably expected to contain at least small amounts of some contaminants, which do not necessarily pose a health risk. The state allows us to monitor for some constituents less often than once per year because the concentrations do not change frequently. Consequently some of our data, though representative, is more than one year old.

If you have any questions about this report or concerning your water utility, please contact the Water Department at (856) 423-1500. We want our valued customers to be informed about their water utility. If you want to learn more, please attend any of our regularly scheduled Borough Council meetings at Borough Hall, 1211 N. Delaware Street. Regular meetings are held on the first Tuesday of each month at 7:00 pm and workshop meetings are held the third Tuesday of each month at 7:00 pm.

### Definitions

**In the following table you may find many terms and abbreviations that are unfamiliar to you. To help you better understand these terms, we've provided the following definitions:**

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

Parts per million (ppm) or Milligrams per liter (mg/l) - one part per million corresponds to one minute in two years or a single penny in \$10,000.

Parts per billion (ppb) or Micrograms per liter - one part per billion corresponds to one minute in 2,000 years, or a single penny in \$10,000,000.

Picocuries per liter (pCi/L) - Pico curies per liter is a measure of the radioactivity in water.

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

Maximum Contaminant Level - The “Maximum Allowed” (MCL) is the highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLG's as feasible using the best available treatment technology.

Maximum Contaminant Level Goal -The “Goal” (MCLG) is the level of a contaminant in drinking water below which there is no known or expected risk to health. MCLG's allow for a margin of safety.

Secondary Maximum Contaminant Level - (SMCL) Federal drinking water measurements for substances that do not have an impact on health. These reflect aesthetic qualities such as odor, taste, or appearance. Secondary standards are recommendations, not mandates.

Tier 3 Violation  
Monitoring and Reporting

**The Borough of Paulsboro's Water Department failed to report and monitor for Combined Radium 226 and 228, Combined Uranium and Gross Alpha for the period Jan 2016 – Mar 2016**

Our water system recently violated a drinking water standard. Even though this was not an emergency, as our customers, you have a right to know what happened and what we are doing to correct the situation.

We routinely monitor for the presence of drinking water contaminants. We took samples on February 16, 2016. But for some reason the lab never completed the samples. It is our responsibility to report these results to the DEP. An error in judgement allowed us to fall to report these results.

**What should I do?**

- You do not need to use an alternative (e.g., bottled) water supply.
- People with severely compromised immune systems, infants, and some elderly may be at increased risk. These people should seek advice about drinking water from their health care providers. General guidelines on ways to lessen the risk of infection by microbes are available from EPA's Safe Drinking Water Hotline at 1-800-426-4791.

**What does this mean?**

This is not an immediate risk. The levels have been under the standard for some time.

*The presents of these containments are very low risk over a short time.*

**What is being done?**

We took additional samples for these containments. We are increasing monitoring the treatment system and making sure everything is operating as it should. Our records show the treatment system never failed to operate during this period.

For more information, please contact Mike Reed at (856) 423-1500 or mreed@paulsboronj.org.

*Please share this information with all the other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this notice in a public place or distributing copies by hand or mail.*

This notice is being sent to you by Borough of Paulsboro. State Water System ID#: NJ0814001.

<b>Detect Table</b>						
<b>Contaminant</b>	<b>Violation Y/N</b>	<b>Level Detected</b>	<b>Units of Measurement</b>	<b>MCLG</b>	<b>MCL</b>	<b>Likely Source of Contamination</b>
<b>Inorganic Contaminants: September 2015.</b>						
Arsenic	NO	Range= 0.50 to 1.10 Avg. = 0.81	ppb	0	5	Erosion of natural deposits; runoff from orchards; runoff from glass and electronics production wastes
Barium	NO	Range= 0.0145 to 0.0871 Avg. = <0.0636	ppm	2	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Beryllium	NO	Range= <0.04 to 0.15 Avg. = <0.090	ppb	4	4	Discharge from metal refineries and coal-burning factories; discharge from electrical, aerospace, and defense industries
Selenium	NO	Range= 0.0019 to 0.0051 Avg. = 0.0032	ppm	0.05	0.05	Discharge from petroleum and metal refineries; erosion of natural deposits; discharge from mines
<b>Lead &amp; Copper: September 2014</b>						
Copper	NO	Range= 0.0032 to 0.476 90 <sup>th</sup> percentile = 0.05	ppm	1.3	AL=1.3	Corrosion of household plumbing systems; erosion of natural deposits
Lead	NO	Range= ND to 0.0315 90 <sup>th</sup> percentile = 0.0021	ppm	0	AL=0.015	Corrosion of household plumbing systems, erosion of natural deposits
<b>Disinfection Byproducts: August 2015</b>						
Total Trihalomethane (TTHM)	NO	Range = 22.0 to 47.0 Avg. = 34.5	ppb	0	80	By-product of drinking water chlorination
Five halo acetic Acids(HAA5)	NO	Range = 2.00 to 9.00 Avg. = 5.50	ppb	0	60	By-product of drinking water chlorination
<b>Volatile Organic Contaminants: 2015</b>						
1,2-Dichloroethane	NO	Range = <0.07 to 0.07 Avg. = <0.07	ppb	0	2	Discharge from industrial chemical factories
1,2-Dichloropropane	NO	Range = <0.07 to 0.07 Avg. = <0.07	ppb	0	5	Discharge from industrial chemical factories
Methyl tertiary butyl ether (MTBE)	NO	Range = <0.16 to 0.85 Avg. = <0.53	ppb	70	70	Leaking underground gasoline and fuel oil tanks. Gasoline and fuel oil spills.
Tetrachloroethylene	NO	Range =<0.16 to 0.16 Avg.= <0.16	ppb	0	1	Leaching from PVC pipes; discharge from factories and dry cleaners
Trichloroethylene	NO	Range = <0.06 to 0.06 Avg. = <0.06	ppb	0	1	Discharge from metal degreasing sites and other factories
<b>Radioactive Contaminants: 2015</b>						
Alpha Emitters	NO	Range = 1.33 to 8.0 Avg. = 5.47	pCi/1	0	15	Erosion of natural deposits
Combined Radium 226 & 228	NO	Range = <1.0 to 1.5 Avg. = <1.125	pCi/1	0	5	Erosion of natural deposits
<b>Secondary Contaminants: Not enforceable. May adversely affect the aesthetic quality of water, such as taste, odor, color, appearance etc.</b>					<b>SMCL</b>	<b>Likely Source of Contamination</b>
Aluminum	NO	Range = 0.0077 - 0.0417 Avg. = 0.0247	ppm	---	0.2	Erosion of natural deposits
Chloride	NO	Range = 29.6 – 39.7 Avg. = 34.7	ppm	---	250	Erosion of natural deposits
Sodium	NO	Range = 37.7 – 39.1 Avg. = 38.4	ppm	---	50	Erosion of natural deposits
Hardness	NO	Range = 52 - 63	ppm	---	50 – 250	Erosion of natural deposits

		Avg. = 57.5				
Iron	NO	Range = 0.008 – 0.25 Avg. = 0.049	ppm	---	0.3	Erosion of natural deposits
Sulfate	NO	Range = 80.0 – 80.1 Avg. = 80.1	ppm	---	250	Erosion of natural deposits
Total Dissolved Solids	NO	Range = 189 – 206 Avg. = 197.5	ppm	---	500	Erosion of natural deposits

**As you can see by the table, our system had no violations. We're proud that your drinking water meets or exceeds all federal and state requirements. We have learned through our monitoring and testing that some constituents have been detected. The EPA has determined that your water IS SAFE at these levels.**

### **ADDITIONAL 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. Our system received monitoring waivers for asbestos and synthetic organic chemicals.

#### **Health Effects of Detected Contaminants:**

- (1) Barium. Some people who drink water containing barium in excess of the MCL over many years could experience an increase in their blood pressure.
- (2) Beryllium. Some people who drink water containing beryllium in excess of the MCL over many years could develop intestinal lesions
- (3) Selenium. Selenium is an essential nutrient. However, some people who drink water containing selenium in excess of the MCL over many years could experience hair or fingernail losses, numbness in fingers or toes, or problems with their circulation.
- (4) Copper. Copper is an essential nutrient, but some people who drink water containing copper in excess of the action level over a relatively short amount of time could experience gastrointestinal distress. Some people who drink water containing copper in excess of the action level over many years could suffer liver or kidney damage. People with Wilson's disease should consult their personal doctor.
- (5) Lead. 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.
- (6) 1, 2 Dichloroethane. Some people who drink water containing 1, 2-dichloroethane in excess of the MCL over many years may have an increased risk of getting cancer.
- (7) 1,2-Dichloropropane. Some people who drink water containing 1,2-dichloropropane in excess of the MCL over many years may have an increased risk of getting cancer
- (8) Methyl tertiary-butyl ether (MTBE). Some people who drink water containing MTBE in excess of the MCL for many years could experience problems with their kidneys.
- (9) Tetrachloroethylene. Some people who drink water containing tetrachloroethylene in excess of the MCL over many years could have problems with their liver, and may have an increased risk of getting cancer.
- (10) Trichloroethene. Some people who drink water containing trichloroethene in excess of the MCL over many years could experience problems with their liver and may have an increased risk of getting cancer.
- (11) TTHMs [Total Trihalomethanes]. 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
- (12) Alpha emitters. Certain minerals are radioactive and may emit a form of radiation known as alpha radiation. Some people who drink water containing alpha emitters in excess of the MCL over many years may have an increased risk of getting cancer.

**MCLs are set at very stringent levels. To understand the possible health effects described for many regulated contaminants, a person would have to drink 2 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.**

#### **Vulnerable Populations:**

**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 (1-800-426-4791)**

#### **Special Considerations Regarding Children, Pregnant Woman, 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 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 health endpoints upon which the standards are based.

**Nitrate:** Nitrate in drinking water at levels above 10 ppm is a health risk for infants of less than six months of age. High nitrate levels in drinking water can cause blue baby syndrome. Nitrate levels may rise quickly for short periods of time because of rainfall or agricultural activity. If you are caring for an infant, you should ask for advice from your health care provider.

**Lead:** 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. The Paulsboro Water Department is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water is available from the Safe Drinking Water Hotline (1-800-426-4791) or at <http://www.epa.gov/safewater/lead>.

**All sources of drinking water are subject to potential contamination** by substances that are naturally occurring or man-made. These substances can be microbes, inorganic or organic chemicals and radioactive substances. All drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that the 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 at 1-800-426-4791.

**Source contaminants:**

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 storm water runoff, industrial or domestic wastewater discharge, 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 the 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.

*We at the Paulsboro Water Department work hard to provide top quality water to every tap. We ask that all our customers help us protect our water sources, which are the heart of our community, our way of life, and our children's future.*