We are proud that your drinking water meets or exceeds all federal and state safety requirements.

If you have any questions about this report or concerning your water utility, please contact Chip Clark at 856-863-3612. 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.

Location:	Borough Hall 1 South Main Street
Date:	2nd & 4th Tuesday each month except June, July & August when they are only the 4th Tuesday
Time:	8:00 pm

We at Glassboro Water work hard to provide top quality water to every tap. Please call our office with any questions or concerns.

Thank you,
Chip Clark
Superintendent

Borough of Glassboro
Water and Sewer Department
1 South Main Street
Glassboro, NJ 08028

Borough of Glassboro

PWS ID# NJ (0806001)

2019 ANNUAL DRINKING WATER QUALITY REPORT

Glassboro Water Department
2019 Annual Drinking Water Quality Report

PWS ID# NJ (0806001)

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 are continually working to improve the water treatment process and protect our water resources.

We are committed to ensuring the quality of your water. Our water sources are groundwater from the Cohansey, Potomac/Raritan/Magothy and Mount Laurel Aquifers. We also purchase water from New Jersey American Company, which draws its water from the Delaware River.

Source Water Assessment Report

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 or by contacting NJDEP's Bureau of Safe Drinking Water at (609) 292-5550. You may also contact your public water system to obtain information regarding your water system's Source Water Assessment. This water system's source water susceptibility ratings and a list of potential contaminant sources are included in this report.

What Contaminants Can Be In Our Drinking 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 water runoff, industrial or domestic wastewater discharges, oil and gas projections, 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.

Am I at Risk?

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 contamination and potential health effects can be obtained by calling the Environmental Protection Agency's Safe Drinking Water Hotline at 1-800-426-4791.

Lead & 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. Glassboro Water 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 and 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 of at http://www.epa.gov/safewater/lead.

Water Treatment Process

To ensure the continued quality of our water, it is treated several ways.

The water from three of our Patomic-Raritan-Magothy wells is pumped from over six hundred feet underground directly into our mains, needing only chlorination as it enters. Our Mount Laurel well is nearly 400 feet and also needs only chlorination prior to entering the distribution system. Chlorination is a state required disinfection process which kills any bacteria that may be present in the water. Although some people may be able to smell or taste the chlorine at times, it is necessary that it is present to insure that water traveling miles to all areas of town stays bacteria free.

Our three Cohansey wells are pumped from wells approximately 100 feet underground. They are filtered through carbon based upflow clarifiers at our treatment plant to remove trace amounts of iron and manganese, chlorinated and then pumped into the distribution system.

Our final Patomic-Raritan-Magothy well is again pumped from over six hundred feet underground. This water first travels through reverse osmosis filters to remove trace amounts of sodium to meet and exceed New Jersey requirements. We then employ Vibratory Shear Enhanced Processing (VSEP) to improve the efficiency of the process. The water is then chlorinated and pumped into the distribution system.

Online Citizen Reporting

The Glassboro Police Department is now offering online citizen reporting for minor incidents. To provide additional convenience for our community, you can now make a police report via our online portal.

Reports that can be made include:

- Criminal Mischief Under $200
- Harassment (Not Domestic Violence Related)
- Lost Property
- Property Damage
- Theft of Property under $200

For more information, or to make a report online, visit: www.glassboropd.org and go to "Citizen Reporting".

You can still report these incidents "in-person" to an officer by calling 856-881-1500

Surveillance Camera Registration Program

The Glassboro Police Department has launched a residential camera registration program! Residents can voluntarily provide their contact information to our agency so that we may call them in the event of an incident that may have been caught on home surveillance systems.

This program is voluntary, does not provide direct access to any systems, and is **COMPLETELY FREE!!**

For more information or to register, visit www.glassboropd.org/camera

Help Us Help You!

Glassboro Water Department Test Results

The Glassboro Water Department routinely monitors for contaminants in your drinking water according to federal and state laws. This table shows the results of our monitoring for the period of January 1st to December 31st, 2018. We are pleased to report that your drinking water meets or exceeds all federal and state safety requirements. We have learned through our monitoring and testing that some contaminants have been detected. As you can see by the table, our system had no violations.

Definitions

In the following table you will find many terms and abbreviations you might not be familiar with. 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 (µg/l) – one part per billion corresponds to one minute in 2,000 years, or a single penny in $10,000,000.
Parts per trillion (ppt) or Nanograms per liter (ng/l) – one part per trillion corresponds to one minute in 2,000,000 years or one penny in $10,000,000,000.
Parts per quadrillion (ppq) or Picograms per liter (pg/l) – one part per quadrllion corresponds to one minute in 2,000,000,000 years or one penny in $10,000,000,000,000.
Picocuries per liter (pCi/L) – picocuries per liter is a measure of the radioactivity in water.
Millirems per year (mrem/yr) – measure of the radiation absorbed by the body.
Nephelometric Turbidity Unit (NTU) – nephelometric turbidity unit is a measure of the clarity of water. Turbidity in excess of 5 NTU is just noticeable to the average person.
Action Level – the concentration of a contaminant which, if exceeded, triggers treatment or other requirements, which a water system must follow.
Treatment Technique (TT) – A treatment technique is a required process intended to reduce the level of a contaminant in drinking water.
Maximum Contaminant Level – The "Maximum Allows" (MCL) is the highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLCGs as feasible using the best available measurement 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. MCLGs allow for a margin of safety.
Maximum Residual Disinfectant Level (MRDL) – 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.
Maximum Residual Disinfectant Goal (MRDLG) – 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 contaminants.
Secondary Contaminant – Substances that do not have an impact on health. Secondary Contaminants affect aesthetic qualities such as odor, taste or appearance. Secondary standards are recommendations, not mandates.
Recommended Upper Limit (RUL) – Recommended maximum concentration of secondary contaminants. These reflect aesthetic qualities such as odor, taste or appearance. RULs are recommendations, not mandates.

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as 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 microbiological contaminants are available from the Safe Drinking Water Hotline (800-426-4791).

EPA requires monitoring for over 80 drinking water contaminants. Those contaminants listed in the table are only contaminants detected in your water.

Inorganic Contaminants

Contaminant (Unit of Measurement)	Violation Y/N	Level Detected	MCLG	MCL	Likely Source of Contamination
Antimony (ppm)	N	ND	0.006	0.006	Discharge from petroleum refineries; fire retardants; ceramics; electronics; solder
Arsenic (ppm)	N	0.00060	0.010	0	Erosion of natural deposits; runoff from orchards; runoff from glass & electronics production wastes
Barium (ppm)	N	0.023	2	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Chromium (ppm)	N	ND	0.1	0.1	Discharge from steel and pulp mills; erosion of natural deposits
Copper (ppm)	N	0.43*	1.3	AL=1.3	Corrosion of household plumbing systems; erosion of natural deposits
Cyanide (ppb)	N	0.00400	0.02	0.02	Discharge from steel metal factories; discharge from plastic and fertilizer factories
Fluoride (ppm)	N	0.94	4	4	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
Lead (ppb)	N	0.002*	0	AL=15	Corrosion of household plumbing systems; erosion of natural deposits
Nickel (ppm)	N	0.0078	N/A	N/A	N/A
Nitrate (as Nitrogen) (ppm)	N	0.39	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Selenium (ppm)	N	0.0014	0.05	0.05	Discharge from petroleum and metal refineries; erosion of natural deposits; discharge from mines

* 90th percentile level detected.
The Borough of Glass t vulnerable to potential asbestos contamination; therefore the Bureau of Safe Drinking Water has approved a waiver for asbestos monitoring for the current nine-year compliance cycle 2011-2019.

Disinfection Byproducts

Contaminant (Unit of Measurement)	Violation Y/N	Level Detected	MCLG	MCL	Likely Source of Contamination
Haloacetic Acids (HAA5) (ppb)	N	8.2	NA	60	By-product of drinking water disinfection
Total Trihalomethanes (TTHM) (ppb)	N	44.6	NA	80	By-product of drinking water disinfection

	Pathogens			Nutrients			Pesticides			Volatile Organic Compounds			Inorganics			Radionuclides			Radon			Disinfection Byproduct Precursors		
Sources	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 - 8		2	6	3		5		3	5	3		5		7	1	3	4	1		4	4	3	5	
GUDI - 0																								
Surface Water																								

Radioactive Contaminants					
Contaminant (Unit of Measurement)	Violation Y/N	Level Detected	MCLG	MCL	Likely Source of Contamination
Gross Alpha (pCi/l)	N	ND	0	15	Erosion of natural deposits
Combined Radium - 228 & 226 (pCi/l)	N	ND	0	5	Erosion of natural deposits

Regulated Disinfectants			
Contaminant (Unit of Measurement)	Level Detected (Average & Highest Detect)	MRDLG	MRDL
Chlorine (ppm)	0.31/0.53	4.0	4.0

Secondary Contaminants		
Contaminant (Unit of Measurement)	Level Detected	RUL
Iron (ppm)	0.2	0.3
Manganese (ppb)	0.05	50
Sodium* (ppm)	80.7	100
Sulfate (ppm)	8.4	250

* For healthy individuals the sodium intake from water is not important, because a much greater consumption of sodium takes place from salt in the diet. However sodium levels above the Recommended Upper Limit (RUL) may be of concern to individuals on a sodium restricted diet.

While our highest sodium level reported is slightly higher than the RUL, Glassboro operates a Reverse Osmosis treatment plant and other treatment methods to keep sodium levels well below the RUL for drinking water.

NOTE: The state allows us to monitor for certain substances less than once per year because the concentrations of these contaminants do not change frequently. Some of our data, though representative, are more than one year old.

Source Water Assessment

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 rating for the pathogen category. For the purpose of Source Water Assessment Program, radionuclides are more of a concern for ground water than surface water. As a result, surface water intakes' susceptibility to radionuclides was not determined and they all received a low rating.

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. Public water systems are required to monitor for regulated contaminants and to install treatment if any contaminants are detected at frequencies and concentrations above allowable levels. As a result of the assessments, DEP may customize (change existing) monitoring schedules based on the susceptibility ratings.

- Pathogens: Disease-causing organisms such as bacteria and viruses. Common sources are animal and human fecal 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, weeks 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 both 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 react to dissolved organic material (for example leaves) present in surface water.

UCMR4(Unregulated Contaminant Monitoring)		
Cyanotoxims /Haloacetic Acid		
Contaminant	Result	Range
Bromochoroacetic Acid	0.89	NA
Bromodichloracetic Acid	<0.05	NA
Chlorodibromacetic Acid	<0.30	NA
Dibromacetic Acid	0.36	NA
Dichloroacetic Acid	2.6	NA
Monobromoacetic Acid	<0.30	NA
Monochloroacetic Acid	<2.0	NA
Tribromoacetic Acid	<2.0	NA
Trichloroacetic Acid	1.7	NA
Bromobutanoic Acid	102%	NA
Semivolatile Chemical		
Benzo	82%	Range 80-130%
Dimethyl-2nitrobenzene(S)	101%	Range 80-130%
Trihenylphosphate (S)	94%	Range 80-130%
Pesticides		
Alpha-BHC	<0.010	
Chlorpyrifos	<0.030	
Dimethipin	<0.20	
Ethoprop	<0.30	
Oxyfluorfen	<0.050	
Permethrin	<0.040	
Profenofos	<0.30	
Tebucomazole	<0.20	
Tribufos	<0.070	
Alcohols		
2-Methoxyethanol	<0.40	
1-Butanol	<2.0	
2-Propen	<0.50	
Metals		
Germanium	<0.30	
Manganese	<0.40	
Organics		
Toluidine-d9	107%	Range 50-130%
Quinoline-d7	100%	Range 70-130%

The fourth Unregulated Contaminant Monitoring Rule (UCMR 4) was published in the Federal Register on December 20, 2016. UCMR 4 requires monitoring for 30 chemical contaminants between 2018 and 2020 using analytical methods developed by EPA and consensus organizations. This monitoring provides a basis for future regulatory actions to protect public health.