

2020 Annual Drinking Water Quality Report

Municipal Authority of the Borough of Bedford

As your public drinking water supplier (Public Water Supply ID Number 4050002), the Municipal Authority of the Borough of Bedford (MABB) formerly the Bedford Borough Water Authority, is pleased to present to you our Consumer Confidence Report for the 2020 operating year. This report provides you with information about the quality of water and the services we deliver to you every day. We constantly strive to provide you with a safe and dependable supply of drinking water. We want you to understand the constant effort we make to continually protect our water sources and improve the quality of water supplied to you. We are committed to ensuring the quality and consistency of your water.

WATER SOURCE:

Our water sources consist of two (2) reservoirs (Todd Spring and J.C. Smith) and the Raystown Branch of the Juniata River. The reservoirs are located west of the Borough of Bedford. The intake from the Raystown Branch of the Juniata River is located near Wolfsburg, northwest of the Borough of Bedford. In addition to the above, we have four (4) interconnections with the Bedford Township Municipal Authority's water system that can be utilized during emergency situations.

SOURCE WATER ASSESSMENT:

Reports on our system are available at our office, which will provide more detailed information such as potential sources of contamination. A summary of our water system's susceptibility to potential sources of contamination follows:

A Source Water Assessment of the Raystown Branch of the Juniata River watershed, which supplies water to the Bedford Borough Water Filtration Plant, was completed in 2003 by the firm Spotts, Stevens, and McCoy, Inc. for the PA Department of Environmental Protection (PA DEP). The Assessment has found that the Raystown Branch of the Juniata River watershed is potentially most susceptible to road deicing materials, accidental spills along roads, agricultural runoff, logging, on-lot wastewater disposal, disposal from wastewater treatment plants, quarries, cemeteries, leaks in underground storage tanks, and off road recreational vehicle use that may cause a chemical or biological degradation of the watershed and in turn the water being pumped from the river to the water filtration plant. Overall, the Raystown Branch of the Juniata River watershed has a medium to high risk of significant contamination.

A Source Water Assessment of the Todd Spring and J.C. Smith Reservoirs' watersheds, which also supply water to the Bedford Borough Water Filtration Plant, was completed in 2003 by the PA DEP. The Assessment has found that the Todd Spring and J.C. Smith Reservoirs' watersheds are potentially most susceptible to logging and off road recreational vehicle use that may cause or increase erosion in the watershed and in turn increase sedimentation loads and the turbidity of the raw water collected by the reservoirs. Overall, the Todd Spring and J.C. Smith Reservoirs' watersheds have little risk of significant contamination.

Summary reports of the Assessments are available by writing to the Municipal Authority of the Borough of Bedford, 244 West Penn Street, Bedford, PA 15522. Copies of the complete reports are also available for review at the PA DEP Southcentral Regional Office, Records Management Unit at (717) 705-4700. Additional information regarding Source Water Assessments and a summary of the PA DEP Source Water Assessment reports are available in the eLibrary page on the DEP website at www.depgreenport.state.pa.us/elibrary/GetFolder.aspx?FolderID=4490.

"Water Is a Valuable Resource - Please Use It Wisely"

WATER QUALITY AND HEATH RELATED ISSUES:

The Municipal Authority of the Borough of Bedford routinely monitors for constituents in your drinking water according to Federal and State laws. In order to ensure that tap water is safe to drink, the United States Environmental Protection Agency (EPA) and Pennsylvania Department of Environmental Protection (DEP) prescribe regulations which limit the amounts of contaminants in water provided by public systems. The Food and Drug Administration regulations establish limits for contaminants in bottled water which must provide the same protection for public health. These agencies require monitoring of the water to ensure that your drinking water does not exceed certain Maximum Contaminant Levels (MCL's). These MCL's are set at very stringent levels for the protection of public health.

All sources of drinking water are subject to potential contaminants that are naturally occurring or man-made. Those contaminants can be microbes, organic or inorganic chemicals, or radioactive materials. Drinking water, including bottled drinking water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of these 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. The sources of drinking water, including both tap 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 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 operations and wildlife.
- **Inorganic Contaminants**, such as salts and metals, which can be naturally occurring or result from urban storm 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, stormwater runoff and residential uses.
- **Organic chemical contaminants**, including synthetic and volatile organics, 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.

Some people may be more vulnerable to contaminants in drinking water than the general population.

Immuno-compromised persons such as those 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 advise 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 at 1-800-426-4791.

WATER QUALITY INFORMATION - The MABB routinely monitor, and test, for contaminants in your drinking water according to Federal and State laws. The following table shows the results of monitoring conducted by the MABB for the period of January 1st to December 31st, 2020 and shows results for every regulated contaminant detected in the water, even in the minutest traces. Some of the data in the table may be from test results obtained from prior years, in accordance with the Safe Drinking Water Act, and these dates are noted on the table where applicable. Concentrations of such contaminants do not change frequently in the source water and annual monitoring is not necessary to safeguard the quality of water. The table also contains the nature of each substance, the highest level allowed by regulation, the ideal goals for public health the amount detected and the usual sources of contamination. In this table you will find many terms and abbreviations you might not be familiar with. Please refer to the Glossary on the back of the table page to help you better understand these terms and abbreviations. It should also be noted that many additional contaminants have been tested for during 2020 which were not detected to be present in the water and have been listed following the table page.

DETECTED REGULATED CONTAMINANTS TABLE							
Contaminant (Unit of Measure)	MCL	MCLG	Highest Level Detected	Range of Detections	Sample Period	Violation (Yes/No)	Likely Source of Contamination
Turbidity							
Turbidity (NTU) <i>[MABB Water Treatment System Filtered Water]</i>	TT = 0.3 single measurement	0	0.07 NTU	0.01 to 0.07 NTU	2020 <i>(05/08/2020 highest)</i>	No	Soil Runoff
	TT = at least 95% of monthly samples ≤ 0.3		100% monthly samples ≤ 0.3	N/A	2020	No	
Disinfection Residuals and Disinfection Byproducts							
Chlorine (ppm) <i>[Distribution System]</i>	MRDL = 4	MRDLG = 4	1.54	1.01 to 1.54	2020 <i>(March highest)</i>	No	Water additive used to control microbes
Chlorine (ppm) <i>[Entry Point]</i>	MinRDL = 0.2	NA	1.28 <i>(Lowest level)</i>	1.28 to 2.34	2020 <i>(9/19/20 - lowest)</i>	No	Water additive used to control microbes
Total Trihalomethanes (ppb) <i>[Distribution System]</i>	80	0	28.0 <i>(Maximum RAA)</i>	4.90 to 48.8	2020	No	By-product of drinking water chlorination
Haloacetic Acids (ppb) <i>[Distribution System]</i>	60	0	34.0 <i>(Maximum RAA)</i>	0 to 54.4	2020	No	By-product of drinking water disinfection
Inorganic Contaminants							
Barium (ppm)	2.0	2.0	0.033	NA- One sample only	2020	No	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Lead and Copper							
Contaminant	Action Level (AL)	MCLG	90 th Percentile Value	# Sites Above AL of Total Sites	Sample Date	Violation (Yes/No)	Source of Contamination
Lead (ppb)	15	0	3.23	No sites were above the AL out of 20 sites tested	3 rd Qtr 2019	No	
Copper (ppm)	1.3	1.3	0.345	No sites were above the AL out of 20 sites tested	3 rd Qtr 2019	No	Corrosion of Household Plumbing
Total Organic Carbon <i>[MABB Water Treatment System]</i>							
Contaminant	Range of % removal required		Range of % removal achieved		Number of Quarters Out of Compliance	Violation (Yes/No)	Source of Contamination
Total Organic Carbon	35% to 45%		22% to 35%		0 <i>(Alternative Criteria achieved)</i>	No	Naturally present in the environment
Raw Water Quality Table							
Microbial Contaminants							
Contaminant Name	Highest Level Detected		Range of Detection	Sample Period	Violation (Yes or No)	Likely Source of Contamination in Drinking Water	
E. Coli Bacteria	36.8		ND to 36.8	2018	No	Human and animal fecal waste	
Raw Water Quality Table Notes:							
The MABB began testing its raw (untreated) water sources for <i>E. coli</i> in October 2017 to comply with the LT2 Enhanced Surface Water Treatment Rule. Testing was continued through 2018 and was completed in September 2018. All results have been within normal, expected ranges. The MABB has treatment processes in place at each of its treatment facilities that have been designed to remove these microbial contaminants from the raw water prior to the release of the treated water to the distribution system. The MABB treatment facilities use filtration and chlorine disinfection to ensure that these constituents are inactivated and removed. The PA DEP also conducts Filter Plant Performance Evaluations at MABB treatment facility on a regular basis.							

Violations:

Haloacetic Acids: Results of a sample collected in November of 2020 and analyzed for Haloacetic Acids were reported past the required monthly reporting deadline which resulted in a late report violation. The required sample event and analysis were performed on time, but submission of the results of the sample analysis to DEP was inadvertently missed by the laboratory. Upon notification that the report submission was missed, the laboratory submitted the test results to DEP and the Authority has achieved compliance for this violation.

TOC and Alkalinity – Results of a sample collected in the second quarter of 2020 and analyzed for Total Organic Carbon (TOC) and Alkalinity were reported past the required monthly reporting deadline which resulted in a late report violation. The required sample event and analysis were performed on time, but submission of the results of the sample analysis to DEP was inadvertently missed by the laboratory. Upon notification that the report submission was missed, the laboratory submitted the test results to DEP and the Authority has achieved compliance for this violation.

Supplemental Information Regarding Lead in Drinking Water - Although no samples from the MABB distribution system that were tested for lead exceeded the established Action Limit (AL), lead was present at detectable levels in some of the samples analyzed in 2019. Elevated levels of lead, if present, 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 MABB 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 or at: <http://www.epa.gov/safewater/lead>.

- GLOSSARY OF TERMS USED IN THIS REPORT AND WATER QUALITY TABLES-

MABB – Municipal Authority of the Borough of Bedford

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; **DEP** - Pennsylvania Department of Environmental Protection

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.

MinRDL - Minimum Residual Disinfection Level - The minimum level of residual disinfectant required at the entry point to the distribution system

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 - The level of a drinking water disinfectant below which there is no known or expected risk to health. MDRDLGs do not reflect the benefits of the use of disinfectants to control microbial contamination.

N/A - Not Applicable **ND** - Non-Detects. Laboratory analysis indicates the contaminant is not present at a detectable level.

NTU - Nephelometric Turbidity Unit. Nephelometric turbidity unit is a measure of the clarity of water. Turbidity in excess of 5 NTU is just noticeable to the average person.

ppm - Parts per million or milligrams per liter (mg/l). **ppb** - Parts per billion or micrograms per liter (µg/L).

RAA – Running annual average

TT - Treatment Technique - A required process intended to reduce the level of contaminant in drinking water.

Turbidity - The measurement of cloudiness of the water. We monitor turbidity because it is a good indicator of the effectiveness of filtration.

Additional Testing:

Additional contaminants are regulated and are also routinely tested for, but are not present at detectable levels. Contaminants that have been tested for by the MABB, but not detected in the Authority's system during 2020 or recent years, included:

- **Microbial Contaminants: (2020)** – Total Coliform bacteria (*distribution system sampling*)
- **Radioactive Contaminants: (2015)** Gross Alpha Emitters, **(2014)** Radium 226 & 228 & Combined Uranium
- **Volatile Organic Compounds (VOCs) including: (2020)** cis-1,2-Dichloroethylene; Benzene; trans-,2-Dichloroethylene; Dichloromethane; 1,2-Dichloropropane; Ethylbenzene; Styrene; Tetrachloroethylene; 1,1,1-Trichloroethane; 1,1,2-Trichloroethane; Trichloroethylene; Toluene; Xylenes (total); Carbon tetrachloride; Chlorobenzene; o-Dichlorobenzene; p-Dichlorobenzene; 1-2-Dichloroethane; 1,1-Dichloroethylene; 1,2,4-Trichlorobenzene; Vinyl chloride - Bowman, Shaffer and Bedford Springs Well Sources
- **Inorganic contaminants including: (2020)** Nitrates; Nitrites; Arsenic; Antimony; Arsenic; Beryllium; Cadmium; Chromium; Cyanide; Mercury; Nickel; Selenium; Thallium

- **Synthetic Organic Chemicals (SOCs) including: (2020)** Lindane; Methoxychlor; Endothall; Di(2-Ethylhexyl)Adipate; Oxyal (Vydate); Simazine; Di(2-Ethylhexyl) Phthalate; Piclorem; Carbofuran; Hexachlorocyclopentadiene; Atrazine; Alachlor; 2,4-D; Benzo(a)pyrene; Pentachlorophenol; 1,2-Dibromo, 3 Chloroprop; Ethylene Dibromide (EDP); Chlorodane; Toxaphene; Dalpon; Diquat; Glyphosate; Dinoseb; Dioxin; Heptachlor; Heptachlor dioxide; 2,4,-D; 2,4,5-Silvex; Hexachlorobenzene; PCBs

- PLEASE CONSERVE OUR WATER RESOURCES –

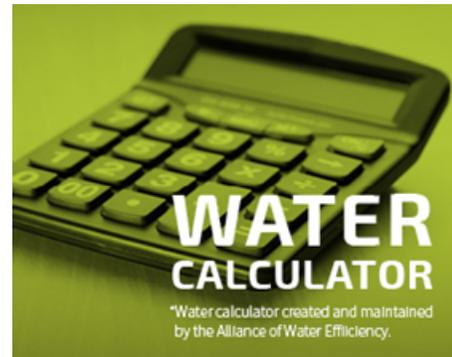
The Municipal Authority of the Borough of Bedford requests that customers conserve our water resources by conserving water in the home and at places of work. Efficient water use can have major environmental, public health, and economic benefits by helping to improve water quality, maintain aquatic ecosystems, and protect drinking water resources. Efficient use of water, through behavioral, operational, or equipment changes, if practiced broadly can help mitigate the effects of drought. Efficiency measures can also save the homeowner money on their water and energy bills. The following facts, tips and suggestions were obtained from **Think2now** and the EPA **Watersense** websites and can help you conserve water, save money and protect and preserve our water resources. For many more water saving tips and water conservation resources, please visit their websites at www.think2now.com or www.epa.gov/watersense.

Water Conservation Facts

1. Less than 2% of the Earth's water supply is fresh water.
2. Of all the earth's water, 97% is salt water found in oceans and seas.
3. Only 1% of the earth's water is available for drinking water. Two percent is frozen.
4. The human body is about 75% water.
5. A person can survive about a month without food, but only 5 to 7 days without water.
6. Every day in the United States, we drink about 110 million gallons of water.
7. Showering and bathing are the largest indoor uses (27%) of water domestically.
8. If every household in America had a faucet that dripped once each second, 928 million gallons of water a day would leak away.
9. A leaky faucet can waste 100 gallons a day.
10. One flush of the toilet uses 3 ½ gallons of water (on average).
11. An average bath requires 37 gallons of water.
12. An average family of four uses 881 gallons of water per week just by flushing the toilet.
13. The average 5-minute shower takes 15-25 gallons of water--around 40 gallons are used in 10 minutes.
14. You use about 5 gallons of water if you leave the water running while brushing your teeth.
15. If you water your grass and trees more heavily, but less often, this saves water and builds stronger roots.
16. An automatic dishwasher uses 9 to 12 gallons of water while hand washing dishes can use up to 20 gallons.
17. Approximately 1 million miles of pipelines and aqueducts carry water in the U.S. & Canada. That's enough pipe to circle the earth 40 times.
18. About 800,000 water wells are drilled each year in the United States for domestic, farming, commercial, and water testing purposes.
19. You can refill an 8-oz glass of water approximately 15,000 times for the same cost as a six-pack of soda pop.
20. A dairy cow must drink four gallons of water to produce one gallon of milk.
21. 300 million gallons of water are needed to produce a single day's supply of U.S. newsprint.
22. One inch of rainfall drops 7,000 gallons or nearly 30 tons of water on a 60' by 180' piece of land.
23. A gallon of gasoline takes nearly 13 gallons of water to produce. Combine your errands, car pool to work, or take public transportation to reduce both your energy and water use.
24. A cross-country airplane trip (about 6,000 miles) could be worth more than 1,700 standard toilet flushes.
25. According to recent reports, nearly 5% of all U.S. water withdrawals are used to fuel industry and the production of many of the material goods we stock up on weekly, monthly, and yearly.

26. It takes about 100 gallons of water to grow and process a single pound of cotton, and the average American goes through about 35 pounds of new cotton material each year.

27. Try <http://www.home-water-works.org/calculator>



Other Resources:

- [American Water Works Association](http://www.awwa.org/) (<http://www.awwa.org/>)
- [Green Plumbers](http://www.greenplumbersusa.com/) (<http://www.greenplumbersusa.com/>)
- [Earth Easy](http://eartheasy.com/water-conservation) (<http://eartheasy.com/water-conservation>)
- [Alliance for Water Efficiency](http://www.allianceforwaterefficiency.org/) (<http://www.allianceforwaterefficiency.org/>)
- [EPA Water Sense](http://www.epa.gov/watersense/) (<http://www.epa.gov/watersense/>)
- [USGS Water](http://www.usgs.gov/water/) (<http://www.usgs.gov/water/>)

Save Indoors



You've purchased some [WaterSense labeled products](#) and started down the road to savings, but don't stop there. There are lots of things you can do in your own home to reduce water use and get more from less. Just follow our simple tips below to get started!

Fix a leak:

Small household leaks can add up to gallons of water lost every day. That's why WaterSense reminds Americans to check their plumbing fixtures and irrigation systems each year in March during [Fix a Leak Week](#).

In the bathroom—where over half of all water use inside a home takes place:

- Turn off the tap while shaving or brushing teeth.
- Showers use less water than baths, as long as you keep an eye on how long you've been lathering up. Learn tips on how to [Shower Better](#).
- If you're dreaming of a [Better Bathroom](#), get ready for your mini-makeover.
- [Calculate how much you can save](#) with WaterSense labeled products in the bathroom!

In the kitchen—whip up a batch of big water savings:

- Plug up the sink or use a wash basin if washing dishes by hand.
- Use a dishwasher—and when you do, make sure it's fully loaded!
- Scrape your plate instead of rinsing it before loading it into the dishwasher.
- Keep a pitcher of drinking water in the refrigerator instead of letting the faucet run until the water is cool.
- Thaw in the refrigerator overnight rather than using a running tap of hot water.
- Add food wastes to your compost pile instead of using the garbage disposal.

In the laundry room—where you can be clean AND green:

- Wash only full loads of laundry or use the appropriate water level or load size selection on the washing machine.
- To save money on your energy bills, set your washing machine to use cold water rather than hot or warm water.

Save Outdoors

Of the estimated 29 billion gallons of water used daily by households in the US, nearly 9 billion gallons, or 30 percent, is devoted to outdoor water use. In the hot summer months, or in dry climates, a household's outdoor water use can be as high as 70 percent.

- [Create a water-smart landscape](#) that is both beautiful and efficient to give your home the curb appeal you desire.
- Timing is everything! Knowing when and how much to water allows you to keep a [healthy landscape](#).

- Upgrade to a WaterSense labeled controller if you have an [in-ground irrigation system](#).
- Find a certified irrigation professional to install, maintain, or audit your irrigation system to ensure it is watering at peak efficiency.
- Sweep driveways, sidewalks, and steps rather than hosing off.
- Wash the car with water from a bucket, or consider using a commercial car wash that recycles water.
- If you have a pool, use a cover to reduce evaporation when the pool is not being used.
- Take action during the [hot summer months](#) when water use increases to curb water waste. Get the facts on water use when it's hot.
- If a [drought](#) is declared in your area, go the extra mile to save water.

Save Energy

It takes a lot of energy to deliver and treat the water you use every day for bathing, shaving, cooking, and cleaning. Homes with electric water heaters, for example, spend one-quarter of their electric bill just to heat water. As an example, letting your faucet run for five minutes uses about as much energy as letting a 60-watt light bulb run for 14 hours.

Drops & Watts: You Can't Have One Without the Other

On average, the annual energy used to deliver and treat water for only 10 households could power a refrigerator for more than two years. In some areas of the country, that estimate is very low. Heating water for showering, bathing, shaving, cooking, and cleaning also requires a considerable amount of energy. Homes with electric water heaters, for example, spend one-fourth of their total electric bills.

Did you Know?

It also takes water to create energy. Vast amounts of water are used to cool the power plants that generate electricity. In fact, it takes 3,000 to 6,000 gallons of water to power a 60-watt incandescent bulb for 12 hours per day over the course of a year. One of the simplest ways to save both water and energy is to install water-efficient products. WaterSense labeled products not only save water, but can help reduce your energy bills. Installing WaterSense labeled faucet aerators in your bathrooms, for example, costs just a few dollars but could save you enough electricity to dry your hair every day for a year! You can be sure the products will not only save resources, but will perform well. All WaterSense labeled products are tested and independently certified to ensure they meet EPA's criteria for both efficiency and performance.

Please help us find leaks, save water and reduce water service costs... Because water lines are located underground, leaks may go unnoticed for days and even years resulting in a considerable waste of our valuable water resource and additional costs for all customers. Please help us locate these leaks by reporting to the Water Department any occurrences of: water running in locations that are normally dry; wet spots in yards and streets; the sound of water running in your home when water is not in use; the sound of water trickling or running in a storm inlet when it is not raining; sudden or unusually low water pressure; and slugs of discolored or cloudy water. When an occurrence such as this is reported, a representative of the water department will make contact and investigate the situation.

Municipal Authority of the Borough of Bedford
244 West Penn Street
Bedford PA 15522

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MUNICIPAL AUTHORITY OF THE BOROUGH OF BEDFORD PWSID: 4050002 2020 DRINKING WATER REPORT

Este informe contiene información muy importante sobre su agua potable. Tradúzcalo o hable con alguien que lo entienda bien.

This report contains important information about your drinking water.
Translate it or speak with someone who understands it.

How to Contact Us: 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 meetings. They are held on the second Monday of each month at 4:00 PM, in the Bedford Ambulance Meeting Room located at 130 West Vondersmith Avenue (Lower Level) in Bedford until the Bedford Borough Municipal Building renovation project is complete.. If you have any questions about this report, or questions concerning the Municipal Authority of the Borough of Bedford or the water system in general, you may contact:

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Email: bedfordborough@bedboro.com
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Office Hours: Weekdays from 9 AM to 4 PM