Belleville Township Water Department
2023 Water Quality Report
PWS ID 0701001

Belleville is committed to providing a reliable supply of safe, quality drinking water to its residents. The purpose of this report is to provide you, our customer, with information on the sources of your drinking water. This report will also describe the water treatment process and explain what potential substances may be found in drinking water. Health information and a listing of the amounts of detected substances and how they compare to the state and federal regulations are also provided.

This report confirms that your drinking water is safe. However, as you may know, in the past, the Township was experiencing issues with the monitoring schedule for the following contaminants: water quality parameters (orthophosphate). Also, we experienced issues with excursions from the optimal water quality parameter control values. In these situations, you have been notified of the violations, what the Belleville Water Department is doing to remediate these issues, as well as, what actions you should be taking as a consumer of our water. We are actively implementing improvements to our water system to provide you with a better quality of drinking water, i.e., Newark has made treatment modifications to reduce the levels of disinfection by-products; hydrant flushing and revised sampling procedures to reduce positive total coliform results; and, Newark has eliminated silica and is now utilizing zinc orthophosphate for corrosion control which coats the lead pipes and fixtures to prevent lead from corroding and leaching into our drinking water thus lowering lead levels. Finally, the Township submitted one (1) Remedial Measures Report due to the said water quality parameter excursions.

Results of all of Belleville Township water sampling can be reviewed at the NJDEP Drinking Water Watch web site: https://www9.state.nj.us/DEP_WaterWatch_public/

If you would like additional information or if you have any questions concerning this report, you can contact the Belleville Water Department at 973-450-3414. Public participation regarding water quality is welcomed at scheduled Township Council meetings as noted on the Township website.

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

Este informe contiene informaci6n muy im portant e sobre su agua de beber. Traduzcalo 6 hable con alguien que lo en tienda bien.

SOURCE WATER

Belleville Township purchases treated surface water from the Newark Water Department through four (4) interconnections located on Passaic Avenue, Hilton Street, Joralemon Street, and Belleville Avenue. Newark withdraws water from the Pequannock Watershed in West Milford, New Jersey and treats it at the Pequannock Water Treatment Plant. Water quality monitoring stations are operated by the U.S. Geological Survey upstream of the Pequannock WTP intake at the Charlotteburg Reservoir and Oak Ridge Reservoir. These monitoring stations provide continuous data for important water quality parameters, and, help provide advanced warning of adverse changes in water quality. Emergency connections with another purveyor, Nutley, exist within the system.

You can view Newark's recent annual Water Quality Reports at the following web site:

https://www.newark.gov/viewer/water-quality-reports

SOURCE WATER ASSESSMENT

NJDEP has prepared Source Water Assessment reports and summaries for all public water systems. The Source Water Assessment for the Newark system (PWS ID 0714001) and Nutley system (PWS ID 0716001) can be obtained by accessing NJDEP's source water assessment web site at http://www.nj.gov/dep/watersupply/swap/index.html, or by contacting the NJDEP, Bureau of Safe Drinking Water at 609-292-5550 or watersupply@dep.nj.gov. If a system is rated highly susceptible for a contamination category, it does not mean a customer is – or will be – consuming contaminated water. The rating reflects the potential for contamination of a source water, not the existence of contamination. Public water systems are required to monitor for regulated contaminants and to install treatment if any of those contaminants are detected at frequencies and concentrations above allowable levels. The source water assessments performed on the intakes lists the susceptibility ratings for a variety of contaminants that may be present in Newark and Nutley source waters (Belleville purchases treated surface water from Newark, and, has emergency interconnections with Nutley) as seen in the tables below.

Surface Water Intakes	Pathogens	Nutrients	Pesticides	Volatile Organic Compounds
Newark	High	Low	Low	Low
Nutley	N/A	N/A	N/A	N/A

Surface Water Intakes	Inorganic Contaminants	Radionuclides	Radon	Disinfection Byproduct Precursors
Newark	High	Low	Low	High
Nutley	N/A	N/A	N/A	N/A

WHAT TO EXPECT FROM YOUR WATER

The sources of drinking water (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, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity. To ensure that tap water is safe to drink, the EPA prescribes regulations that limit the amount of certain substances in water provided by public water systems. 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.

SUBSTANCES THAT COULD BE IN 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 (1-800-426-4791). Substances that may be present in source water include:

- Microbial Contaminants – such as viruses and bacteria, may come from sewage treatment plants, septic systems, agricultural livestock operations, or wildlife;
- Inorganic Contaminants – such as salts and metals, can be naturally occurring or may result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming;
- Pesticides and Herbicides – may come from a variety of sources such as agriculture, urban stormwater runoff, and residential uses;
- Organic Chemical Contaminants – including synthetic and volatile organic chemicals, are by-products of industrial processes and petroleum production and may also come from gas stations, urban stormwater runoff, and septic systems;
- Radioactive Contaminants - can be naturally occurring or may be the result of oil and gas production and mining activities.

TESTING AND TREATMENT

Newark takes multiple steps in their testing and treatment processes to make sure the water they deliver to your home is safe to drink and meets contaminant level standard. Your water goes through a thorough treatment process which includes removing small debris, filtering, and disinfecting. In addition, Newark regularly collects and tests approximately 300 water samples a day to ensure that the water our customers receive meets and exceeds federal and state drinking water quality standards. Newark's commitment to providing Belleville, with quality drinking water is proven through the comprehensive testing and treatment processes we employ.

CHLORINE TREATS OUR WATER

For almost 100 years, water suppliers in America and other countries have used chlorine to treat or disinfect drinking water. According to the EPA and other health agencies, chlorine is currently one of the most effective disinfectants used to kill harmful microorganisms. Disinfection of all public water supplies is required by federal and state laws and regulations, including the Safe Drinking Water Act and the Surface Water Treatment Rule. Water supplied by Newark meets the Chlorine Contact Time (CT) requirements for inactivation of Giardia. Water is treated with potassium permanganate before treatment and chlorinated after treatment and further chlorinated at Montclair chlorination station before entering the water.

ITEMS OF SPECIAL INTEREST

Lakes, rivers, and reservoirs may contain Cryptosporidium, which is a tiny microbe. It is found in human feces and many domestic and wild animals. Newark tests for Cryptosporidium on a monthly basis in our Pequannock finished water surface water supplies. It has never been detected in a viable state in any of their treated water supplies.

NITRATE

Nitrate in drinking water at levels about 10 ppm is a health risk for infants of less than six months of age and 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.

ARSENIC

While your drinking water meets the USEPA's standard for arsenic, it does contain low levels of arsenic. EPA 's standard balances the current understanding of arsenic's possible health effects against the costs of removing arsenic from drinking water. EPA continues to research the health effects of low levels of arsenic, which is a mineral known to cause cancer in humans at high concentrations and is linked to other health effects such as skin damage and circulatory problems.

TURBIDITY

Turbidity is the measure of the cloudiness of water. Newark monitors it because it is a good indicator of water quality. High turbidity can hinder the effectiveness of disinfection.

LEAD

Newark has completed an analysis of corrosion control measures, and, is now utilizing zinc orthophosphate for corrosion control treatment to lower lead levels in the water. If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. 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. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. Newark and Belleville are responsible for providing high quality drinking water but cannot control the variety of materials used in plumbing components. If your home or business was built before 1950 you can suspect that you have a lead service line. 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, (800) 426-4791, or at http://www.epa.gov/safewater/lead.

DISINFECTION BY-PRODUCTS

Disinfection by-products (Total Trihalomethanes & Haloacetic Acids) are formed when disinfectants react with natural organic matter in the water. 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 system, and may have an increased risk of getting cancer. Some people who drink water containing haloacetic acids in excess of the MCL over many years may have an increased risk of getting cancer.

WATER QUALITY TABLES

The tables on the following pages list all the drinking water analytes that were detected during calendar year 2023. The presence of these analytes in the water does not necessarily indicate that the water poses a health risk. Unless otherwise noted (N=Newark, 20XX), the data presented in these tables are from Township sampling results from January 1 through December 31, 2023, or the most recent sample performed in accordance with the regulation. The state requires us to monitor the water for certain contaminants less than once per year because the concentrations of these contaminants are not expected to vary significantly from year to year.

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).

Secondary Compounds	CL	Unit Measure	Federal/State Secondary Standards (optimal Range)	Source of Contamination
Alkylbenzene Sulfonate and Linear Alkylbenzene	N/A	ppb	500	Naturally present in environment
Alkalinity	29.5	ppm	NS	A characteristic of water caused by carbonate and bicarbonates
Aluminum(N)	<0.15	ppm	<0.200	By-product of water treatment using aluminum salts
Chloride(N)	36.1	ppm	<250	Erosion of natural deposits
Color(N)	2	CU	<10	Presence of manganese and iron, plankton, humus, peat and weeds
Hardness(N)	48.7	ppm	50-250	Caused primarily by salts of calcium and magnesium
Iron	<0.05	ppm	<0.300	Erosion of natural deposits
Manganese	0.0372	ppm	<0.050	
Odor(N)	<1	TON	<3	Algae and plant matter
pH	7.55	units	6.5-8.5	Presence of carbonate, bicarbonates and carbon dioxide
Sodium(N)	22.4	ppm	<50	Runoff from road salt and from some water softening process
Sulfate(N)	12.0	ppm	<250	Erosion of natural deposits
Total Dissolved Solids(N)	104	ppm	<500	
Zinc(N)	<0.20	ppm	<5	Erosion of natural deposits, pipe corrosion and/or runoff

Inorganic Contaminants	CL	Federal/State MCL	MCL Meets Standard?	MCLG	Typical Source of Contaminant
Arsenic (ppb)(N)	<0.5	10.0/5.0	Yes	0	Erosion of natural deposits; Runoff from orchards; Run off from glass and electronics; and, production wastes.
Barium (ppm)(N)	<0.00599	2.0/2.0	Yes	2	Erosion of natural deposits.
Fluoride (ppm)(N)	<0.1	<2.0	Yes	<2	
Mercury (ppm)(N)	<0.0002	0.002/0.002	Yes	0.002	Erosion of natural deposits; and, discharge from refineries and factories.
Nitrate (ppm as Nitrogen)(N)	<0.1	10.0/10.0	Yes	10	Runoff from fertilizer use; Leaching from septic tanks, sewage; and, Erosion of natural deposits.

Micro- biological	492 samples	Federal/State MCL	MCL Meets Standard?	MCLG
Total Coliform	6	Testing Positive< 5% per month	No	0

Source - Naturally Present in the Environment

Volatile Organic Compounds	CL	Federal/State MCL	MCL Meets Standard?	Typical Source of Contaminant
VOC's (ppb)(N)	ND	Dependent on specific VOC	Yes	Industrial factory discharge. They include benzene, toluene and naphthalene.

Regulated Disinfectants	CL Min	CL Max	MRDL	MRDLG	Source of Contamination
	0.12	1.26			
Distribution System Chlorine, ppm	0.65		4.0	4.0	Water Additive used to control microbes

Source (Raw) Water Pathogen Monitoring	CL Min	CL Max	Source of Contamination
Giardia Cyst(N)	0	0	Microbial Pathogens found in all untreated water. Chlorination will inactivate Giardia
Giardia, Cyst/L(N)	0	0	Surface Water Causes Giardiasis
Cryptosporidium, Oocysts/L(N)	0		Microbial Pathogens found in surface water.

Synthetic Organic Compounds (SOC)	Asbestos
Waiver granted till 12/31/2020(N)	Waiver

Haloacetic Acids(ppb)	Min	Max	LRAA
A	22	34	28
B	26	37	30
C	23	31	28
G	23	634	29

MCL – 60 ppb

Source - By Product of Drinking Water Chlorination

Stage 2 Trihalomethanes (ppb)	Min	Max	LRAA
A	26	40	34
B	25	39	33
C	26	47	36
G	26	47	36

MCL – 80 ppb

Source – By Product of Drinking Water Chlorination

Perfluorononanoic Acid	CL	MCL
PFNA (ppt)	<4	13

Source - Discharge from industrial, chemical and manufacturing factories, release from aqueous film forming foam (see Township web site https://www.bellevillenj.gov for laboratory results)

Radiological Contaminants	CL	Federal/State MCL	MCL Meets Standard?	MCLG	Typical Source of Contaminant
Combined Radium (pCi/L) 2017(N)	0	5	Yes	0	Erosion of natural deposits.

Lead and Copper	Belleville (90th percentile) 2023 Samples	Federal/State MCL	MCL Meets Standard	MCLG	Typical Source of Contaminant
Lead (ppm) Jan – June	0.0108 **6 sites above action level**	AL=0.015	Yes	0	Corrosion of household plumbing; Erosion of natural deposits; and, Leaching from wood preservatives.
Lead (ppm) Jul - Dec	0.00413 **0 sites above action level**				
Copper (ppm) Jan - Jun	0.103	AL=1.3	Yes	1.3	Corrosion of household plumbing; Erosion of natural deposits; and, Leaching from wood preservatives.
Copper (ppm) Jul - Dec	0.0962				

Turbidity	Min	Max	Federal/State MCL	MCL Meets Standard?	MCLG	Typical Source of Contaminant
	0.08	0.5				
Turbidity (NTU and Combined Filtered Water)(N)	0.41– highest single measurement		TT= 1 NTU	Yes	N/A	Soil run-off
	99.93% - percentage of samples <0.3 NTU		95%- percentage of samples <0.3 NTU			
	0.19 – Average					

Total Organic Carbon	CL	Federal/State MCL	MCL Meets Standard?	MCLG	Typical Source of Contaminant
TOC (ppm)(N)	Running Avg 1.56 Removal Ratio 1.42%	TT= Meeting alternative criteria removal ratio of 1.0	Yes	N/A	Naturally present in environment

KEY TERMS & ACRONYMS

Action Level (AL): The concentration of a contaminant which, if exceeded, triggers treatment or other requirement that a water system must follow.

CL: Compound or Contaminant Level

CU: Color Units.

LRAA: Locational running annual average

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

Maximum Contaminant Level Goal (MCLG): 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 disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.

Maximum Residual Disinfectant Level 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 contamination.

NTU: Nephelometric Turbidity Units.

pCi/L: PicoCuries per liter (a measure of radioactivity).

ppb (parts per billion): 1 drop in 10,000 gallons, 1 inch in 16,000 miles, or one penny in $10,000,000.

ppm (parts per million): 1 drop in 10 gallons, 1 inch in 16 miles, or one penny in $10,000.

ppt (parts per trillion): 1 drop in 10,000,000 gallons, 1 inch in 16,000,000 miles or one penny in $10,000,000,000.

Treatment Technique (TT): A required process intended to reduce the level of a contaminant in drinking water.

TON: Threshold Odor N

ADDITIONAL RESOURCES

Newark Water & Sewer website: https://waterandsewer.newarknj.gov/	Belleville Water Department: 973-450-3414
EPA Drinking Water website: www.epa.gov/safewater	EPA Safe Drinking Water Hotline: 800-426-4791
NJDEP Water Supply website: www.nj.gov/dep/watersupply	NJDEP Bureau of Safe Drinking Water: 609-292-5550
American Water Works Association (AWWA) website: www.awwa.org	AWWA New Jersey website: www.njawwa.org