



Dear Valued Customer:

The Brick Township Municipal Utilities Authority is pleased to present this summary of water quality delivered during 2016. The Federal Safe Drinking Water Act (SDWA) requires that utilities issue an annual **CONSUMER CONFIDENCE REPORT** in addition to other notices that may be required by law. This report details where Brick Utilities water comes from, what it contains, and the risks our water treatment and testing are designed to prevent.

While this report details results from 2016, our residents and customers can get water quality information that is updated periodically by accessing our internet site at [www.brickmua.com](http://www.brickmua.com).

Brick Utilities is committed to delivering a safe and reliable supply of drinking water to over 100,000 residents of northern Ocean County and Monmouth County. If you have any questions, please contact Brick Utilities at (732) 458-7000 Ext. 4220.

**Brick Township Municipal  
Utilities Authority  
PWS ID# NJ1506001**

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## 2016 Consumers' Water Quality Report

### Overview

In 2016, Brick Utilities continued participation in the Partnership for Safe Drinking Water, a national initiative to help achieve operational excellence in surface water treatment. The Partnership is a voluntary cooperative effort between the U.S. Environmental Protection Agency, AWWA and other drinking water organizations, with more than 200 surface water utilities throughout the United States.

Brick Utilities maintains a laboratory that is certified by the New Jersey Department of Environmental Protection. The laboratory, which has operated continuously since 1975, is a key component of Brick Utilities Comprehensive Water Quality Monitoring Program. The Authority conducts monitoring of its source water treatment process and finished water in excess of the number and types of tests that are required by state or federal regulations. The Authority believes that a comprehensive source water testing program is essential, considering that 74% of the water that is treated comes from the Metedeconk River. The river is fed by a 70-square mile watershed that is subject to both natural and manmade contamination, which can cause the quality of the source or untreated water to change.

### Water Source

Brick Utilities treats approximately 3.5 billion gallons of water each year. In addition to water from the Metedeconk River and Brick Reservoir, the Authority draws water from high volume wells that tap into the Potomac-Raritan-Magothy Aquifer. These wells are nearly 2,000 feet deep and are not influenced by surface phenomena. The Authority also draws a relatively small amount of water from the Cohansey Aquifer.

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

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

## Susceptibility Ratings for Brick Township MUA Sources

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 - 11		6	5	7		4		7	4	7		4	7		4	7	4			7	4	7	4	
GUDI - 2	2			2						2			2			2				2		2		
Surface water intakes - 1	1				1				1		1		1					1			1	1		

The table provides ratings of high (H), medium (M) or low (L) for each contaminant category. 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. NJDEP found the following potential contaminant sources within the source assessment areas for our sources: underground storage tanks, known contaminated sites, cemeteries, discharge to ground/surface water permits, storm sewer permits, landfills. If you have questions regarding the Source Water Assessment Report or Summary please contact the Bureau of Safe Drinking Water at [swap@dep.state.nj.us](mailto:swap@dep.state.nj.us) or call (609) 292-5550.

### Explanation of Violations

There were no violations.

### Variances/Exemptions

This water system was given a waiver by the NJDEP for exemption from monitoring for synthetic organic compounds (SOCs). SOC's include substances like pesticides, herbicides, and plasticizers. The waiver was given after the NJDEP performed extensive analyses on the Metedeconk River.

### Unregulated Contaminants

The U.S. Environmental Protection Agency (EPA) is working to resolve several scientific issues that will allow it to set cryptosporidium safety standards. The Authority's testing performed in 2016 exhibited no detectable presence of cryptosporidium on any occasion. No precaution about the drinking water is currently needed for the general public. The Authority's water undergoes extensive treatment to include coagulation, sedimentation, and filtration. Cryptosporidium is effectively removed by filtration, consequently no finished water delivered by Brick Utilities has ever shown any presence of cryptosporidium.

### Key To Table (following page)

AL = Action Level

TT = Treatment Technique

ND = None Detected

N/A = Not Applicable

MCL = Maximum Contaminant Level

MCLG = Maximum Contaminant Level Goal

NTU = Nephelometric Turbidity Units

MRDL = Maximum Residual Disinfectant Level

pCi/l = picocuries per liter (a measure of radioactivity)

ppm = parts per million, or milligrams per liter (mg/l)

ppb = parts per billion, or micrograms per liter (ug/l)

MRDLG = Maximum Residual Disinfectant Level Goal

LRAA = Locational Running Annual Average

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 transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants may be particularly at risk from infection. These individuals 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 are available from the Safe Drinking Water Hotline (800) 426-4791.

**2016 WATER QUALITY REPORT – BRICK TOWNSHIP MUA – PWSID# NJ1506001**

Contaminant	Violation Y/N	Brick Twp MUA	Unit Measurement	MCLG	MCL	Major sources in Drinking Water
<b>MICROBIOLOGICAL CONTAMINANTS</b>						
Total Coliform	N	0 %	% Samples	0	5% of monthly samples are positive	Naturally present in the environment.
Turbidity (1)	N	0.05 Avg. 0.26 Max 100 % samples <0.3 NTU	NTU	N/A	95% samples < 0.3 NTU TT	Soil runoff. Turbidity is a measure of cloudiness in the water. We monitor it because it is a good indicator of water quality. High turbidity can hinder the effectiveness of disinfectants.
<b>INORGANIC CONTAMINANTS</b>						
Barium	N	0.06 Max range: 0.02-0.06	ppm	2	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits.
Cadmium	N	2.88 Max range: ND-2.88	ppb	5	5	Corrosion of galvanized pipes; Erosion of natural deposits; Discharge from metal refineries; Runoff from waste batteries and paints.
Chromium	N	1.08 Max range: ND-1.08	ppb	100	100	Discharge from steel and pulp mills; Erosion of natural deposits.
Copper (2)	N	90th percentile: 0.05 0 sites > AL	ppm	1.3	AL=1.3	Corrosion of household plumbing systems; erosion of natural deposits.
Fluoride	N	0.05 Max range: (0.02-0.05)	ppm	4	4	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories.
Lead (2)	N	90th percentile: 4.72 2 sites > AL	ppb	0	AL=15	Corrosion of household plumbing systems; erosion of natural deposits.
Nitrate (as Nitrogen)	N	0.82 Max range: ND-0.82	ppm	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits.
Selenium	N	0.88 Max range: ND-0.88	ppb	50	50	Discharge from petroleum and metal refineries; Erosion of natural deposits; Discharge from mines.
Thallium	N	1.92 Max range: ND-1.92	ppb	0.5	2	Leaching from one-processing sites; Discharge from Electronics, glass, and drug factories.
<b>DISINFECTANTS AND DISINFECTION BY-PRODUCTS</b>						
TTHM (total trihalomethanes)	N	STAGE2 highest LRAA 50.3 range: 22.0-53.6	ppb	N/A	80	By-product of drinking water disinfection.
HAA5 (Haloacetic Acids)	N	STAGE2 highest LRAA 31.1 range: 11.7-30.3	ppb	N/A	60	By-product of drinking water disinfection.
Chloramine	N	highest annual avg: 1.27 range: 0.08-1.83	ppm	4 (MRDLG)	4 (MRDL)	Water additive used to control microbes.
<b>RADIOLOGICAL CONTAMINANTS (3)</b>						
Combined Radium	N	1.03	pCi/L	0	5	Erosion of natural deposits.

1. Turbidity is a measure of the cloudiness of water and is a good indicator of the effectiveness of the filtration system.
2. Lead and copper were tested in 2016, in accordance with permit requirements.
3. The State allows us to monitor for some contaminants less than once per year because the concentrations of these contaminants do not change frequently. This data, though representative, is more than one year old. Radiological monitoring was conducted by Brick Township MUA in 2014, in accordance with permit requirements.

**See advice about special populations and a source for further information on the next page.**

## Required Additional Health Information

To ensure that tap water is safe to drink, EPA prescribes limits on the amounts of certain contaminants in water provided by public water systems. FDA regulations establish limits for contaminants in 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 **Environmental Protection Agency's Safe Drinking Water Hotline at (800) 426-4791**.

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 radioactive material, and can pick up substances resulting from the presence of animals or from human activity. Contaminants that may have been present in source water include:

(A) Microbial contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.

(B) Inorganic contaminants, such as salts and metals, which can be naturally occurring or resulting from urban storm runoff, industrial or domestic wastewater discharges, oil and gas production, mining or farming.

(C) Pesticides and herbicides, which may come from a variety of sources such as agriculture, storm water runoff, and residential uses.

(D) 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 storm water runoff, and septic systems.

(E) Radioactive contaminants, which can be naturally occurring or be the result of oil and gas production and mining activities.

(F) Radon, which is a 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.

(G) Disinfection By-Product Precursors, which are formed when disinfectants (usually chlorine) used to kill pathogens react with dissolved organic material (for example leaves) present in surface water.

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. The Food and Drug Administration's (FDA) regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

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. Brick Utilities 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://epa.gov/safewater/lead>.

## 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.

**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.

Infants and young children are typically more vulnerable to lead in drinking water than the general population. It is possible that lead levels at your home may be higher than at other homes in the community as a result of materials used in your home plumbing. If you are concerned about elevated lead levels in your home water, you may wish to have your water tested and flush your tap for 30 seconds to 2 minutes before using tap water. Additional information is available from the Safe Drinking Water Hotline at (800) 426-4791.

## National Primary Drinking Water Regulation Compliance and Other Monitoring

Brick Utilities is active in protecting the environment and community, and the health and safety of customers is this Authority's highest priority. This Authority welcomes questions residents may have about Brick Utilities and the quality of water. For more information, call **Joseph Maggio, P.E.**, Director of Water Quality **at (732) 458-7000 Ext. 4220**. Water quality data for community water systems throughout the United States is available on the internet at [www.waterdata.com](http://www.waterdata.com).

### ***An Explanation of the Water Quality Data Table***

The chart on the preceding page provides representative analytical results of water samples routinely collected through 2016 from your water system. Please note the following definitions:

**Maximum Contaminant Level (MCL):** The highest level of contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment 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.

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

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

**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 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.