

*The Water We Drink*  
**Annual Drinking Water Quality Report**  
**Barneгат Township Water & Sewer Utility Department**  
**For the Year 2017, Results from the Year 2016**

We are pleased to present you with the 2017 Annual Water Quality Report. This report is designed to inform you about the quality water we deliver to you every day. Our constant goal is to provide you with safe and dependable drinking water. We want you to understand the effort we make to continually improve the water treatment process and protect our water resources.

**We are pleased to report that our drinking water meets all federal and state safety requirements.**

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 microbiological contaminants are available from the Safe Drinking Water Hotline (800-426-4791).

<b>TEST RESULTS</b>						
Contaminant	Violation Y/N	Level Detected	Units of Measurement	MCLG	MCL	Likely Source of Contamination
<b>Radioactive Contaminants:</b>						
Gross Alpha Test results Yrs. 2014	N	Range: 4.5 – 10.4 Highest Detect: 10.4	pCi/l	0	15	Erosion of natural deposits
Combined Radium 228 & 226 Test results Yrs. 2014	N	Range: 1.8 – 3.2 Highest Detect: 3.2	ppb	0	5	Erosion of natural deposits
<b>Inorganic Contaminants:</b>						
Barium Test results Yr. 2016	N	Range = 0.1 Highest detect = 0.1	ppm	2	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Copper Test results Yr. 2016 Result at the 90 <sup>th</sup> Percentile	N	ND No samples exceeded the action level.	ppm	1.3	AL=1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Lead Test results Yr. 2016 Result at 90 <sup>th</sup> Percentile	N	ND No samples exceeded the action level	ppb	0	AL=15	Corrosion of household plumbing systems, erosion of natural deposits
<b>Volatile Organic Contaminants / Disinfection Byproducts:</b>						
TTHM Total Trihalomethanes Test results Yr. 2016	N	Range = 1 - 7 Highest LRAA = 4	ppb	N/A	80	By-product of drinking water disinfection
HAA5 Haloacetic Acids Test results Yr. 2016	N	Range = ND - 13 Highest LRAA = 5	ppb	N/A	60	By-product of drinking water disinfection
Total Xylenes Test results Yr. 2016	N	Range = ND – 0.75 Highest detect = 0.75	ppb	1000	1000	Discharge from petroleum factories; discharge from chemical factories
<b>Regulated Disinfectants</b>		<b>Level Detected</b>		<b>MRDL</b>		<b>MRDLG</b>
Chlorine Test results Yr. 2016		Average = 0.6 ppm		4.0 ppm		4.0 ppm

**For Total Haloacetic Acids (HAA5s) and Total Trihalomethanes (TTHMs), which are disinfection byproducts, compliance is based on a Locational Running Annual Average (LRAA), calculated at each monitoring location. The LRAA calculation is based on four completed quarters of monitoring results.**

#### **QUESTIONS ABOUT YOUR WATER UTILITY**

If you have any questions about this report or the Barneгат Township Utilities, please contact **Roger Budd**, Township Utilities Manager at 609-698-6185. If you want to learn more, please attend any of our regularly scheduled Committee meetings at the Municipal Bldg. in the Court Room. Meetings are held the first and third Monday of each month at 7:00 p.m.

#### **WHERE YOUR WATER COMES FROM**

The source of Barneгат Township's drinking water is groundwater. Our six wells draw water from the Kirkwood-Cohansey aquifer and are capable of pumping 6.8 million gallons of water a day. The New Jersey Department of Environmental Protection (NJDEP) has prepared Source Water Assessment Reports and Summaries for all public water systems. Please see the Susceptibility Ratings page for Barneгат Township's Drinking Water Wells. Further information on the Source Water Assessment Program can be obtained by logging onto NJDEP's source water assessment web site 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. You may also contact your public water system at 698-6185.

## **YOUR DRINKING WATER QUALITY**

The Barnegat Utilities routinely monitors for constituents in your drinking water according to Federal and State laws. The table shows the results of our monitoring for the period of January 1st to December 31st 2016. The state allows us to monitor for some contaminants 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.

## **ADDITIONAL INFORMATION**

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 discharges, 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 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.

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.

The Safe Drinking Water Act regulations allow monitoring waivers to reduce or eliminate the monitoring requirements for asbestos, volatile organics and synthetic organic chemicals. Our system received a monitoring waiver for synthetic organic chemicals and asbestos.

## **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 Barnegat Township Water & Sewer Utility is responsible for providing high quality drinking water, but can not 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 or at <http://www.epa.gov/safewater/lead>.

## **UNDERSTANDING THE WATER QUALITY TABLE**

In the following table you will find many terms and abbreviations you may not be familiar with. To help you better understand these terms we have 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)** - picocuries per liter is a measure of the radioactivity in water.

**Action Level** - 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 MCLGs 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. MCLGs allow for a margin of safety.

**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. RUL's are recommendations, not mandates.

**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

**We at the Barnegat Township Water & Sewer Utility 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. Please call our office if you have questions.**

The Barnegat Township Water & Sewer Utility Department participated in monitoring for unregulated contaminants under the Unregulated Contaminant Monitoring Rule (UCMR). Unregulated contaminants are those for which the EPA has not established drinking water standards. The purpose of unregulated contaminant monitoring is to assist the EPA in determining the occurrence of unregulated contaminants in drinking water and whether regulation is warranted. Our results are available upon request. We found the substances listed below.

Contaminant	Level Detected	Units of Measurement	Likely source
1,4-Dioxane	Range = ND – 0.11	ppb	Cyclic aliphatic ether; used as a solvent or solvent stabilizer in manufacturing and processing of paper, cotton, textile products, automotive coolant, cosmetics and shampoos
Chlorate	Range = ND – 370	ppb	Agricultural defoliant or desiccant; disinfection byproduct; used in the production of chloride dioxide
Chromium	Range = ND – 0.8	ppb	Naturally-occurring element; used in the making of steel and other alloys; chromium -3 or -6 are used for chrome plating, dyes and pigments, leather tanning, and other wood preservation
Chromium (VI)	Range = ND – 0.15	ppb	Naturally-occurring element; used in the making of steel and other alloys; chromium -3 or -6 are used for chrome plating, dyes and pigments, leather tanning, and other wood preservation
Cobalt	Range = ND – 2.4	ppb	Naturally-occurring element found in the earth's crust and at low concentrations in seawater, and in some surface and ground water; cobaltous chloride was formally used in medicine as a germicide
Strontium	Range = ND - 30	ppb	Naturally-occurring element; historically commercial use of strontium has been in the faceplate glass of cathode-ray tube televisions to block x-ray emissions
Vanadium	Range = ND – 0.3	ppb	Naturally-occurring element metal; used as vanadium pentoxide which is a chemical intermediate and a catalyst

**Barnegat Township Water & Sewer Utility Department - PWSID # NJ1533001**

Barnegat Township Utilities is a public community water system consisting of 6 wells.

This system's source water comes from the following aquifers: Kirkwood-Cohansey Watertable Aquifer System, Rio Grande Water-Bearing Zone

**Susceptibility Ratings for Barnegat Township Utilities 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. For susceptibility ratings of purchased water, refer to the specific water system's source water assessment report.

The seven contaminant categories are defined at the bottom of this page. DEP considered all surface water highly susceptible to pathogens, therefore all intakes received a high 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.

Sources	Pathogens			Nutrients			Pesticides			Volatile Organic Compounds			Inorganics			Radionuclides			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 - 6			6		3	3			6			6	3	3		4	2			2	4			6

**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, 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 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 with dissolved organic material (for example leaves) present in surface water.