

# **DORCHESTER COUNTY SANITARY DISTRICT BONNIE BROOK – PWSID MD0090001 TP01 2016 ANNUAL DRINKING WATER QUALITY REPORT**

The Dorchester County Sanitary District is pleased to present to you our annual water quality report for the period of January through December 2016. The report is designed to inform you about the quality of water provided to you every day. Please contact the Dorchester County Sanitary District at 410-228-6222 if you have any questions about this report, your water supply, or the times, dates and locations of public meetings.

The source of our drinking water is from two wells in deep confined aquifers. A confined aquifer is a sort of underground reservoir of water, which is bounded above and below by other layers of earth that water will not pass through. These layers create a barrier, which prevents contamination from all forms of human induced pollution. The aquifer is tapped by drilling a well and pumping the water to the surface for distribution. The two wells are located on Mallard Lane in Bonnie Brook.

## **Sources of 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. In order to ensure that tap water is safe to drink, EPA prescribes regulations which limit the amount of certain compounds in water provided by public water systems. We treat our water according to EPA's regulations. 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 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 800-426-4791.

## **Contaminants That May Be Present in Source Water**

φ **Microbial Contaminants**, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.

φ **Pesticides and Herbicides**, which may come from a variety of sources such as agriculture, urban stormwater runoff, and residential uses.

φ **Inorganic Contaminants**, such as salts and metals, which can be naturally-occurring or result from urban stormwater runoff, industrial, or domestic wastewater discharges, oil and gas production, mining, or farming.

φ **Organic Chemical Contaminants**, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff, and septic systems.

φ **Radioactive Contaminants**, which can be naturally-occurring or be the result of oil and gas production and mining activities.

## **Lead**

We are pleased to report that our drinking water is safe and meets state and federal requirements without the need for any type of treatment. Although our water supply requires no treatment, we chlorinate our wells to insure disinfecting. Maryland Department of the Environment requires us to routinely monitor for certain contaminants. The treatment plant is inspected daily, Monday through Friday, and tested for chlorine residuals. Approximately 300 people are served through approximately 110 connections.

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)***

# Bonnie Brook Treated Water Quality Report 2016

## Lead Prevention

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 Bonnie Brook 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 drinking 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 EPA Safe Drinking Water Hotline at 1-800-426-4791 or at <http://www.epa.gov/safewater/lead>*.

## Radon

Radon is a radioactive gas that occurs naturally in some groundwater. It may pose a health risk when the gas is released from water into air, as occurs during showering, bathing, or washing dishes and clothes. Radon gas released from drinking water is a relatively small part of the total radon in air. During 2000, the level detected in our water supply was 280 pCi/L. EPA is proposing to regulate this substance in the range of 300 pCi/L to 1,500 pCi/L. Radon is released into homes and groundwater from soil. Inhalation of radon gas has been linked to lung cancer; however, the effects of radon ingested in drinking water are not yet clear. If you are concerned about radon in your home, tests are available to determine the total exposure level. For additional information call the EPA radon hotline at 1-800-SOS-RADON.

## Definitions:

φ **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.

φ **Maximum Contaminant Level (MCL)** - 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.

φ **Action Level (AL)**-

The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow

φ **Maximum residual disinfectant level goal (MRDLG)** - The level of 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.

φ **Maximum residual disinfectant (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.

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

φ **Turbidity** - Relates to a condition where suspended particles are present in the water. Turbidity measurements are a way to describe the level of "cloudiness" of the water.

φ **pCi/l** - Picocuries per liter. A measure of radiation.

φ **ppb** - parts per billion or micrograms per liter

φ **ppm** - parts per million or milligrams per liter

# Bonnie Brook Treated Water Quality Report 2016

Regulated at the Treatment Plant					
Contaminant	Typical Source of Contamination	Highest Level Allowed (EPA's MCL)	Highest Level Detected	Ideal Goal (EPA's MCLG)	Violation Yes / No
Arsenic	Erosion of Natural Deposits; runoff from orchards; runoff from glass and electronics productions wastes	10 ppb	<5 ppb	10 ppb	No
Fluoride	Erosion of Natural Deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories	4000 ppb	1190 ppb	4000 ppb	No
Chlorine	Water additive used to control microbes	MRDLG = 4 ppm	1 ppm	MRDL = 4 ppm	No
Beta/Photon Emitters (2015 Testing)	Decay of natural and man-made deposits	50 pCi/l	5.5 pCi/l**	15 pCi/l	No
Gross Alpha (2009 Testing)	Erosion of Natural Deposits	15 pCi/l*	1.2 pCi/l**	15 pCi/l	No
Combine Radium (226 & 228) (2009 Testing)	Erosion of Natural Deposits	5 pCi/l	1.1 pCi/l	0 pCi/l	No

Notations: \*EPA considers 50 pCi/L to be the level of concern for beta particles

\*\* Because the beta particles results were below 50 pCi/L, no testing for individual beta particle constituents was required

Regulated in the Distribution System					
Contaminant	Typical Source of Contamination	Action Level	90th percentile Bonnie Brook Water	Ideal Goal	Violation Yes / No
Copper	Corrosion of household plumbing fixtures and systems	1300 ppb	165 ppb	1300 ppb	No
Lead	Corrosion of household plumbing fixtures and systems	15 ppb	<5 ppb	0 ppb	No
			<b>Bonnie Brook Water</b>		
Total Trihalomethanes (TTHM) (2015)	By-product of drinking water disinfection	80 ppb	16.93 ppb	n/a	No
Haloacetic Acids (HAA5's) (2015)	By-product of drinking water disinfection	60 ppb	7.02 ppb	n/a	No

Unregulated Contaminants		
Contaminant	Typical Source of Contamination	Amount Detected
Sodium (2016 Testing)	Naturally Occurring	157 ppm
Sulfate (2010 Testing)	Naturally Occurring	19 ppm

The table above lists all the drinking water contaminants that were detected during the 2016 calendar year. The presence of these compounds in the water does not necessarily indicate that the water poses a health risk. Unless otherwise noted, the data presented in the table is from testing done January 1 – December 31, 2016. The State requires us to monitor for certain contaminants less than once per year because the concentrations of these contaminants are not expected to vary significantly from year to year.

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 at 800-426-4791.