Queen Anne's County

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June 2016

2016 Annual Drinking Water Quality Report

Prospect Bay Water Treatment Facility
MDE Public Water System ID No. 170009

This report is required by the federal Safe Water Drinking Act Amendment of 1996 and is designed to educate our customers about the quality of the water we deliver to you every day. We are pleased to inform you that your drinking water is safe and meets all federal and state requirements. Our constant goal is to provide you with a safe and dependable supply of drinking water. We want you to understand the efforts we make to continually improve the water treatment process and protect our water resources. We are committed to ensuring the quality of your water. We do periodically have iron issues (brown water) which can be an inconvenience, but this situation does not represent any health or safety concerns.

Your water is supplied by the Prospect Bay water treatment facility that utilizes groundwater from two 10-inch wells 360 feet deep into the Aquia Greensand aquifer.

The Sanitary District routinely monitors for constituents in your drinking water according to Federal and State laws. The enclosed table indicates the results of our monitoring for the period of January 1 to December 31, 2015. All drinking water, including bottled drinking water, may be reasonably expected to contain at least a small amount of some constituents. It's important to remember that the presence of these constituents does not necessarily pose 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 Environmental Protection Agency (EPA) requires that all public water utilities publish the following two paragraphs:

> 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 (1-800-426-4791). *Note: Cryptosporidium is a microbe found in some surface water supplies such as rivers or reservoirs. It is not typically found in groundwater, which is where all of our water supplies originate.*
>
> 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

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home plumbing. The Sanitary District 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 and 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 Hotlines at 1-800-426-4791 or at http://www.epa.gov/safewater/lead. *Note: None of our County water systems have ever had lead issues.*

In the following table, you will find many terms and abbreviations you might not be familiar with. To help you better understand these terms we have provided the following definitions:

Non-Detect - laboratory analysis indicates that the constituent is not present.

Parts per million **(ppm)** - one part per million corresponds to one minute in two years or a single penny in $10,000. Also equivalent to milligrams per liter (mg/l).

Parts per billion **(ppb)** - one part per billion corresponds to one minute in 2,000 years, or a single penny in $10,000,000. Also equivalent to micrograms per liter (µg/l).

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

Maximum Contaminant Level Goal **(MCLG)** - The 'Goal' 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.

Maximum Contaminant Level **(MCL)** - The 'Maximum Allowed' 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.

The Sanitary District's water staff consists of nine personnel with a combined experience of 87 years. Each operator is required to obtain 30-hours of formal training every three years in water treatment and water distribution operations.

Major decisions affecting the water utility are made by the County Commissioners, sitting as the Sanitary Commission. Should you wish to attend, the Sanitary Commission meets the second Tuesday of the month at 9:00 a.m. in their meeting room located at 107 North Liberty Street, Centreville, Maryland. Sanitary Commission meeting minutes are published and posted on the County's webpage which can be reviewed at www.qac.org.

In our continuing effort to maintain a safe and dependable water supply it is often necessary to make improvements in your water system. The costs of these improvements, as well as the cost to retain experienced staff, are reflected in the small annual rate increases you may experience every July.

We want our customers to be informed about their water utility. If you have any questions about this report or concerning your water utility, feel free to contact me via email at aquimby@qac.org or by calling 410-643-3535.

Very truly yours,

Alan L. Quimby, P.E.
Chief Sanitary Engineer

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TEST RESULTS

2015 Prospect Bay Water Treatment Plant

REGULATED CONTAMINENTS

Contaminant	Units	Level Detected	MCL	MCLG	Likely Sources
Gross Beta[1]	µrem/y	880	4000	0	Natural Deposits
Arsenic	ppb	**Non Detect**	10	0	Natural Deposits
Copper	ppb	**229**	AL=1300	1300	Plumbing Corrosion
Lead	ppb	**Non Detect**	AL=15	0	Plumbing Corrosion
Fluoride	ppb	907	4000	4000	Natural Deposits
Nitrate	ppb	**Non Detect**	10,000	10,000	Fertilizer Runoff
Haloacetic Acids[3]	ppb	3	60	none	Disinfection Byproducts
Trihalomethanes[3]	ppb	7	80	none	Disinfection Byproducts

UNREGULATED (but detected) CONTAMINENTS

Contaminant	Units	Level Detected
Iron	ppb	130
Chloride	ppm	1.8
Sodium	ppm	27
Sulfate	ppm	3

Footnotes:

1. Gross Beta, and Radon are a measure of naturally occurring radioactive contaminants.
2. The Maryland Department of the Environment (MDE) tests for Volatile Organic Compounds (VOC) and Synthetic Organic Compounds (SOC).
3. The Sanitary District failed to take the required test last year for this contaminant.

Test Sample Dates: (full test results available upon request)

Arsenic – May 18 and July 9, 2015
Inorganics – June 25, 2014
Lead & Copper – July 24, 2015
Nitrate & Nitrite – June 2, 2015
Radioactives – April 1, 2008
VOC/SOC – January 15, 2003, April 18, 2005

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Bold indicates new results for this year's report; most contaminants are not required to be tested annually.

WATER CONSERVATION TIP$

1. Introduction

According to the American Water Works Association, the average per person indoor water use in the United States is 69.3 gallons per day. The breakdown of this use is shown below.
As you will note, leaks are responsible for 13.7%, or 9.5 gallons per day (gpd).

Toilets	26.7%	(18.5 gpd)	Leaks	13.7%	(9.5 gpd)
Clothes Washing	21.7%	(15.0 gpd)	Dishwasher	1.4%	(1.0 gpd)
Showers & Baths	18.5%	(12.8 gpd)	Other	2.2%	(1.6 gpd)
Faucets	15.7%	(10.9 gpd)			

2. Toilets – Toilets use the majority of water in your home, even when they don't leak.

- Older toilets (installed prior to 1994) use 3.5 to 7 gallons per flush. Replacing an older toilet can save the typical household 7,900 to 21,700 gallons per year.
- You can also fill one-half gallon milk bottles with water and place in the tank. Doing so will then save one-half gallon per flush and will not affect performance.
- Check toilets periodically for leaks. This can be done by putting food coloring in the tank (not the bowl) and waiting an hour. If the color is in the bowl after an hour, the toilet is leaking. You may need to clean or replace the flapper. **This is the number one cause of high-usage complaints – typically a bathroom in a spare bedroom no one uses. A toilet leak can increase your bill by 10 times if allowed to leak for a full quarter!**
- Don't use toilets as a trashcan. Flush only when necessary.
- **Do not flush unused medicines down the toilet; damage to the environment may result.**

3. Bathing – The third highest water use (and the second highest energy use) is bathing.

- If your showerhead can fill a one-gallon bucket in less than 20 seconds, replace it with a water efficient showerhead.
- A short shower instead of a bath will save 20 gallons of water.
- When taking a bath, don't let the cold water escape when you first turn on the hot water, the hot water which follows will warm the initial burst of cold water.

4. Appliances

- Clothes washers are the second biggest water user which uses 30-35 gallons per load. A high efficiency model will use 30% less water and 40-50% less energy.
- A full dishwasher uses as much as 25 gallons per load, but a full dishwasher uses less water than washing the same load by hand. Newer dishwashers should not require pre-rising of the dirty dishes in the sink.

5. Other

- Install aerators on all faucets.
- Turn off water when brushing teeth.
- Keep water in the refrigerator to drink, rather than letting water run into the sink while waiting for the water to get cool.
- Keep garbage disposal use to a minimum.

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6. Irrigation

- A single yard sprinkler uses as much water in one hour as a typical home uses in 24 hours. If you water one hour a day for a week, you have doubled your water use for that week.
- Unless you have a 'yard meter' used strictly for irrigation, you will also be paying a sewer fee for the irrigation water.
- Irrigate sparingly, or use alternative means such as rain barrels.