



*Queen
Anne's
County*

County Commissioners:

James J. Moran, At Large
David L. Dunmyer, District 1
Bob Simmons, District 2
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**DEPARTMENT OF PUBLIC WORKS
SANITARY DISTRICT**

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June 1, 2014

2014 Annual Drinking Water Quality Report

Stevensville Water System

Stevensville Treatment Facility - 208 Church Street
Business Park Facility - 230 Bateau Drive
Thompson Creek Facility - 610 Marion Quimby Drive
Bayside Marina Facility – 103 Tackle Circle
Queens Landing Facility – 131 Queens Landing Drive
Bridgepointe Facility – 9025 Bridgepointe Drive
Kent Island Village Facility – 1839 Anchorage Drive
MDE Public Water System ID No. 170019

This report is required by the federal Safe Water Drinking Act Amendment of 1996 and is designed to educate you 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. **However we are aware that we still have iron issues (brown water) occasionally that can be a significant inconvenience, but is not a health issue.** 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.

The Sanitary District routinely monitors for constituents in your drinking water according to Federal and State laws. With the interconnection of the Stevensville and Chester water distribution systems, your water can now be supplied by seven water treatment facilities. The Stevensville water treatment facility is the primary producer and utilizes groundwater from a 20-inch well 1590 feet deep into the Lower Patapsco aquifer. The second treatment plant is the Business Park water treatment facility which utilizes groundwater from a new single 12 inch well 1494 feet deep into the Lower Patapsco aquifer. The third treatment plant is the Thompson Creek water treatment facility which was utilizing groundwater from a single 6-inch well 240 feet deep into the Aquia, however this facility is currently off-line due to withdrawal limits placed by the State's permit. The fourth plant is the Bayside facility which utilizes two 10-inch wells 670 feet into the Magothy aquifer. The fifth plant is the Queen's Landing water treatment facility, which utilizes two 10 inch wells 280 feet deep into the Aquia. The sixth plant is the Bridgepointe water facility, which utilizes groundwater from two 6-inch wells 710 feet deep into the Magothy aquifer. The final being the Kent Island Village water treatment facility, which utilizes a single 6 inch well 290 feet deep into the Aquia.



The enclosed table indicates the results of our monitoring for the period of January 1 to December 31, 2013. 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.

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).

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 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>.

(Please note EPA mandates the previous two paragraphs. 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. In regards to lead, none of our 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 to better understand these terms we've 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 ($\mu\text{g/l}$).

Action Level (AL) - the concentration of a contaminant, which, if exceeded, triggers treatment or other requirements that 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.

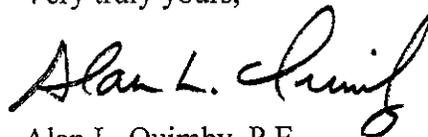
The Sanitary District's water staff consists of nine personnel with a combined experience of 53 years. Each operator is required to obtain 30 hours of formal training every 3 years in water treatment and water distribution operations.

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 at 9:00 a.m. in their meeting room located at 107 North Liberty Street, Centreville, Maryland.

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, please contact me at the above number.

Very truly yours,

A handwritten signature in black ink that reads "Alan L. Quimby". The signature is written in a cursive, flowing style.

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

WATER CONSERVATION TIPS

I. 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)		

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

- a. 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.
- b. 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.
- c. 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 quarter!**
- d. Don't use toilets as a trashcan. Flush only when necessary.
- e. **Do not flush unused medicines down the toilet; damage to the environment may result.**

III. Bathing - The third highest water use (and the second highest energy use) is bathing.

- a. If your showerhead can fill a one-gallon bucket in less than 20 seconds, replace it with a water efficient showerhead.
- b. A short shower instead of a bath will save 20 gallons of water.
- c. 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.

IV. Appliances

- a. 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.
- b. 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.

V. Other

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

VI. Irrigation

- a. 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.**
- b. **Unless you have a 'yard meter' used strictly for irrigation, you will also be paying a sewer fee for the irrigation water.**
- c. **Irrigate sparingly, or use alternative means such as rain barrels.**

TEST RESULTS
2013 Stevensville Water System – Chester Area Facilities
REGULATED CONTAMINANTS

Contaminant	Units	Level Detected Bridgepointe	Level Detected Kent Island Village	Level Detected Bayside	Level Detected Queen's Landing	MCL	MCLG	Likely Sources
Gross Alpha ¹	µrem/yr	160	Non-Detect	224	Non-Detect	15,000	0	Natural Deposits
Gross Beta ¹	µrem/yr	na	504	568	440	4000	0	Natural Deposits
Barium	ppb	Non-Detect	Non-Detect	Non Detect	160	2000	2000	Natural Deposits
Copper	ppb	582	582	582	582	AL=1300	1300	Plumbing Corrosion
Di(2-ethylhexyl) phthalate ²	ppb	0.7	Non-Detect	0.5	2.6	6	0	Discharge from rubber or chemical factories
Fluoride	ppb	Non Detect	Non-Detect	240	Non Detect	4000	4000	Natural Deposits
Nitrate	ppb	Non Detect	Non-Detect	Non Detect	Non Detect	10,000	10,000	Fertilizer Runoff
Haloacetic Acids ³	ppb	3	3	3	3	60	0	Disinfection Byproducts
Trihalomethanes ³	ppb	1	1	1	1	100	0	Disinfection Byproducts

UNREGULATED (but detected) CONTAMINANTS

Contaminant	Units	Level Detected Bridgepointe	Level Detected Kent Island Village	Level Detected Bayside	Level Detected Queens Landing
Bromodichloromethane ²	ppb	0.9	Non-Detect	6.5	1.1
Chloroform ²	ppb	3.2	Non-Detect	1.5	6.4
Chloride	ppm	Non-Detect	Non-Detect	Non-Detect	1.5
Dibromodichloromethane ²	ppb	Non-Detect	Non-Detect	Non-Detect	1.5
Iron	ppb	390	Non-Detect	240	167
Sodium	ppm	59	120	59	8.6
Sulfate	ppm	44	56	49	47

- Gross Alpha and Gross Beta are a measure of naturally occurring radioactive contaminants.
- The Maryland Department of the Environment (MDE) tests for Volatile Organic Compounds (VOC) and Synthetic Organic Compounds (SOC).
 Test Sample Dates: (full test results available upon request)
¹Disinfection Byproducts – August 28, 2013
 Lead & Copper – December 31, 2012
 Nitrate & Nitrite – August 21, 2013 (BP), July 18, 2013 (QL & KIV & BS)
 Inorganics – May 11, 2012 (BP), May 17, 2012 (KIV), May 11, 2012 (BS & QL)
 VOC/SOC – April 1, 2008 (BP), 2-15-06 (QL), April-28-09 (KIV & BS)
 Radioactives – 01-22-13 (KIV), May 15, 2007 (BP), 01-22-13 (QL), 01-22-13 (BS)
 All Others – April 6, 2006
- 3. Bold** indicates new results for this year's report; most contaminants are not required to be tested annually

2013 Stevensville Water System – Stevensville Area Facilities

REGULATED CONTAMINANTS

Contaminant	Units	Level Detected Stevensville	Level Detected Business Park	Level Detected Thompson Creek	MCL	MCLG	Likely Sources
Gross Alpha ¹	µrem/y	328	Non-Detect	Out of Service	15000	0	Natural Deposits
Gross Beta ¹	µrem/y	576	392		4000	0	Natural Deposits
Barium	ppb	160	140		2000	2000	Natural Deposits
Copper	ppb	582	582		AL=1300	1300	Plumbing Corrosion
Dalapon	ppb	Non-Detect	Non-Detect		200	200	Herbicide Runoff
Dinoseb	ppb	Non-Detect	Non-Detect		7	7	Herbicide Runoff
Di(2-ethylhexyl) phthalate	ppb	1	Non-Detect		6	0	Chemical Factories
Nitrate	ppb	Non-Detect	Non-Detect		10,000	10,000	Fertilizer Runoff
Haloacetic Acids ³	ppb	0	0		60	none	Disinfection Byproducts
Trihalomethanes ³	ppb	1	1		100	none	Disinfection Byproducts

UNREGULATED (but detected) CONTAMINANTS

Contaminant	Units	Level Detected Stevensville	Level Detected Business Park	Level Detected Thompson Creek
Bromodichloromethane ²	ppb	0.1	1.5	Out of Service
Chloroform ²	ppb	0.3	9.1	
Sodium	ppm	19	15	
Sulfate	ppm	12	14	
Radium Combined ¹	µrem/y	136	72	

1. Gross Alpha, Gross Beta, and Radium Combined are a measure of naturally occurring radioactive contaminants.
2. The Md Department of the Environment (MDE) tests for Volatile Organic Compounds (VOC) and Synthetic Organic Compounds (SOC).
3. Test Sample Dates: Lead&Copper 12-31-12, Nitrate & Nitrite 5-11-12, Inorganics 5/11/12 (Stv & TC) 7-18-13 (BP), VOC/SOC 7-23-13 (Stv) 5-12-09/6-7-10 (BP) & 3-15-10/1-26-10 (TC), ³Disinfection Byproducts 8-28-13, Radioactives 4-3-12.
4. **Bold** indicates new results for this year's report; most contaminants are not required to be tested annually.