

# ***Annual Drinking Water Quality Report***

## **Somerset County Sanitary District, Inc.**

### **Princess Anne Subdistrict**

#### **PWSID 0190002**

We are pleased to present to you this year's Annual Quality Water Report. This report is designed to inform you about the quality water and services we deliver to you every day. 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. Our water sources are: Well # 3 (Rest Stop) at a depth of 240 feet, Well # 4 (Irving Avenue) at a depth of 210 feet, Well # 5 (Crisfield Lane) at a depth of 210 feet, Well # 6 (Abbey Lane) at a depth of 191 feet, Well # 7 (Industrial Park) at a depth of 240 feet Well # 10 (Hawk Lane) at a depth of 194 feet, Well # 8 (Ridge Road) at a depth of 191 feet, 6 inches and Well #11 (Loretto Road) at a depth of 240 feet. These wells draw from the Manokin Aquifer, which is treated and pumped into our water distribution system. Well # 9 (Washington High) is 1,470 feet deep and draws from the Patapsco Aquifer.

We are pleased to report that our drinking water is safe and meets federal and state requirements. The following report is provided in compliance with federal regulations and will be provided annually. This report outlines the quality of our drinking water and what that quality means.

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).

If you have any questions about this report, please contact Sanitary District at 410-651-3831. We want our valued customers to be informed about their water utility. If you want to learn more, please attend any regularly scheduled meeting held on the second Thursday of each month at 1 p.m. in the Somerset County Office Complex, Princess Anne, Maryland. Please go to our website to confirm dates and times of meetings at [www.somersetmd.us](http://www.somersetmd.us) then select *Agencies* and then select *Sanitary District*.

The Somerset County Sanitary District, Inc. routinely monitors for constituents in your drinking water according to Federal and State laws. This table shows the results of our monitoring for the period of January 1<sup>st</sup> to December 31<sup>st</sup>, 2017. As water travels over the land or underground, it can pick up substances or contaminants such as microbes, inorganic and organic chemicals, and radioactive substances. All drinking water, including bottled drinking water, may be reasonably expected to contain at least small amounts of some constituents. It's important to remember that the presence of these constituents does not necessarily pose a health risk.

#### **Definitions**

In this table you will find many terms and abbreviations you might not be familiar with. To help you better understand these terms we've 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.

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

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

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

***Millirems per year (mrem/yr)*** - measure of radiation absorbed by the body.

***Million Fibers per Liter (MFL)*** - million fibers per liter is a measure of the presence of asbestos fibers that are longer than 10 micrometers.

***Nephelometric Turbidity Unit (NTU)*** - nephelometric turbidity unit is a measure of the clarity of water. Turbidity in excess of 5 NTU is just noticeable to the average person.

**mrem** – millirems per year (a measure of radiation absorbed by the body)

**n/a** – not applicable

**Definitions (continued)**

**Average – (Avg.)** – Regulatory compliance with some MCL’s are based on running annual average of monthly samples.

**Level 1 Assessment** – A Level 1 assessment is a study of the water system to identify potential problems and determine (if possible) why coliform bacteria have been found in a water system.

**Level 2 Assessment** - A Level 1 assessment is a very detailed study of the water system to identify potential problems and determine (if possible) why an E. coli MCL violation has occurred and/or why total coliform bacteria have been found in a water system on multiple occasions.

**LRAA – Locational Running Annual Average** – Regulatory compliance calculated for TTHMs and HAA5s based on running annual average samples taken at a specific site for TTHMs and HAA5s

**Non-Detected Contaminants:** Following is a list of potential drinking water substances that the Sanitary District is required to test for, but which have not been detected in the water supply in the past year. .

Monitored but not found at the Point of Entry for the following Princess Anne Wells: Irving Ave., Industrial Park, Rest Stop, Ridge Road, Loretto Road, Crisfield Lane, Washington High and UMES Hawk Lane

1041	Nitrate	1005	Arsenic	Iron			
<u>Monitored but not found at the Point of Entry for the following Wells: Irving Ave., Industrial Park, Ridge Road &amp; Loretto Road</u>							
2418	1,2,4-Trimethylbenzene	2986	1,1,1,2-Tetrachloroethane	2955	Xylenes, Total	2030	P-Isopropyltoluene
2962	p-Xylene	2212	Dichlorodifluoromethane	2965	o-Chlorotoluene	2214	Bromomethane
2966	p-Chlorotoluene	2216	Chloroethane	2976	Vinyl Chloride	2218	Trichlorofluoromethane
2967	m-Dichlorobenzene	2246	Hexachlorobutadiene	2968	o-Dichlorobenzene	2248	Naphthalene
2969	p-Dichlorobenzene	2251	Methyl-Tert-Butyl-Ether (MTBE)			2977	1,1-Dichloroethylene
2378	1,2,4-Trichlorobenzene	2978	1,1-Dichloroethane	2380	cis-1,2-Dichloroethylene		
2979	trans-1,2-Dichloroethylene	2980	1,2-Dichloroethane	2410	1,1-Dichloropropene	2981	1,1,1-Trichloroethane
2412	1,3-Dichloropropane	2982	Carbon Tetrachloride	2413	1,3-Dichloropropene	2983	1,2 – Dichloropropane
2414	1,2,3-Trichloropropane	2984	Trichloroethylene (TCE)	2416	2,2-Dichloropropane	2985	1,1,2-Trichloroethane
2420	1,2,3-Trichlorobenzene	2987	Tetrachloroethene (PCE)	2422	N-Butylbenzene	2408	Dibmethane
2964	Dichloromethane (Methylene Chloride)	2989	Monochlorobenzene	2424		2424	1,3,5-Trimethylbenzene
2990	Benzene	2426	Tert-Butylbenzene	2991	Toluene	2428	Sec-Butylbenzene
2988	1,1,2,2-Tetrachloroethane	2993	Bromobenzene	2430	Bromochloromethane	2992	Ethylbenzene
2994	Isopropylbenzene	2995	m-Xylene	2997	o-Xylene	2996	Styrene
2998	n-Propylbenzene	2944	Dibromochloromethane	2962	p-Xylene	2941	Chloroform
2943	Bromodichloromethane	2210	Chloromethane	2942	Bromoform		

Monitored but not found at the Point of Entry for the following Wells: Crisfield Lane, UMES Hawk Lane and Rest Stop

2418	1,2,4-Trimethylbenzene	2986	1,1,1,2-Tetrachloroethane	2955	Xylenes, Total	2030	P-Isopropyltoluene
2962	p-Xylene	2212	Dichlorodifluoromethane	2965	o-Chlorotoluene	2214	Bromomethane
2966	p-Chlorotoluene	2216	Chloroethane	2976	Vinyl Chloride	2218	Trichlorofluoromethane
2967	m-Dichlorobenzene	2246	Hexachlorobutadiene	2968	o-Dichlorobenzene	2248	Naphthalene
2969	p-Dichlorobenzene	2251	Methyl-Tert-Butyl-Ether (MTBE)			2977	1,1-Dichloroethylene
2378	1,2,4-Trichlorobenzene	2978	1,1-Dichloroethane	2380	cis-1,2-Dichloroethylene		
2979	trans-1,2-Dichloroethylene	2980	1,2-Dichloroethane	2410	1,1-Dichloropropene	2981	1,1,1-Trichloroethane
2412	1,3-Dichloropropane	2982	Carbon Tetrachloride	2413	1,3-Dichloropropene	2983	1,2 – Dichloropropane
2414	1,2,3-Trichloropropane	2984	Trichloroethylene (TCE)	2416	2,2-Dichloropropane	2985	1,1,2-Trichloroethane
2420	1,2,3-Trichlorobenzene	2987	Tetrachloroethene (PCE)	2422	N-Butylbenzene	2408	Dibmethane
2964	Dichloromethane (Methylene Chloride)	2989	Monochlorobenzene	2424		2424	1,3,5-Trimethylbenzene
2990	Benzene	2426	Tert-Butylbenzene	2991	Toluene	2428	Sec-Butylbenzene
2988	1,1,2,2-Tetrachloroethane	2993	Bromobenzene	2992	Ethylbenzene		
2994	Isopropylbenzene	2995	m-Xylene	2997	o-Xylene	2996	Styrene
2998	n-Propylbenzene	2944	Dibromochloromethane	2962	p-Xylene		
2943	Bromodichloromethane	2210	Chloromethane	2942	Bromoform		

The Somerset County Sanitary District sampled the Drinking Water at the Wellhead prior to treatment for the purpose of measuring specific nonregulated contaminants in an effort to better define treatment efforts to improve water quality. The results of these samples are included in this Consumer Confidence Report for your information. The contaminants sampled were: Tannin & Lignin, Total Organic Carbon, Total Dissolved Solids, Alkalinity, Calcium, Manganese, Magnesium, Iron, Sodium and Hardness as Calcium Carbonate (CaCO3). None of the contaminants tested for were at levels to be a health concern.

**Detected Contaminants:** In addition to these undetected substances, the Sanitary District did find some regulated substances present in the water system. These substances are shown below, along with MCL and MCLG for each one detected.

**Princess Anne Water System**

Contaminant	Level Detected	Unit of Measure	MCL	MCLG	Likely Source of Contamination
1. Total Trihalomethanes	16.3 – 69.2	ppb	80	N/A	By-product of disinfection using chlorine when natural and/or manmade organic compounds are present in drinking water. Concentration can be dependent on ambient temperature.

Highest LRAA – 84 ppb – see Public Notice reference of the MCL Exceedance found on the final page of this document

Bromodichloroethane 2943	4.4 – 22.0	ppb			
Bromoform 2942	<0.5 – 1.3	ppb			
Chloroform 2941	10.0 – 43.0	ppb			
Dibromochloromethane 2944	4.2 – 11.0	ppb			
2. Total Haloacetic Acids	< 2.0 -19.4	ppb	60	N/A	By-product of disinfection using chlorine when natural and/or manmade organic compounds are present in drinking water. Concentration can be dependent on ambient temperature.

Highest LRAA – 28 ppb

Monochloroacetic Acid MCAA	<2.0	ppb			
Monobromoacetic Acid MBAA	<1.0	ppb			
Dichloroacetic Acid DCAA	<1.0 – 9.0	ppb			
Dibromoacetic Acid DBAA	<1.0 – 4.0	ppb			
Trichloroacetic Acid TCAA	1.2 – 9.7	ppb			
3. Radioactive Contaminants					
Beta/Photon Emitters (Gross Beta)	0.0 – 7.4	pCi/L	50	0	Decay of natural and man-made deposits.
Sampled 10/19/2015					
Combined Radium 226/228	0.9	pCi/L	5	0	Erosion of Natural Deposits
Sampled 10/19/2016					
4. Selenium 1045	2.1 – 3.0	ppb	50	50	Erosion of geological and natural deposits. Discharge from petroleum and metals refineries
Sampled 12/27/2016					
5. Barium 1010	0.005 - 0.011	mg/l	2	2	Discharge from drilling waste Discharge from metal finishing and processing
Sampled 12/27/2016					
6. Arsenic 1005	<0.0 - 0.544	mg/l	10	n/a	Erosion of natural deposits; Runoff from orchards; runoff from glass and electronics production wastes.

Contaminant	Level Detected	Unit of Measurement	Action Level (AL)	MCLG	Likely Source of Contamination
7. Lead PB 90	1.70	ppb	15	0.0	Corrosion of household plumbing systems and/or erosion of natural deposits.
	Level detected = 90th percentile				
No sites over Action Level which, if exceeded, triggers treatment or other requirements which a water system must follow.					
8. Copper CU 90	0.163	mg/l	1.3	1.3	Corrosion of household plumbing systems and/or erosion of natural deposits, Leaching from wood preservatives.
	Level detected = 90th percentile				
No sites over Action Level which, if exceeded, triggers treatment or other requirements which a water system must follow.					

Contaminant	Level Detected	Unit of Measurement	MRDLG	MRDL	Likely Source of Contamination
9. Chlorine	0.9 – 1.2	mg/l	4	4	Water additive to control microbes

**Plant ID: Rest Stop #3**

Contaminant	Level Detected	Unit of Measure	MCL	MCLG	Likely Source of Contamination
<b>Sampled at the Point of Entry to the Water System</b>					
1. Fluoride 1025	0.31	mg/l	4	4	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
2. Chloroform 2941	<0.50	ppb	n/a	n/a	By-product of disinfection using chlorine when natural and/or manmade organic compounds are present in drinking water. Concentration can be dependent on ambient temperature.
3. Bromodichloromethane 2943	2.5	ppb	n/a	n/a	By-product of disinfection using chlorine when natural and/or manmade organic compounds are present in drinking water. Concentration can be dependent on ambient temperature.

**Plant ID: Rest Stop #3**

Contaminant	Level Detected	Unit of Measure	MCL	MCLG	Likely Source of Contamination
<b>Sampled at the Wellhead before treatment</b>					
4. Sodium 1052	179	mg/l	-	-	Erosion of geological & natural salt Erosion of Natural Deposits
5. Tannin & Lignin	1.8	mg/l	-	-	Erosion of geological & natural salt Erosion of Natural Deposits
6. Total Organic Carbon	3.55	mg/l	-	-	Erosion of geological & natural salt Erosion of Natural Deposits
7. Total Dissolved Solids	319	mg/l	-	-	Erosion of geological & natural salt Erosion of Natural Deposits
8. Alkalinity	299	mg/l	-	-	Erosion of geological & natural salt Erosion of Natural Deposits
9. Calcium	8.92	mg/l	-	-	Erosion of geological & natural salt Erosion of Natural Deposits
10. Manganese	0.009	mg/l	-	-	Erosion of geological & natural salt Erosion of Natural Deposits
11. Magnesium	5.84	mg/l	-	-	Erosion of geological & natural salt Erosion of Natural Deposits
12. Hardness as CaCO3	46.3	mg/l	-	-	Erosion of geological & natural salt Erosion of Natural Deposits

**Plant ID: Irving Ave. # 4**

Contaminant	Level Detected	Unit of Measure	MCL	MCLG	Likely Source of Contamination
<b>Sampled at the Point of Entry to the Water System</b>					
1. Fluoride 1025	0.29	mg/l	4	4	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
<b>Sampled at the Wellhead before treatment</b>					
2. Sodium 1052	143	mg/l	-	-	Erosion of geological and natural salt
3. Tannin & Lignin	2.0	mg/l	-	-	Erosion of geological & natural salt Erosion of Natural Deposits
4. Total Organic Carbon	2.87	mg/l	-	-	Erosion of geological & natural salt Erosion of Natural Deposits
5. Total Dissolved Solids	383	mg/l	-	-	Erosion of geological & natural salt Erosion of Natural Deposits
6. Alkalinity	267	mg/l	-	-	Erosion of geological & natural salt Erosion of Natural Deposits
7. Calcium	7.85	mg/l	-	-	Erosion of geological & natural salt Erosion of Natural Deposits
8. Manganese	0.008	mg/l	-	-	Erosion of geological & natural salt Erosion of Natural Deposits
9. Magnesium	4.54	mg/l	-	-	Erosion of geological & natural salt Erosion of Natural Deposits
10. Hardness as CaCO3	38.3	mg/l	-	-	Erosion of geological & natural salt Erosion of Natural Deposits

**Plant ID: Crisfield Lane # 5**

Contaminant	Level Detected	Unit of Measure	MCL	MCLG	Likely Source of Contamination
<b>Sampled at the Point of Entry to the Water System</b>					
1. Fluoride 1025	0.31	mg/l	4	4	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
2. Chloroform 2941	0.5	ppb	n/a	n/a	By-product of disinfection using chlorine when natural and/or manmade organic compounds are present in drinking water. Concentration can be dependent on ambient temperature.
3. Bromodichloromethane 2943	<0.50	ppb	n/a	n/a	By-product of disinfection using chlorine when natural and/or manmade organic compounds are present in drinking water. Concentration can be dependent on ambient temperature.

**Plant ID: Crisfield Lane # 5**

Contaminant	Level Detected	Unit of Measure	MCL	MCLG	Likely Source of Contamination
<b>Sampled at the Wellhead before treatment</b>					
4. Sodium 1052	154	mg/l	-	-	Erosion of geological and natural salt
5. Tannin & Lignin	1.20	mg/l	-	-	Erosion of geological & natural salt Erosion of Natural Deposits
6. Total Organic Carbon	2.63	mg/l	-	-	Erosion of geological & natural salt Erosion of Natural Deposits
7. Total Dissolve Solids	409	mg/l	-	-	Erosion of geological & natural salt Erosion of Natural Deposits
8. Alkalinity	264	mg/l	-	-	Erosion of geological & natural salt Erosion of Natural Deposits
9. Calcium	8.81	mg/l	-	-	Erosion of geological & natural salt Erosion of Natural Deposits
10. Manganese	0.010	mg/l	-	-	Erosion of geological & natural salt Erosion of Natural Deposits
11. Magnesium	5.08	mg/l	-	-	Erosion of geological & natural salt Erosion of Natural Deposits
12. Hardness as CaCO3	42.9	mg/l	-	-	Erosion of geological & natural salt Erosion of Natural Deposits

**Plant ID: Industrial Park #7**

Contaminant	Level Detected	Unit of Measure	MCL	MCLG	Likely Source of Contamination
<b>Sampled at the Point of Entry to the Water System</b>					
1. Fluoride 1025	0.35	mg/l	4	4	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
2. Sodium 1052	184	mg/l	-	-	Erosion of geological and natural salt
3. Tannin & Lignin	1.50	mg/l	-	-	Erosion of geological & natural salt Erosion of Natural Deposits
4. Total Organic Carbon	3.93	mg/l	-	-	Erosion of geological & natural salt Erosion of Natural Deposits
5. Total Dissolved Solids	533	mg/l	-	-	Erosion of geological & natural salt Erosion of Natural Deposits
6. Alkalinity	302	mg/l	-	-	Erosion of geological & natural salt Erosion of Natural Deposits
7. Calcium	8.67	mg/l	-	-	Erosion of geological & natural salt Erosion of Natural Deposits
8. Manganese	0.011	mg/l	-	-	Erosion of geological & natural salt Erosion of Natural Deposits
9. Magnesium	6.05	mg/l	-	-	Erosion of geological & natural salt Erosion of Natural Deposits
10. Hardness as CaCO3	46.6	mg/l	-	-	Erosion of geological & natural salt Erosion of Natural Deposits
<b>Sampled at the Wellhead before treatment</b>					
11. Fluoride 1025	0.35	mg/l	4	4	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
12. Sodium 1052	185	mg/l	-	-	Erosion of geological and natural salt
13. Tannin & Lignin	1.00	mg/l	-	-	Erosion of geological & natural salt Erosion of Natural Deposits
14. Total Organic Carbon	3.82	mg/l	-	-	Erosion of geological & natural salt Erosion of Natural Deposits
15. Total Dissolved Solids	535	mg/l	-	-	Erosion of geological & natural salt Erosion of Natural Deposits
16. Alkalinity	300	mg/l	-	-	Erosion of geological & natural salt Erosion of Natural Deposits
17. Calcium	8.72	mg/l	-	-	Erosion of geological & natural salt Erosion of Natural Deposits
18. Manganese	0.011	mg/l	-	-	Erosion of geological & natural salt Erosion of Natural Deposits

**Plant ID: Industrial Park #7 (continued)**

Contaminant	Level Detected	Unit of Measure	MCL	MCLG	Likely Source of Contamination
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**Sampled at the Wellhead before treatment (continued)**

19. Magnesium	6.05	mg/l	-	-	Erosion of geological & natural salt Erosion of Natural Deposits
20. Hardness as CaCO3	46.7	mg/l	-	-	Erosion of geological & natural salt Erosion of Natural Deposits

**Plant ID: Hickory Road # 6**

Contaminant	Level Detected	Unit of Measure	MCL	MCLG	Likely Source of Contamination
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**Sampled at the Point of Entry to the Water System**

1. Fluoride 1025	0.24	mg/l	4	4	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
2. Nitrate 1040	0.671	mg/l	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage, erosion of natural deposits
3. Arsenic 1005	<0.002 -0.026	mg/l	10	n/a	Erosion of natural deposits; Runoff from orchards; runoff from glass and electronics production wastes.

**Sampled at the Wellhead before treatment**

4. Sodium 1052	106	mg/l	-	-	Erosion of geological and natural salt
5. Tannin & Lignin	1.50	mg/l	-	-	Erosion of geological & natural salt Erosion of Natural Deposits
6. Total Organic Carbon	1.94	mg/l	-	-	Erosion of geological & natural salt Erosion of Natural Deposits
7. Total Dissolved Solids	319	mg/l	-	-	Erosion of geological & natural salt Erosion of Natural Deposits
8. Alkalinity	236	mg/l	-	-	Erosion of geological & natural salt Erosion of Natural Deposits
9. Calcium	10.3	mg/l	-	-	Erosion of geological & natural salt Erosion of Natural Deposits
10. Manganese	0.017	mg/l	-	-	Erosion of geological & natural salt Erosion of Natural Deposits
11. Magnesium	5.01	mg/l	-	-	Erosion of geological & natural salt Erosion of Natural Deposits
12. Hardness as CaCO3	46.4	mg/l	-	-	Erosion of geological & natural salt Erosion of Natural Deposits

**Plant ID: Ridge Road #8**

Contaminant	Level Detected	Unit of Measure	MCL	MCLG	Likely Source of Contamination
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**Sampled at the Point of Entry to the Water System**

1. Fluoride 1025	0.24	mg/l	4	4	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
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**Sampled at the Wellhead before treatment**

2. Sodium 1052	124	mg/l	-	-	Erosion of geological and natural salt
3. Tannin & Lignin	1.20	mg/l	-	-	Erosion of geological & natural salt Erosion of Natural Deposits
4. Total Organic Carbon	2.26	mg/l	-	-	Erosion of geological & natural salt Erosion of Natural Deposits
5. Total Dissolved Solids	358	mg/l	-	-	Erosion of geological & natural salt Erosion of Natural Deposits
6. Alkalinity	258	mg/l	-	-	Erosion of geological & natural salt Erosion of Natural Deposits
7. Calcium	10.7	mg/l	-	-	Erosion of geological & natural salt Erosion of Natural Deposits
8. Manganese	0.018	mg/l	-	-	Erosion of geological & natural salt Erosion of Natural Deposits
9. Magnesium	5.60	mg/l	-	-	Erosion of geological & natural salt Erosion of Natural Deposits
10. Hardness as CaCO3	49.7	mg/l	-	-	Erosion of geological & natural salt Erosion of Natural Deposits

**Plant ID: Washington High #9**

Contaminant	Level Detected	Unit of Measure	MCL	MCLG	Likely Source of Contamination
<b>Sampled at the Wellhead before treatment</b>					
1. Fluoride 1025	3.74	mg/l	4	4	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
2. Sodium 1052	347	mg/l	-	-	Erosion of geological and natural salt
3. Tannin & Lignin	0.40	mg/l	-	-	Erosion of geological & natural salt Erosion of Natural Deposits
4. Total Organic Carbon	0.94	mg/l	-	-	Erosion of geological & natural salt Erosion of Natural Deposits
5. Total Dissolved Solids	892	mg/l	-	-	Erosion of geological & natural salt Erosion of Natural Deposits
6. Alkalinity	589	mg/l	-	-	Erosion of geological & natural salt Erosion of Natural Deposits
7. Calcium	1.30	mg/l	-	-	Erosion of geological & natural salt Erosion of Natural Deposits
8. Manganese	0.007	mg/l	-	-	Erosion of geological & natural salt Erosion of Natural Deposits
9. Magnesium	0.92	mg/l	-	-	Erosion of geological & natural salt Erosion of Natural Deposits
10. Hardness as CaCO3	7.0	mg/l	-	-	Erosion of geological & natural salt Erosion of Natural Deposits

**Plant ID: UMES Hawk Lane #10**

Contaminant	Level Detected	Unit of Measure	MCL	MCLG	Likely Source of Contamination
<b>Sampled at the Point of Entry to the Water System</b>					
1. Fluoride 1025	0.28	mg/l	4	4	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
2. Chloroform 2941	1.2	ppb	n/a	n/a	By-product of disinfection using chlorine when natural and/or manmade organic compounds are present in drinking water. Concentration can be dependent on ambient temperature.
3. Bromodichloromethane 2943	<0.50	ppb	n/a	n/a	By-product of disinfection using chlorine when natural and/or manmade organic compounds are present in drinking water. Concentration can be dependent on ambient temperature.
<b>Sampled at the Wellhead before treatment</b>					
4. Sodium 1052	117	mg/l	-	-	Erosion of geological and natural salt
5. Tannin & Lignin	1.60	mg/l	-	-	Erosion of geological & natural salt Erosion of Natural Deposits
6. Total Organic Carbon	2.26	mg/l	-	-	Erosion of geological & natural salt Erosion of Natural Deposits
7. Total Dissolved Solids	326	mg/l	-	-	Erosion of geological & natural salt Erosion of Natural Deposits
8. Alkalinity	238	mg/l	-	-	Erosion of geological & natural salt Erosion of Natural Deposits
9. Calcium	7.64	mg/l	-	-	Erosion of geological & natural salt Erosion of Natural Deposits
10. Manganese	0.009	mg/l	-	-	Erosion of geological & natural salt Erosion of Natural Deposits
11. Magnesium	3.89	mg/l	-	-	Erosion of geological & natural salt Erosion of Natural Deposits
12. Hardness as CaCO3	35.1	mg/l	-	-	Erosion of geological & natural salt Erosion of Natural Deposits

**Plant ID: Loretta Road # 11**

Contaminant	Level Detected	Unit of Measure	MCL	MCLG	Likely Source of Contamination
<b>Sampled at the Point of Entry to the Water System</b>					
1. Fluoride 1025	0.21	mg/l	4	4	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories

**Plant ID: Loretta Road # 11**

Contaminant	Level Detected	Unit of Measure	MCL	MCLG	Likely Source of Contamination
<b>Sampled at the Wellhead before treatment</b>					
2. Sodium 1052	95.7	mg/l	-	-	Erosion of geological and natural salt
3. Tannin & Lignin	0.80	mg/l	-	-	Erosion of geological & natural salt Erosion of Natural Deposits
4. Total Organic Carbon	1.84	mg/l	-	-	Erosion of geological & natural salt Erosion of Natural Deposits
5. Total Dissolved Solids	275	mg/l	-	-	Erosion of geological & natural salt Erosion of Natural Deposits
6. Alkalinity	221	mg/l	-	-	Erosion of geological & natural salt Erosion of Natural Deposits
7. Calcium	10.5	mg/l	-	-	Erosion of geological & natural salt Erosion of Natural Deposits
8. Manganese	0.014	mg/l	-	-	Erosion of geological & natural salt Erosion of Natural Deposits
9. Magnesium	4.65	mg/l	-	-	Erosion of geological & natural salt Erosion of Natural Deposits
10. Hardness as CaCO <sub>3</sub>	45.4	mg/l	-	-	Erosion of geological & natural salt Erosion of Natural Deposits

The samples monitored for **Fluoride did not exceed either the Maximum Contaminant Level (MCL)** or the Secondary Maximum Contaminant Level (SMCL) for fluoride in the Drinking Water. Samples collected in 2017 measured in a range of 0.21 mg/l to 3.74 mg/l. The Sanitary District is providing the following information regarding the potential effects of consuming water containing fluoride in excess of the standards as a customer service. The SMCL is based on aesthetics and is not a health concern.

Federal regulations require that Fluoride, which occurs naturally in your water, not exceed a concentration of 4.0 mg/l in the drinking water. This is an enforceable standard called a Maximum Contaminant Level or MCL, and it has been established to protect the public health. Exposure to drinking water levels above 4.0 mg/l for many years may result in some cases in crippling skeletal fluorosis, which is a serious bone disorder. Federal law requires that we notify you when monitoring indicates that the fluoride in your drinking water exceeds 2.0 mg/l. This is intended to alert families about dental problems that might affect children under nine years of age. The fluoride concentration of your water exceeds this guideline.

Fluoride in children's drinking water at levels of approximately 1 mg/l reduces the number of dental cavities. However, some children exposed to levels of fluoride greater than about 2.0 mg/l may develop dental fluorosis. Dental fluorosis in its moderate and severe forms is a brown staining and /or pitting of the permanent teeth. Because dental fluorosis occurs only when developing teeth (before they erupt from the gums) are exposed to elevated Fluoride levels, households without children are not expected to be affected by this level of fluoride. Children under age nine should be provided with alternative sources of drinking water or water that has been treated to remove Fluoride to avoid the possibility of staining and pitting on their teeth. You may also want to contact your dentist about the proper use by young children of fluoride containing products. Your water supplier can lower the concentrations of the fluoride in the water so that you will still receive the benefits of cavity prevention while the possibility of staining and pitting is minimized. Removal of fluoride may significantly increase your water cost. Treatment systems are commercially available for home use. Information on such systems is available by calling the Sanitary District or contacting your local hardware or home products dealer.

Lead if present at elevated levels can cause serious health problems, especially for pregnant women and young children. Lead in the drinking water is primarily from materials and components associated with service lines and home plumbing. The Somerset County Sanitary District Inc. 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 Environmental Protection Agency's Safe Drinking Water Hotline at 1-800-426-4791 or at <http://www.epa.gov/safewater/lead>.

The Sanitary District monitors the drinking water regularly for bacterial contamination using Total and Fecal Coliform and E.Coli as indicator bacteria. No Bacterial Contamination was detected in the year 2017. The Sanitary District monitors the drinking water regularly for pH, Free Chlorine, Total Chlorine, Total Iron, Ortho-Phosphate and Total Phosphate to ensure water quality. The Sanitary District and the Maryland Department of the Environment have monitored for the following groups of contaminants within the last five years: Synthetic Organic Compounds and Metals. Reports containing the results of these monitoring may be obtained upon request.



Our system had an exceedance of the Maximum Contaminant Levels (MCL) for the LRAA for Total Trihalomethanes for the period of April 1, 2017 through June 30, 2017. The exceedance is based on an annual average and was high due to two samples taken in 2016 to monitor Total Trihalomethanes in the Princess Anne Water System. The high level was not a system wide concern has been controlled with the reduction of the background Chlorine concentration and regular flushing of the specific section of the water system affected. Public Notices were mailed to each customer and the Public Notice was posted in many Public Places and on our Webpage. Total Trihalomethanes are a health concern due the carcinogenic nature of the compounds. Some persons who drink water containing Trihalomethanes in excess of the MCL over many years may experience problems with their liver, kidneys or central nervous system.

We have learned through our monitoring and testing that some constituents have been detected. **The EPA and MDE has determined that your water IS SAFE** at these levels.

All sources of drinking water are subject to potential contamination by substances that are naturally occurring or man made. These substances can be microbes, inorganic or organic chemicals and radioactive substances. All 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.

MCL's are set at very stringent levels. To understand the possible health effects described for many regulated constituents, a person would have to drink 2 liters of water every day at the MCL level for a lifetime to have a one-in-a-million chance of having the described health effect.

Thank you for allowing us to continue providing your family with clean, quality water this year.

### **PUBLIC NOTICE for October 1, 2017 – November 2, 2017**

#### **Monitoring and Reporting Violation of the Safe Drinking Water Act Princess Anne Water System**

The Somerset County Sanitary District Inc. is require to monitor your drinking water for specific contaminants on a regular basis. Results of regular monitoring are an indicator of whether or not your drinking water meets health standards. For October 1, 2017 – November 2, 2017 we did not report results for the Lead and Copper Monitoring by the designated deadline. Both Contaminants were monitored as required in the time period required and the results are included in this Consumer Confidence Report. The results of the monitoring were reported past the deadline because of difficulty in receiving samples from homeowners and because the contract laboratory did not supply the results of the analysis in a timely manner.

### **PUBLIC NOTICE for January 1, 2017 – December 31, 2017**

#### **Monitoring and Reporting Violation of the Safe Drinking Water Act Princess Anne Water System Ridge Road Well (TP05), Hickory Road Well (TP02) and Loretto Road Well (TP08)**

The Somerset County Sanitary District Inc. is required to monitor your drinking water for Fluoride on a regular basis. Results of regular monitoring are an indicator of whether or not your drinking water meets health standards. For January 1, 2017 – December 31, 2017 the Maryland Department of the Environment had no record of the reported results for the Fluoride monitoring for 2017 by the designated deadline. Fluoride was monitored as required in the time period required and the results are included in this Consumer Confidence Report. The results of the monitoring were reported on time but were not recorded as received by the Maryland Department of the Environment.