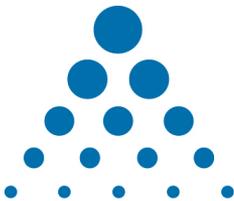


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# JOINT BASE ANDREWS WATER SYSTEM



## 2014 WATER QUALITY REPORT



**Terrapin**

Utility Services, Inc.

A Subsidiary of American States Utility Services, Inc.

**Our Mission: Serving Those Who Serve®**

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## Protecting and Preserving Your Drinking Water

We are pleased to present the following Joint Base Andrews 2014 Water Quality Report, which contains information about testing completed in your water system through December 2014.

Terrapin State Utility Services, Inc. (TUS) takes seriously its job as the guardian of drinking water quality for its customers. TUS is regulated by the state and federal government, and we are proud to say the quality of your water continually meets all drinking water quality standards.

TUS works with the Washington Suburban Sanitary Commission (WSSC) and members of the 779<sup>th</sup> Aerospace Squadron to ensure you receive water that meets regulatory requirements. Each week, industry professionals take water samples to monitor quality at approved sites throughout the distribution system. If there is an exceedance of a drinking water standard, we are required to notify you quickly and take action to restore normal service.

We pride ourselves on our strong customer service culture that comes from industry knowledge and relationships built in the water industry. Our representatives are available around the clock to answer questions and address any water concerns day or night.

On behalf of all of us at Terrapin Utility Services, Inc., thank you for providing us the opportunity to serve you. If you have any questions about this report, please call the TUS office at (301) 735-4101.

Sincerely,

Robert Spowls  
President and Chief Executive Officer  
American States Water Company

Greg Booker  
Utility Manager  
Terrapin State Utility Services

## About the Company

American States Water Company is an investor-owned utility publicly traded on the New York Stock Exchange under the trading symbol AWR and is the parent company of American States Utility Services (ASUS). ASUS is one of the leaders in privatization of utilities on military installations across the nation. Through its subsidiary, Terrapin State Utility Services, Inc. (TUS), the important responsibility of managing the water systems at Joint Base Andrews is accomplished.

AWR and its family of companies provide water to communities throughout the United States. For more than 80 years, we've been installing and maintaining complex structures consisting of thousands of miles of pipelines, wells, pumping stations and reservoirs. With AWR companies, you can count on reliable water services, quality drinking water, and unsurpassed response to your questions.

You can find our companies in California, Maryland, New Mexico, North Carolina, South Carolina, Texas and Virginia. Our trained personnel have thousands of years of combined experience and are certified to work the various aspects of water systems. Our water testing procedures allow us to meet or exceed the water quality regulations set in place by the US Environmental Protection Agency (USEPA) and the Maryland Department of Health and Environmental Control (DHEC) to deliver quality, wholesome water to you – our customers.

Managing the daily operations for TUS is Greg Booker, Utility Manager. Greg is a seasoned professional in the water industry. He has worked in all phases of water distribution.

All the men and women at TUS are committed to meeting the needs of Joint Base Andrews. The water system at Joint Base Andrews undergoes comprehensive infrastructure analysis to determine what areas need repair, replacement or new facilities.

We're here to give you peace of mind – water when you need it and unsurpassed service. For questions on your water service, please contact Greg Booker, Utility Manager at (301) 735-4101.

## Our Subsidiaries



**Fort Bliss**  
Water Services Company  
A Subsidiary of American States Utility Services, Inc.

**Serving Fort Bliss and Biggs Army  
Air Field, Texas**



**Terrapin**  
Utility Services, Inc.  
A Subsidiary of American States Utility Services, Inc.

**Serving Andrews Air Force Base, Maryland**



**Old Dominion**  
Utility Services, Inc.  
A Subsidiary of American States Utility Services, Inc.

**Serving Fort Eustis, Fort Monroe, Fort Story,  
and Fort Lee, Virginia**



**Palmetto State**  
Utility Services, Inc.  
A Subsidiary of American States Utility Services, Inc.

**Serving Fort Jackson, South Carolina**



**Old North**  
UTILITY SERVICES, INC.  
A Subsidiary of American States Utility Services, Inc.

**Serving Fort Bragg, Pope Army Air Field,  
and Camp Mackall, North Carolina**

## **Safekeeping of Water Supplies and Facilities**

To reduce the risk of terrorism affecting local water supplies and distribution systems, Terrapin State Utility Services, Inc. is following recommendations from the Federal Bureau of Investigation, the United States Environmental Protection Agency and the American Water Works Association. While water systems have a low relative likelihood of experiencing terrorist acts, these agencies advise that water systems should guard against unplanned physical intrusion, review emergency response plans, and increase vigilance. Terrapin State Utility Services, Inc. has taken all these steps and is continuing to look for additional safety improvements.

## **If You Have Questions – Contact Us**

For information about your water quality or to find out about upcoming opportunities to participate in public meetings, please contact Greg Booker, Utility Manager, at (301) 735-4101.

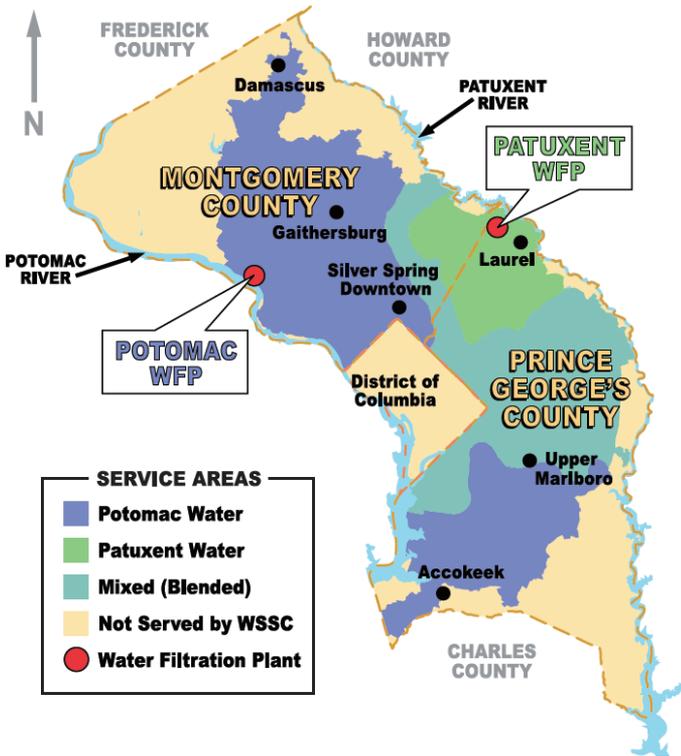
## **Information Statement from EPA on Lead**

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. Washington Suburban Sanitary Commission 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 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>

For more information about health effects of the listed constituents in the enclosed tables, call the EPA hotline at 1-800-426-4791.

## Where Does Our Water Come From?

Joint Base Andrews purchases its drinking water from the Washington Suburban Sanitary Commission (WSSC). WSSC filters and processes water from the Patuxent and Potomac Rivers and provides this water to Joint Base Andrews through their distribution system. The source water treated at the Patuxent Water Filtration Plant (WFP) is held in two



reservoirs - Triadelphia and T. Howard Duckett (also known as Rocky Gorge) - and is pumped to the plant. The Potomac WFP draws water directly from the Potomac River. The map shows the approximate service areas for both the Patuxent and Potomac WFPs.

## Risk to Tap and Bottled Water

To ensure that tap water is safe to drink, the U.S.EPA prescribes regulations limiting the amount of certain contaminants in water provided by public Water systems. U.S. 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 these contaminants does not necessarily indicate that the water poses a health risk.

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, in some cases, radioactive material, and substances resulting from the presence of animals or from human activity. Substances 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, or wildlife;

**Inorganic Contaminants**, such as salts and metals, which can be naturally occurring or may result from urban stormwater 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 stormwater runoff, and residential uses;

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

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

For more information about contaminants and potential health effects, call the U.S. EPA's Safe Drinking Water Hotline at (800) 426-4791.

## Tap vs. Bottled

Thanks in part to aggressive marketing, the bottled water industry has successfully convinced us all that water purchased in bottles is healthier alternative to tap water. However, according to a four-year study conducted by the National Resources Defense Council, bottled water is not necessarily cleaner or safer than most tap water. In fact, about 25 percent of bottled water is actually just bottled tap water (40 percent according to government estimates).

The Food and Drug Administration is responsible for regulating bottled water, but these rules allow for less rigorous testing and purity standards than those required by the U.S. EPA for community tap water. For instance, the high mineral content for some bottled waters makes them unsuitable for babies and young children. Further, the FDA completely exempts bottled water that is packaged and sold within the same state, which accounts for about 70 percent of all bottled water sold in the United States.

People spend 10,000 times more per gallon for bottled water than they typically do for tap water. If you get your recommended eight glasses a day from bottled water, you could be spending up to \$1,400 annually. That same amount of tap water would cost about 49 cents. Even if you installed a filter device on your tap, your annual expenditure would be far less than what you would pay for bottled water.

For a detailed discussion on the NRDC study results, check out their web site at [www.nrdc.org/water/drinking/bw/exesum.asp](http://www.nrdc.org/water/drinking/bw/exesum.asp).

## Definitions

### Maximum Contaminant Level (MCL)

The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the maximum contaminant level goals as is economically and technologically feasible. Secondary MCLs are set to protect the odor, taste and appearance of drinking water.

### Maximum Contaminant Level Goal (MCLG)

The level of contaminant in drinking water below which there is no known or expected risk to health. Maximum contaminant level goals are set by EPA. MCLGs allow for a margin of safety.

### Maximum Residual Disinfectant Level (MRDL)

The level of a disinfectant added for water treatment that may not be exceeded at the consumer's tap. 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 disinfectant added for water treatment below which there is no known or expected health risk. MRDLGs are set by EPA. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contamination.

### Primary Drinking Water Standard (PDWS)

MCLs for contaminants that affect health, along with their monitoring and reporting requirements, and water treatment requirements.

### Action Level (AL)

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

### Treatment Technique (TT)

A required process intended to reduce the level of a contaminant in drinking water.

# Sample Results

## 2014 Water Quality Report

## Washington Suburban Sanitary Commission

### Water Quality Data

#### DETECTED REGULATED CONTAMINANTS

SUBSTANCE	UNITS	PATUXENT TAP		POTOMAC TAP		MCL (or TT)	MCLG	VIOLATION?	MAJOR SOURCE IN DRINKING WATER
		LEVEL FOUND <sup>1</sup>	RANGE	LEVEL FOUND <sup>1</sup>	RANGE				
<b>METALS</b>									
Arsenic	µg/L	n/d	n/d - <2	n/d	n/d - <2	10	0	NO	Erosion of natural deposits; runoff from orchards
Barium	mg/L	0.025	0.019 - 0.029	0.033	0.019 - 0.047	2	2	NO	Discharge of drilling wastes & metal refineries; erosion of natural deposits
Total Chromium	µg/L	<2	n/d - <2	<2	n/d - 2	100	100	NO	Discharge from steel & pulp mills; erosion of natural deposits
Selenium	µg/L	n/d	n/d - <2	<2	n/d - <2	50	50	NO	Discharge from petroleum and metal refineries; erosion of natural deposits; discharge from mines

#### INORGANIC CONTAMINANTS

Fluoride	mg/L	0.66	0.39 - 0.80	0.68	0.60 - 0.79	4	4	NO	Water additive which promotes strong teeth; erosion of natural deposits
Nitrate	mg/L	1.2	0.6 - 1.9	1.8	1.2 - 3.1	10	10	NO	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Nitrite	mg/L	n/d	n/d - <0.05	n/d	n/d - <0.05	1	1	NO	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits

#### MICROBIAL CONTAMINANTS

Turbidity	NTU	0.03	0.02-0.13 <sup>1</sup>	0.04	0.01 - 0.21 <sup>1</sup>	TT=1 NTU	n/a	NO	Soil runoff
Residual chlorine	% <0.3 NTU	100%	n/a	100%	n/a	TT=95% min	n/a	NO	
Viruses	n/a	met TT requirements	met TT requirements	met TT requirements	met TT requirements	TT>=0.2	0	NO	Water additive used to control microbes
Giardia lamblia	n/a	met TT requirements	met TT requirements	met TT requirements	met TT requirements	TT=99.99% removal	0	NO	Human and animal fecal waste
Cryptosporidium	n/a	met TT requirements	met TT requirements	met TT requirements	met TT requirements	TT=99% removal	0	NO	Human and animal fecal waste

#### DISINFECTION BYPRODUCT (DBP) PRECURSOR

Total Organic Carbon	n/a	met TT requirements	met TT requirements	met TT requirements	met TT requirements	TT	n/a	NO	Naturally present in the environment
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#### PESTICIDES & SYNTHETIC ORGANIC CONTAMINANTS

Atrazine	µg/L	<1	n/d - 1.7	n/d	n/d - <1	3	3	NO	Runoff from herbicide used on row crops
Dalapon	µg/L	n/d	n/d - <1	n/d	n/d - <1	200	200	NO	Runoff from herbicide used on rights of way
Simazine	µg/L	<1	n/d - 1.2	n/d	n/d - n/d	4	0	NO	Herbicide runoff

#### RADIOACTIVE CONTAMINANTS

Gross Alpha	pCi/L	<2	<2 - <2	<2	<2 - <2	15	0	NO	Erosion of natural deposits
Gross Beta	pCi/L	4.4	<4 - 5.4	<4	<4 - <4	50 <sup>2</sup>	0	NO	Decay of natural and man-made deposits
Radium 228	pCi/L	<1	<1 - <1	<1	<1 - 1	5 <sup>3</sup>	0 <sup>3</sup>	NO	Erosion of natural deposits

SUBSTANCE	UNITS	CUSTOMER TAP <sup>4</sup>		AL	MCLG	VIOLATION?	MAJOR SOURCE IN DRINKING WATER
		90th PERCENTILE <sup>5</sup>	# of SITES ABOVE AL				

#### METALS

Copper	mg/L	0.0874	0 samples	1.3	1.3	NO	Corrosion of household plumbing systems
Lead	µg/L	1.17	0 samples	15	0	NO	Corrosion of household plumbing systems

SUBSTANCE	UNITS	DISTRIBUTION SYSTEM		MCL (or MRDL)	MCLG (or MRDLG)	VIOLATION?	MAJOR SOURCE IN DRINKING WATER
		LEVEL FOUND <sup>6</sup>	RANGE				

#### BACTERIOLOGICAL CONTAMINANTS

Total Coliform	% Positive per month	0.31	0 - 0.80	5	0	NO	Naturally present in the environment
No. of E. coli Positive Samples	Count	0	0 - 0	0	0	NO	Human and animal fecal waste

#### DISINFECTANT & DBPs

Residual Chlorine	mg/L	1.28 <sup>8</sup>	n/d <sup>7</sup> - 7.67 <sup>8</sup>	4 <sup>9</sup>	4 <sup>9</sup>	NO	Water additive used to control microbes
Halooacetic Acids (HAA5)	µg/L	42.7 <sup>10</sup>	8.8 - 69.6	60 <sup>11</sup>	n/a	NO	By-product of drinking water chlorination
Total Trihalomethanes (THMs)	µg/L	61.2 <sup>10</sup>	11.1 - 117	80 <sup>11</sup>	n/a	NO	By-product of drinking water chlorination

#### DETECTED UNREGULATED CONTAMINANTS

SUBSTANCE	UNITS	PATUXENT TAP		POTOMAC TAP		MCL	MCLG	VIOLATION?	MAJOR SOURCE IN DRINKING WATER
		LEVEL FOUND <sup>1</sup>	RANGE	LEVEL FOUND <sup>1</sup>	RANGE				
<b>METALS</b>									
Hexavalent Chromium <sup>12</sup>	µg/L	<0.03	n/d - 0.054	0.118	0.096 - 0.140	n/a	n/a	n/a	
Strontium <sup>13</sup>	µg/L	62	60 - 63	120	120 - 120	n/a	n/a	n/a	
Vanadium <sup>13</sup>	µg/L	n/d	n/d - n/d	<0.2	n/d - 0.25	n/a	n/a	n/a	

#### INORGANIC CONTAMINANTS

Chlorate <sup>13</sup>	µg/L	n/d	n/d - n/d	22	n/d - 44	n/a	n/a	n/a	
Sodium	mg/L	15.1	11.0 - 26.0	25.3	10.0 - 120	n/a	n/a	n/a	

SUBSTANCE	UNITS	DISTRIBUTION SYSTEM		MCL	MCLG	VIOLATION?	MAJOR SOURCE IN DRINKING WATER
		LEVEL FOUND <sup>6</sup>	RANGE				

#### METALS

Hexavalent Chromium <sup>12</sup>	µg/L	0.121	0.075 - 0.170	n/a	n/a	n/a	n/a	
Strontium <sup>13</sup>	µg/L	94	76 - 110	n/a	n/a	n/a	n/a	
Vanadium <sup>13</sup>	µg/L	<0.2	n/d - 0.23	n/a	n/a	n/a	n/a	

#### INORGANIC CONTAMINANTS

Chlorate <sup>13</sup>	µg/L	<20	n/d - 25	n/a	n/a	n/a		
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-See full report on WSSCs website: <https://www.wsscwater.com/waterquality>

## Measurements

Water is sampled and tested throughout the year.

### Contaminants are measured in:

- Parts per million (ppm) or milligrams per liter (mg/L),
- Parts per billion (ppb) or micrograms per liter ( $\mu\text{g/L}$ ),
- Parts per trillion (ppt) or nanograms per liter (ng/L).
- Grains per gallon (grains/gal) – A measurement of water hardness often used for sizing household water softeners. One grain per gallon is equal to 17.1 mg/L of hardness.
- Nephelometric Turbidity Units (NTU) – A measurement of the clarity of water. Turbidity in excess of 5 NTU is noticeable to the average person.
- Picocuries per liter (pCi/L) – A measurement of radioactivity in water.

*If this is difficult to imagine, think about these comparisons:*

#### Parts per million:

3 drops in 42 gallons  
1 second in 12 days  
1 inch in 16 miles



#### Parts per billion:

1 drop in 14,000 gallons  
1 second in 32 years  
1 inch in 16,000 miles



#### Parts per trillion:

10 drops in enough water to  
fill the Rose Bowl  
1 second in 32,000 years  
1 inch in 16 million miles



## For Systems

Some people may be more vulnerable to constituents in the water than the general population. Immuno-compromised people, such as those with cancer undergoing chemotherapy, persons who have had organ transplants, people with HIV/AIDS or other immune system disorders, some elderly persons and infants can be particularly at risk of infections. These people should seek advice about drinking water from their healthcare providers. The EPA and the Centers for Disease Control guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the EPA's safe drinking water hotline at 1-800-426-4791.

## Sample Reporting

This report is a summary of the quality of the water we provide our customers. The analysis was made using data from the most recent U.S. Environmental Protection Agency (EPA) required tests and is presented in the included pages. We hope this information helps you become more knowledgeable about what's in your drinking water.

Although all the substances listed here are under the Maximum Contaminant Level (MCL), we feel it is important that you know exactly what was detected and how much of the substance is present in the water. Compliance (unless otherwise noted) is based on the average level of concentration being below the MCL. The State allows us to monitor for some contaminants less than once per year because the concentrations do not change frequently. Some of our data, though representative, are more than a year old.

## Lead and Copper

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 line and home plumbing. The Washington Suburban Sanitary Commission 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 the 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 at 1-800-426-4791 or at <http://www.epa.gov/safewater/lead>.



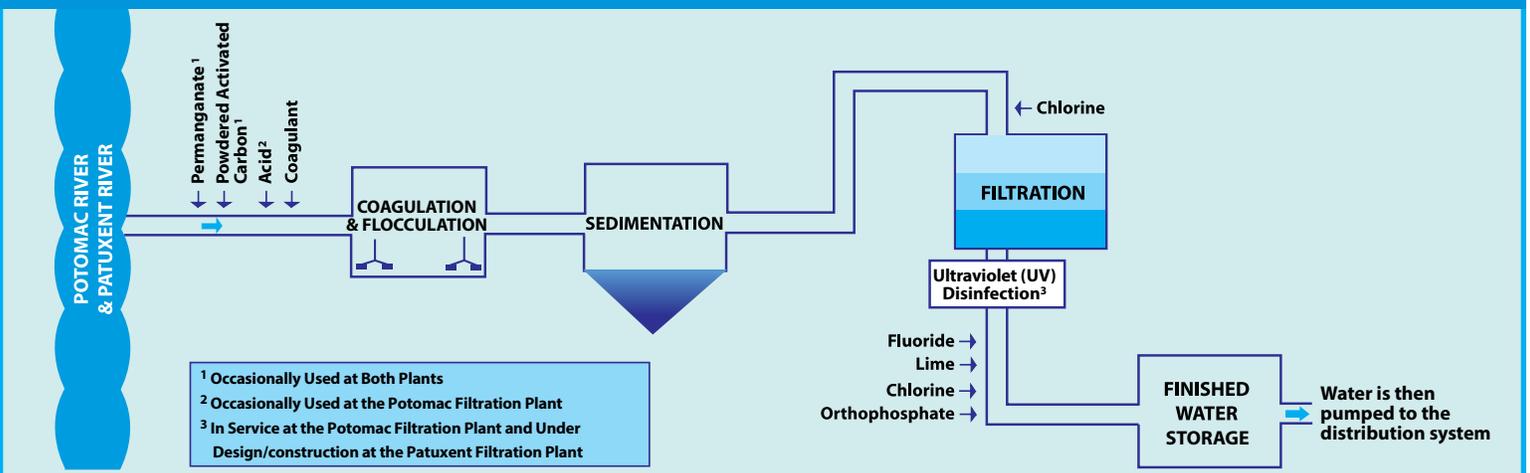
**Terrapin**  
Utility Services, Inc.  
A Subsidiary of American States Utility Services, Inc.

Water Quality Data

DETECTED REGULATED CONTAMINANTS

SUBSTANCE	UNITS	PATUXENT TAP		POTOMAC TAP		MCL (or TT)	MCLG	VIOLA-TION?	MAJOR SOURCE IN DRINKING WATER
		LEVEL FOUND*	RANGE	LEVEL FOUND*	RANGE				
<b>METALS</b>									
Arsenic	µg/L	n/d	n/d - <2	n/d	n/d - <2	10	0	NO	Erosion of natural deposits; runoff from orchards
Barium	mg/L	0.025	0.019 - 0.029	0.033	0.019 - 0.047	2	2	NO	Discharge of drilling wastes & metal refineries; erosion of natural deposits
Total Chromium	µg/L	<2	n/d - <2	<2	n/d - 2	100	100	NO	Discharge from steel & pulp mills; erosion of natural deposits
Selenium	µg/L	n/d	n/d - <2	<2	n/d - <2	50	50	NO	Discharge from petroleum and metal refineries; erosion of natural deposits; discharge from mines
<b>INORGANIC CONTAMINANTS</b>									
Fluoride	mg/L	0.66	0.39 - 0.80	0.68	0.60 - 0.79	4	4	NO	Water additive which promotes strong teeth; erosion of natural deposits
Nitrate	mg/L	1.2	0.6 - 1.9	1.8	1.2 - 3.1	10	10	NO	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Nitrite	mg/L	n/d	n/d - <0.05	n/d	n/d - <0.05	1	1	NO	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
<b>MICROBIAL CONTAMINANTS</b>									
Turbidity	NTU	0.03	0.02-0.13 <sup>1</sup>	0.04	0.01 - 0.21 <sup>1</sup>	TT=1 NTU	n/a	NO	Soil runoff
	% <0.3 NTU	100%	n/a	100%	n/a	TT=95% min	n/a	NO	
Residual chlorine	mg/L	met TT requirements		met TT requirements		TT>=0.2	n/a	NO	Water additive used to control microbes
Viruses	n/a	met TT requirements		met TT requirements		TT=99.99% removal	0	NO	Human and animal fecal waste
<i>Giardia lamblia</i>	n/a	met TT requirements		met TT requirements		TT=99.9% removal	0	NO	Human and animal fecal waste
<i>Cryptosporidium</i>	n/a	met TT requirements		met TT requirements		TT=99% removal	0	NO	Human and animal fecal waste
<b>DISINFECTION BYPRODUCT (DBP) PRECURSOR</b>									
Total Organic Carbon	n/a	met TT requirements		met TT requirements		TT	n/a	NO	Naturally present in the environment
<b>PESTICIDES &amp; SYNTHETIC ORGANIC CONTAMINANTS</b>									
Atrazine	µg/L	<1	n/d - 1.7	n/d	n/d - <1	3	3	NO	Runoff from herbicide used on row crops
Dalapon	µg/L	n/d	n/d - <1	n/d	n/d - <1	200	200	NO	Runoff from herbicide used on rights of way
Simazine	µg/L	<1	n/d - 1.2	n/d	n/d - n/d	4	0	NO	Herbicide runoff
<b>RADIOACTIVE CONTAMINANTS</b>									
Gross Alpha	pCi/L	<2	<2 - <2	<2	<2 - <2	15	0	NO	Erosion of natural deposits
Gross Beta	pCi/L	4.4	<4 - 5.4	<4	<4 - <4	50 <sup>2</sup>	0	NO	Decay of natural and man-made deposits
Radium 228	pCi/L	<1	<1 - <1	<1	<1 - 1	5 <sup>3</sup>	0 <sup>3</sup>	NO	Erosion of natural deposits
SUBSTANCE	UNITS	CUSTOMER TAP <sup>4</sup>				AL	MCLG	VIOLA-TION?	MAJOR SOURCE IN DRINKING WATER
		90th PERCENTILE <sup>5</sup>		# of SITES ABOVE AL					
<b>METALS</b>									
Copper	mg/L	0.0874		0 samples		1.3	1.3	NO	Corrosion of household plumbing systems
Lead	µg/L	1.17		0 samples		15	0	NO	Corrosion of household plumbing systems
SUBSTANCE	UNITS	DISTRIBUTION SYSTEM				MCL (or MRDL)	MCLG (or MRDLG)	VIOLA-TION?	MAJOR SOURCE IN DRINKING WATER
		LEVEL FOUND *		RANGE					
<b>BACTERIOLOGICAL CONTAMINANTS</b>									
Total Coliform	% Positive per month	0.31		0 - 0.80		5	0	NO	Naturally present in the environment
No. of <i>E. coli</i> Positive Samples	Count	0		0 - 0		0	0	NO	Human and animal fecal waste
<b>DISINFECTANT &amp; DBPs</b>									
Residual Chlorine	mg/L	1.28 <sup>6</sup>		n/d <sup>7</sup> - 7.67 <sup>8</sup>		4 <sup>9</sup>	4 <sup>9</sup>	NO	Water additive used to control microbes
Haloacetic Acids (HAA5)	µg/L	42.7 <sup>10</sup>		8.8 - 69.6		60 <sup>11</sup>	n/a	NO	By-product of drinking water chlorination
Total Trihalomethanes (TTHMs)	µg/L	61.2 <sup>10</sup>		11.1 - 117		80 <sup>11</sup>	n/a	NO	By-product of drinking water chlorination

WSSC Drinking Water Treatment Process



Water Quality Data (cont'd)

DETECTED UNREGULATED CONTAMINANTS

SUBSTANCE	UNITS	PATUXENT TAP		POTOMAC TAP		MCL	MCLG	VIOLA-TION?	MAJOR SOURCE IN DRINKING WATER
		LEVEL FOUND*	RANGE	LEVEL FOUND*	RANGE				
<b>METALS</b>									
Hexavalent Chromium <sup>12</sup>	µg/L	<0.03	n/d - 0.054	0.118	0.096 - 0.140	n/a	n/a	n/a	
Strontium <sup>12</sup>	µg/L	62	60 - 63	120	120 - 120	n/a	n/a	n/a	
Vanadium <sup>12</sup>	µg/L	n/d	n/d - n/d	<0.2	n/d - 0.25	n/a	n/a	n/a	
<b>INORGANIC CONTAMINANTS</b>									
Chlorate <sup>12</sup>	µg/L	n/d	n/d - n/d	22	n/d - 44	n/a	n/a	n/a	
Sodium	mg/L	15.1	11.0 - 26.0	25.3	10.0 - 120	n/a	n/a	n/a	
SUBSTANCE	UNITS	DISTRIBUTION SYSTEM				MCL	MCLG	VIOLA-TION?	MAJOR SOURCE IN DRINKING WATER
		LEVEL FOUND *		RANGE					
<b>METALS</b>									
Hexavalent Chromium <sup>12</sup>	µg/L	0.121		0.075 - 0.170		n/a	n/a	n/a	
Strontium <sup>12</sup>	µg/L	94		76 - 110		n/a	n/a	n/a	
Vanadium <sup>12</sup>	µg/L	<0.2		n/d - 0.23		n/a	n/a	n/a	
<b>INORGANIC CONTAMINANTS</b>									
Chlorate <sup>11</sup>	µg/L	<20		n/d - 25		n/a	n/a	n/a	

Terms Defined

**MCL** - Maximum Contaminant Level. 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.

**MCLG** - Maximum Contaminant Level Goal. 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.

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

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

**MRDL** - Maximum Residual Disinfectant Level. 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.

**MRDLG** - Maximum Residual Disinfectant Level Goal. 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.

**Turbidity** - A measure of the cloudiness of the water. We monitor it because it is a good indicator of the effectiveness of our treatment

process.

**NTU** - Nephelometric Turbidity Unit

**mg/L** - Milligrams per liter, equal to parts per million (ppm). The equivalent of one minute in 2 years or one penny in \$10,000.

**µg/L** - Micrograms per liter, equal to parts per billion (ppb). The equivalent of one minute in 2,000 years or one penny in \$10 million.

**ng/L** - Nanograms per liter, equal to parts per trillion (ppt). The equivalent of one minute in 2,000,000 years or one penny in \$10 billion.

**pCi/L** - Picocuries per liter (a measure of radiation)

**n/d** - Not detected

**n/a** - Not applicable

= Equals

< Less than

\* Based on yearly average except as noted.

1. Filtered water, maximum of measurements taken every 15 minutes.
2. EPA considers 50 pCi/L to be the level of concern for beta particles.

3. The MCL and MCLG apply to combined Radium 226 and 228.
4. Most recent sampling, between June and September 2014.
5. If more than 10% of sites exceed the action level, system is required to take additional steps to control corrosiveness of their water.
6. Highest running annual average (RAA)
7. All samples deemed to have detectable disinfectant residual.
8. This data is considered an outlier. The chlorine dose at the plant tap during this time was 2.6 – 3.7 mg/L, and residual chlorine levels at nearby locations were 0.89 – 1.42 mg/L
9. Maximum residual disinfectant level (MRDL), the highest level of a disinfectant allowed in drinking water; based on a running annual average (RAA).
10. Highest locational running annual average (LRAA)
11. Maximum contaminant level based on LRAA
12. Unregulated contaminants were monitored in accordance with third cycle of EPA's Unregulated Contaminant Monitoring Rule (UCMR3). For full results and explanations, go to [www.wsscwater.com/ucmr3](http://www.wsscwater.com/ucmr3)

Water is treated to EPA standards

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. As stewards entrusted to provide safe drinking water to our customers, WSSC treats our water to meet or go beyond U.S. EPA standards.

WSSC drinking water undergoes extensive purification and treatment after it arrives at the plant and before it is sent to the distribution system for delivery to half a million homes and businesses. Our water treatment process includes: coagulation and flocculation (to make small particles and microorganisms in the raw source water adhere to each other); sedimentation (to remove most of those particles and microorganisms); filtration (to remove nearly all the remaining particles and microorganisms); chlorination (for disinfection); lime addition (to minimize the potential for dissolving lead solder used in older homes); and fluoridation (to prevent tooth decay). Orthophosphate is also added to help minimize copper pipe pinhole leaks in home plumbing.

Information on *Cryptosporidium* Health Effects and WSSC Treatment

*Cryptosporidium* is a microbial pathogen found in surface water throughout the U.S. *Cryptosporidium* must be ingested to cause disease, and it may be spread through means other than drinking water. Ingestion of *Cryptosporidium* may cause cryptosporidiosis, an abdominal infection. Most healthy individuals can overcome the disease within a few weeks. However, immuno-compromised adults, infants and small children, and some elderly are at greater risk of developing life-threatening illness. We encourage immuno-compromised individuals to consult their doctor regarding appropriate precautions to take to avoid infection.

WSSC conducted monitoring of *Cryptosporidium* for a two-year period (October 2006 through September 2008) as required by the EPA. The results indicated that our Potomac source water is minimally affected by *Cryptosporidium*, and the Patuxent source is not affected at all. While our existing treatment processes meet new EPA requirements for addressing concerns about *Cryptosporidium*, as an extra precaution, we have installed UV disinfection at the Potomac Plant to provide an extra barrier of protection against *Cryptosporidium*. The UV disinfection upgrade at our Patuxent Plant is underway.