

JOINT BASE ANDREWS WATER SYSTEM



2012 WATER QUALITY REPORT



Terrapin
Utility Services, Inc.

A Subsidiary of American States Utility Services, Inc.

Delivering Excellence, One Drop at a Time

Protecting and Preserving Your Drinking Water

We are pleased to present the following Joint Base Andrews 2012 Water Quality Report, which contains information about testing completed in your water system through December 2012.

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 work with the Washington Suburban Sanitary Commission (WSSC) and members of the 779th 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 State 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 South Carolina 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 at (301) 735-4101.

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

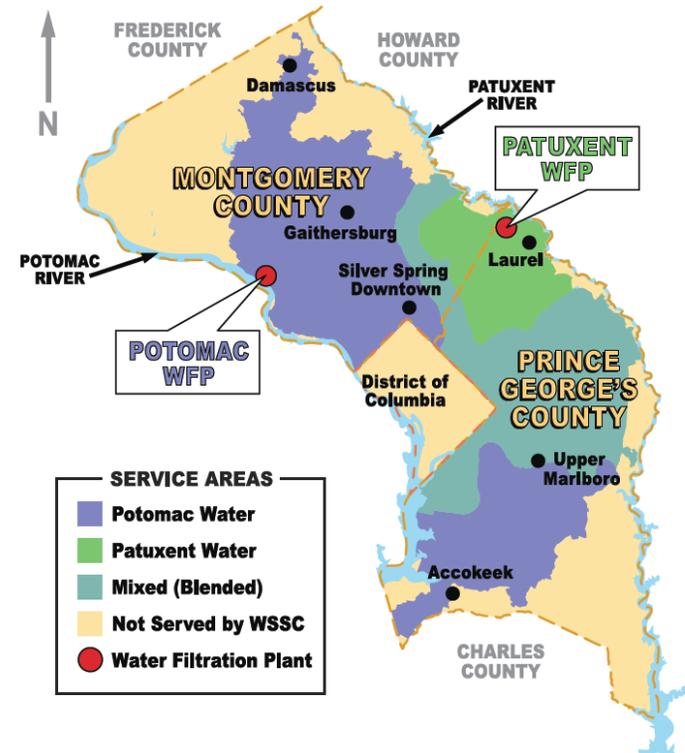
If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. WSSC is responsible for providing high quality drinking water, but 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 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.

Why Is My Water So Hard?

Hard water contains more dissolved calcium and magnesium. Potomac water tends to be hard (typically averaging about 120-130 milligrams per liter). Patuxent water is soft (typically averaging about 60-65 milligrams per liter).

Risk to Tap and Bottled Water

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 mean water may be a health risk. More information about contaminants and potential health effects can be obtained by calling the EPA's Safe Drinking Water Hotline (1-800-426-4791).

In order 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. FDA regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animal or human activity.

For People with Sensitive Immune 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.

Water Quality Data

DETECTED REGULATED CONTAMINANTS									
SUBSTANCE	UNITS	PATUXENT TAP		POTOMAC TAP		MCL (or TT)	MCLG	VIOLATION?	MAJOR SOURCE IN DRINKING WATER
		LEVEL FOUND	RANGE	LEVEL FOUND	RANGE				
PHYSICAL									
Turbidity	NTU	0.18 ¹	n/a	0.18 ¹	n/a	TT=1 NTU	n/a	NO	Soil runoff
% <0.3 NTU		100	n/a	100	n/a	TT=95% min	n/a	NO	
METALS									
Bakum	mg/L	0.004	0.019-0.029	0.032	0.025-0.040	2	2	NO	Discharge of drilling wastes & metal refineries; erosion of natural deposits
Total Chromium	µg/L	n/d	n/d-2	n/d	n/d-4	100	100	NO	Erosion of natural deposits
Copper	mg/L	0.012	0.007-0.018	<0.002	n/d - <0.002	n/a	n/a	n/a	Erosion of natural deposits; algae control treatment chemicals
Selenium	µg/L	n/d	n/d	n/d	n/d-3	50	50	NO	Discharge from petroleum and metal refineries; erosion of natural deposits; discharge from mines
INORGANICS									
Residual Chlorine	mg/L	1.4	1.1-1.7	1.6	1.1-2.3	TT=0.2	n/a	NO	Water additive used to control microbes
Fluoride	mg/L	0.9 ¹	0.46-0.90	0.71	0.60-0.84	4	4	NO	Water additive which promotes strong teeth; erosion of natural deposits
Nitrate	mg/L	1.0	<0.2-1.6	1.7	0.8-2.8	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
DISINFECTANT BYPRODUCT (DBP) PRECURSOR									
Total Organic Carbon	n/a	met TT requirements		met TT requirements		TT	n/a	NO	Naturally present in the environment
PESTICIDES & SYNTHETIC ORGANIC CHEMICALS									
Atrazine	µg/L	n/d	n/d	n/d	n/d-1.3	3	3	NO	Runoff from herbicide used on row crops
Dialopon	µg/L	<1	<1-1	<1	n/d-1	200	200	NO	Runoff from herbicide used on rights of way
Di(2-ethylhexyl)phthalate	µg/L	n/d	n/d	n/d	n/d-2	6	0	NO	Discharge from rubber & chemical factories
RADIONUCLIDES									
Gross Alpha	pCi/L	<2	<2-2	<2	<2-2	15	0	NO	Erosion of natural deposits
Gross Beta	pCi/L	4	<4-4.1	<4	<4-4	50 ²	n/a	NO	Decay of natural and man-made deposits
Radium 226	pCi/L	<1	<0.8-1	<1	<0.7-1	5 ³	0 ³	NO	Erosion of natural deposits
SUBSTANCE UNITS CUSTOMER TAP # AL MCLG VIOLATION? MAJOR SOURCE IN DRINKING WATER									
		90th PERCENTILE ¹		# of SITES ABOVE AL					
METALS									
Copper	mg/L	0.03		0 sample		1.3	1.3	NO	Corrosion of household plumbing systems
Lead	µg/L	<2		1 sample		15	0	NO	Corrosion of household plumbing systems
SUBSTANCE UNITS DISTRIBUTION SYSTEM MCL MCLG VIOLATION? MAJOR SOURCE IN DRINKING WATER									
		LEVEL FOUND *		RANGE		(per MSD L)	(per MSD L)		
BACTERIOLOGICAL									
Total Coliform	% Positive per month	0.41		0.00-1.02		5	0	NO	Naturally present in the environment
E. coli	% Positive per month	0		0.00-0.00		n/a	n/a	n/a	
No. of E. coli Positive Routine Samples	Count	0		0-0		n/a	n/a	n/a	
No. of E. coli Positive Repeat Samples	Count	0		0-0		0	0	NO	Human and animal fecal waste
DISINFECTANT & DBPs									
Residual Chlorine	mg/L	1.2 ⁴		<0.10-3.20		4 ²	4 ²	NO	Water additive used to control microbes
Haloacetic Acids (HAA5)	µg/L	40.1 ⁴		4.3-57.5		80 ⁴	n/a	NO	Byproduct of drinking water chlorination
Total Trihalomethanes (TTHM4)	µg/L	60.3 ⁴		12.1-102		80 ⁴	n/a	NO	Byproduct of drinking water chlorination

DETECTED UNREGULATED CONTAMINANTS									
SUBSTANCE	UNITS	PATUXENT TAP		POTOMAC TAP		MCL (or TT)	MCLG	VIOLATION?	MAJOR SOURCE IN DRINKING WATER
		LEVEL FOUND	RANGE	LEVEL FOUND	RANGE				
METALS									
Hexavalent Chromium	mg/L	2	n/d-34	23	77-200	n/a	n/a	n/a	
PESTICIDES & SYNTHETIC ORGANIC CHEMICALS									
Methoxyflor	µg/L	n/d	n/d	n/d	n/d-1	n/a	n/a	n/a	
RADIONUCLIDES									
Tritium	pCi/L	<10	<100-100	<10	<100-100	n/a	n/a	n/a	

Sampling Results

Our drinking water meets or exceeds all Federal (EPA) drinking water requirements. 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>.

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



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.

Our Subsidiaries

