



Dear Customer:



The Washington Suburban Sanitary Commission supplies water to approximately 1.8 million residents in Montgomery and Prince George's counties. This annual report confirms that WSSC's drinking water meets all U.S. Environmental Protection Agency (USEPA) standards for safety and quality. As we come to our 92nd year, WSSC has never had a drinking water violation.

WSSC delivers high-quality drinking water from two treatment plants via 5,500 miles of water main, 13 pumping stations and more than 60 water storage facilities. Many of these pipelines and facilities are aging and require our immediate attention for repair, rehabilitation and replacement.

Our grandparents and parents sacrificed to pay for the water main system that is in the ground. As General Manager, I am committed to building on their successes by tackling the challenges of aging infrastructure repair and replacement through sound management practices in order to continue our ability to treat and deliver safe, clean water.

We have created a presentation about WSSC's infrastructure program. If you are a member of a civic or community group with 10 or more members who want to learn more about WSSC's progress with our infrastructure programs, please contact the Communications and Community Relations Office at 301-206-8100 to schedule a presentation.

WSSC's mission is to provide safe and reliable water, life's most precious resource, and return clean water to our environment, all in an ethically and financially responsible manner. We hope that the information in this report demonstrates how seriously we take this responsibility.

Sincerely,

**Jerry N. Johnson**

General Manager/CEO

## Important health information from the U.S. EPA

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 that the water poses a health risk.

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 microbial contaminants are available from the EPA's Safe Drinking Water Hotline (800-426-4791) or the EPA's website at [www.epa.gov/safewater](http://www.epa.gov/safewater). More information about contaminants and health effects can also be obtained from the Hotline or the EPA's website.

## For more information

WSSC provides updated information about water quality and other aspects of the service delivery system at our website, [www.wsscwater.com](http://www.wsscwater.com). Or the public can call 301-206-8100 for more information. This report and previous years' water quality reports are also available on our website at [www.wsscwater.com/info/QandA.cfm](http://www.wsscwater.com/info/QandA.cfm).

The public is also invited to a variety of project- and policy-related public hearings and informational workshops throughout the year. Commission meetings are generally held on the third Wednesday of every month, from 8:30 a.m. to 5 p.m. Public hearings on our proposed capital improvements program are held in September, in Rockville and Largo. Budget hearings are usually scheduled to begin in February.

WSSC provides speakers and tours for schools, homeowner associations and service groups. We also organize numerous public events each April as a month-long celebration of Earth Day.

To request a speaker, a tour, or to obtain times and locations of the public hearings and events, please visit our website or call 301-206-8100.



This report contains important information about your drinking water. Have someone translate it for you, or speak with someone who understands it.

Este informe contiene información importante acerca de su agua potable. Haga que alguien lo traduzca para usted, o hable con alguien que lo entienda.

Tài liệu này có tin tức quan trọng về nước uống của quý vị. Hãy nhờ người dịch cho quý vị, hoặc hỏi người nào hiểu tài liệu này.

此报告包含有关您的饮用水的重要信息。请人帮您翻译出来，或请看懂此报告的人将内容说给您听。

# 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				
PHYSICAL									
Turbidity	NTU	0.13 <sup>1</sup>	n/a	0.19 <sup>1</sup>	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									
Antimony	µg/L	<2	n/d - <2	<2	n/d - <2	6	6	NO	Fire retardants; ceramics; electronics; solder
Arsenic	µg/L	<2	n/d - 2	<2	n/d - 2	10	0	NO	
Barium	mg/L	0.026	0.019 - 0.033	0.033	0.024 - 0.044	2	2	NO	Discharge of drilling wastes & metal refineries; erosion of natural deposits
Beryllium	µg/L	n/d	n/d - <2	n/d	n/d - <2	4	4	NO	
Cadmium	µg/L	n/d	n/d - <2	n/d	n/d - <2	5	5	NO	Discharge from metal refineries and coal-burning factories; discharge from electrical, aerospace, and defense industries
Chromium	µg/L	<2	n/d - 2	<2	n/d - 2	100	100	NO	
Copper	mg/L	0.012	0.007 - 0.017	0.002	<0.002 - 0.002	n/a	n/a	n/a	Corrosion of galvanized pipes; erosion of natural deposits; discharge from metal refineries; runoff from waste batteries and paints
Lead	µg/L	n/d	n/d - <2	<2	n/d - <2	n/a	n/a	n/a	
Selenium	µg/L	<2	n/d - 2	<2	n/d - 2	50	50	NO	Erosion of natural deposits
Thallium	µg/L	<1	n/d - 1	<1	n/d - 1	2	0.5	NO	
INORGANICS									
Residual Chlorine	mg/L	1.9	0.6 - 2.6	2.1	1.4 - 3.2	TT=>0.2	n/a	NO	Water additive used to control microbes
Fluoride	mg/L	1.01	0.65 - 1.63	0.87	0.42 - 1.24	4	4	NO	
Nitrate	mg/L	1.07	0.47 - 1.60	1.64	0.87 - 2.80	10	10	NO	Water additive which promotes strong teeth; erosion of natural deposits
Nitrite	mg/L	<0.05	n/d - <0.05	n/d	n/d - <0.05	1	1	NO	
DISINFECTION 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									
2,4-D	µg/L	<0.1	n/d - 0.15	n/d	n/d	70	70	NO	Runoff from herbicide used on row crops
Atrazine	µg/L	n/d	n/d - <1	n/d	n/d	3	3	NO	
Dalapon	µg/L	<1	n/d - <1	<1	n/d - <1	200	200	NO	Runoff from herbicide used on rights of way
Dibromochloropropane (DBCP)	ng/L	20	n/d - 60	20	n/d - 90	200	0	NO	
Di(2-ethylhexyl) phthalate	µg/L	<2	n/d - <2	<2	n/d - <2	6	0	NO	Runoff/leaching from soil fumigant used on soybeans, cotton, pineapples, and orchards
Endrin	µg/L	n/d	n/d	n/d	n/d - <1	2	2	NO	
VOLATILE ORGANIC CHEMICALS (VOCs)									
Xylenes	mg/L	n/d	n/d - <0.0005	n/d	n/d	10	10	NO	Discharge from petroleum factories; discharge from chemical factories
Toluene	mg/L	n/d	n/d - <0.0005	n/d	n/d	1	1	NO	
RADIONUCLIDES									
Gross Alpha	pCi/L	<1.0	<0.7 - <1.0	<1.0	<0.7 - <1.0	15	0	NO	Erosion of natural deposits
Gross Beta	pCi/L	<2.0	<1.5 - 2.2	2.5	1.6 - 4.2	50 <sup>2</sup>	n/a	NO	
Radium 228	pCi/L	<1.0	<0.7 - <1.0	<1.0	<1.0 - <1.0	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					
METALS									
Copper	mg/L	0.122		0 sample		1.3	1.3	NO	Corrosion of household plumbing systems
Lead	µg/L	2.5		1 sample		15	0	NO	
SUBSTANCE	UNITS	DISTRIBUTION SYSTEM				MCL (or MRDL)	MCLG (or MRDLG)	VIOLA- TION?	MAJOR SOURCE IN DRINKING WATER
		LEVEL FOUND *		RANGE					
BACTERIOLOGICAL									
Total Coliform	% Positive per month	0.07		0.00 - 0.52		5	0	NO	Naturally present in the environment Human and animal fecal waste
<i>E. coli</i>	% Positive per month	0		0.00 - 0.00		n/a	n/a	n/a	
No. of <i>E. coli</i> Positive Routine Samples	Count	0		0 - 0		n/a	n/a	n/a	
No. of <i>E. coli</i> Positive Repeat Samples	Count	0		0 - 0		0	0	NO	
DISINFECTANT & DBPs									
Residual Chlorine	mg/L	1.32 <sup>6</sup>		n/d - 4.30		4 <sup>7</sup>	4 <sup>7</sup>	NO	Water additive used to control microbes
Haloacetic Acids (HAA5)	µg/L	33.2 <sup>6</sup>		9.79 - 85.6		60 <sup>8</sup>	n/a	NO	
Total Trihalomethanes (TTHMs)	ug/L	41.4 <sup>6</sup>		8.72 - 97.6		80 <sup>8</sup>	n/a	NO	

## DETECTED UNREGULATED CONTAMINANTS

SUBSTANCE	UNITS	PATUXENT TAP		POTOMAC TAP		MCL (or TT)	MCLG	VIOLA- TION?	MAJOR SOURCE IN DRINKING WATER
		LEVEL FOUND*	RANGE	LEVEL FOUND*	RANGE				
VOCs									
Bromomethane	µg/L	n/d	n/d - <0.5	n/d	n/d - <0.5	n/a	n/a	n/a	
Nitrobenzene	ug/L	n/d	n/d - <10	n/d	n/d - <10	n/a	n/a	n/a	

## TERMS DEFINED

<b>MCL</b>	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.
<b>MCLG</b>	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.
<b>TT</b>	Treatment Technique. A required process intended to reduce the level of a contaminant in drinking water.
<b>AL</b>	Action level. The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.
<b>MRDL</b>	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.

<b>MRDLG</b>	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.
<b>Turbidity</b>	a measure of the cloudiness of the water. We monitor it because it is a good indicator of the effectiveness of our treatment process.
<b>NTU</b>	Nephelometric Turbidity Unit
<b>mg/L</b>	milligrams per liter, equal to parts per million (ppm). The equivalent of one minute in 2 years or one penny in \$10,000.
<b>µg/L</b>	micrograms per liter, equal to parts per billion (ppb). The equivalent of one minute in 2,000 years or one penny in \$10 million.
<b>ng/L</b>	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.
<b>pCi/L</b>	picocuries per liter (a measure of radiation)
<b>n/d</b>	not detected
<b>n/a</b>	not applicable

<b>=</b>	equals
<b>&lt;</b>	less than
<b>*</b>	Based on yearly average except as noted.
<b>1</b>	Filtered water, hourly maximum.
<b>2</b>	EPA considers 50 pCi/L to be the level of concern for beta particles.
<b>3</b>	The MCL and MCLG apply to combined Radium 226 and 228.
<b>4</b>	Most recent sampling, between June and September 2008
<b>5</b>	If more than 10% of qualified customer taps exceed the action level, water system is required to take additional steps to control corrosiveness of their water.
<b>6</b>	Highest running annual average
<b>7</b>	MRDL or MRDLG; based on running annual average.
<b>8</b>	Based on running annual average

## Water is treated to EPA standards

As stewards entrusted to provide safe drinking water to our customers, WSSC treats our water to meet or do better than standards set by the U.S. EPA.

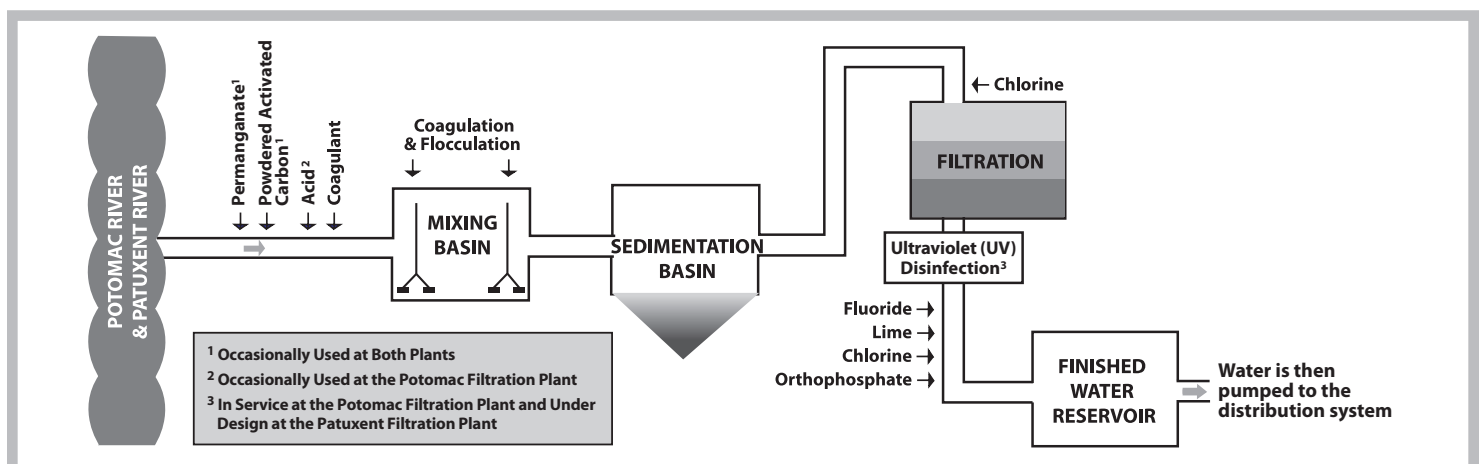
WSSC drinking water undergoes extensive purification and treatment after it arrives at the plant and before it is sent to the distribution system for delivery to half a million homes and businesses. Our water treatment process includes: coagulation and flocculation (to make small particles and microorganisms in the raw source water adhere to each other); sedimentation (to remove most of those particles); filtration (to remove nearly all the remaining particles); 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.

We are also in the process of upgrading our drinking water treatment plants to include UV disinfection as an extra barrier of protection against microbial pathogens such as *Cryptosporidium*. Our Potomac plant has been upgraded and will begin UV disinfection this year, and the UV disinfection upgrade is currently under design for our Patuxent plant.

## Information on *Cryptosporidium* health effects and monitoring

*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. Symptoms of infection include nausea, diarrhea, and abdominal cramps. Most healthy individuals can overcome the disease within a few weeks. However, immunocompromised people, infants and small children, and the 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.

Although filtration removes *Cryptosporidium*, the most commonly used filtration methods cannot guarantee 100 percent removal. We were not required to monitor for *Cryptosporidium* in 2009, but based on our past *Cryptosporidium* monitoring results, our existing treatment processes meet pending EPA requirements for addressing concerns about *Cryptosporidium*. However, as an extra precaution, we have proceeded with the installation of UV disinfection to provide an extra barrier of protection against *Cryptosporidium*.



## Starting at the source

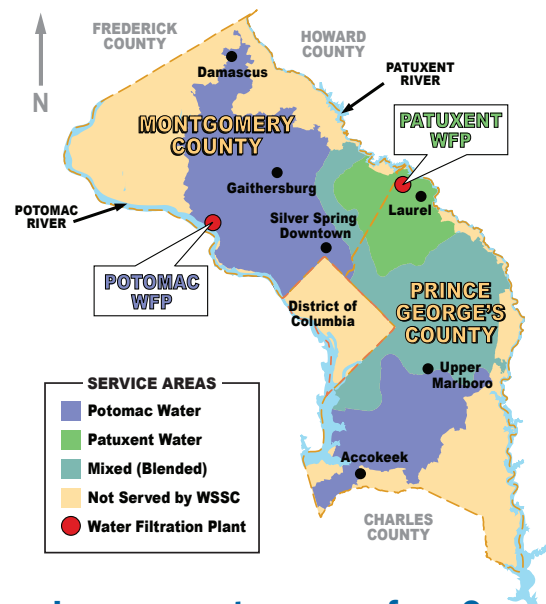
In 2002 and 2004, WSSC conducted source water assessments in cooperation with the Maryland Department of the Environment (MDE) evaluating the vulnerability of our two drinking water sources (Potomac and Patuxent) to contamination. The reports are available for public review at the main branches of the Montgomery and Prince George's County Libraries, or by contacting MDE at 410-537-3714.

Source water from rivers and reservoirs generally picks up contaminants before it reaches water treatment plants. As water travels over the land surface or through the ground on its way to the water body, it dissolves naturally occurring minerals and vegetation/organic matter. It can also pick up pesticides, herbicides, and other synthetic/volatile organic chemicals from agricultural land, golf courses, or residential and urban lands. Sewage treatment plants and septic systems, as well as animal waste from pets, agricultural livestock, and wildlife, may be sources of microbial contaminants. The salts and byproducts from winter road treatments may also be present in source water.

Potential sources of contamination in the Potomac River watershed include urban and agricultural land uses, and potential spills from highways and petroleum pipelines. Contaminants of particular concern include natural organic matter and disinfection by-product (DBP) precursors, pathogenic microorganisms (*Cryptosporidium*, *Giardia*, fecal coliform), taste and odor-causing compounds, ammonia, sediment/turbidity, and algae.

Potential sources of contamination in the Patuxent Reservoirs watershed include transportation, petroleum pipelines, agriculture, on-site septic systems, developed areas, and minor permitted discharges. Phosphorus is the primary contaminant of concern for this watershed. Turbidity, DBP precursors, iron, manganese, and pathogenic microorganisms are also concerns.

WSSC works with local agencies to protect the Potomac and Patuxent drinking water supplies, playing key roles in the Potomac Drinking Water Source Protection Partnership and the Patuxent Reservoirs Watershed Protection Group. Partnering with customers and neighbors is crucial to our efforts. If you are interested in learning more about how you can protect your drinking water supplies, please contact us at 301-206-8100.



## Where does my water come from?

Two rivers, the Patuxent and Potomac, are the sources of all the water we filter and process. The source water treated at the Patuxent Water Filtration Plant (WFP) is held in two reservoirs—Triadelphia and 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 of both plants. As indicated, some areas receive blended water, processed at both the Patuxent and Potomac WFPs.

## Is my water hard or soft?

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

## An Informational 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 [www.epa.gov/safewater/lead](http://www.epa.gov/safewater/lead).



**Washington Suburban  
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