Washington Suburban Sanitary Commission

2010 WATER Quality Report

Dear WSSC Customer:

The Washington Suburban Sanitary Commission (WSSC) is pleased to inform you that once again WSSC drinking water meets or exceeds all U.S. Environmental Protection Agency (USEPA) standards for safety and quality. As we come to our 93rd year, WSSC has never had a drinking water standard violation.

WSSC supplies water to approximately 1.8 million residents in Montgomery and Prince George's counties. We deliver high-quality drinking water from two treatment plants via 5,500 miles of water main, 13 pumping stations and over 60 water storage facilities.

Providing clean drinking water and reliable service is our number one priority and the efforts to do that never stop. We have recently completed renovation of the Potomac Water Filtration Plant which supplies approximately 70 per cent of our system's water. The project has enhanced water quality and ensured compliance with the provisions of the USEPA's Long Term 2 Enhanced Surface Water Treatment Rule. It includes one of the nation's largest ultraviolet disinfection systems for added protection against disease-causing microorganisms.

We are also making progress on the construction of the Bi-County Water Tunnel, scheduled to be completed in 2013. It will ensure an adequate water supply and additional system redundancy for our fast-growing counties well into the future.

Protecting our watershed is very important, so we continue to plant trees and reinforce stream banks to reduce runoff into waterways. We have bought additional acreage along the Patuxent River to provide greater control in those locations, and we have begun developing tougher regulations to reduce erosion on WSSC property along the Patuxent.

WSSC prides itself on being an environmental organization and our concerns go beyond water issues. The direct purchase of wind power provides roughly 30 per cent of the electricity we use. Our photovoltaic project at our Seneca and Western Branch Wastewater Treatment Plants will generate clean, solar energy, and WSSC is part of a research project to test the feasibility of using anaerobic digestion to process biosolids at wastewater treatment plants.

We still have many challenges, not the least of which is the monitoring, repair and replacement of our aging pipelines. Last December we set a one-month record for breaks and leaks – 647; almost 4,000 breaks and leaks over the last two years. We are addressing these challenges and you will hear more about that in the months ahead.

As General Manager, I am committed to moving WSSC forward – all with the focus on providing safe, clean, reliable water and returning it to the environment in a safe, fiscally responsible and environmentally-friendly way.

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 cancer patients undergoing chemotherapy, those 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 from their health care providers about drinking water.

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 (1-800-426-4791) or EPA's website at www.epa.gov/safewater. More information about contaminants and potential health effects also can be obtained from the EPA hotline or 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, or customers can call 301-206-8100 for more information. This report and previous years' water quality reports also are available on our website at www.wsscwater.com/wqr.

The public is invited to a variety of project- and policy-related public hearings and informational workshops throughout the year. Commissioners' 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 each September, in Rockville and in Largo. Public hearings on the proposed budget are usually held in early February.

WSSC provides speakers and tours for schools, homeowner associations and service groups. Each April we organize numerous public events 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

SUBSTANCES	UNITS	PATUXENT TAP		POTOMAC TAP		MCL	MCLG	VIOLATION?	MAJOR SOURCES IN DRINKING WATER
		LEVEL FOUND*	RANGE	LEVEL FOUND*	RANGE	(OR TT)			
PHYSICAL									
Turbidity	NTU	0.09[1]	n/a	0.19[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									
Barium	mg/L	0.025	0.020 - 0.030	0.034	0.028 - 0.043	2	2	NO	Discharge of drilling wastes & metal refineries; erosion of natural deposits
Chromium	µg/L	n/d	n/d	n/d	n/d - <2	100	100	NO	Discharge from steel & pulp mills; erosion of natural deposits
Copper	mg/L	0.015	0.009 - 0.027	<0.002	n/d - 0.007	n/a	n/a	n/a	Erosion of natural deposits; algae control treatment chemicals
INORGANICS									
Residual Chlorine	mg/L	1.9	1.7 - 2.0	1.7	1.0 - 2.7	TT=>0.2	n/a	NO	Water additive used to control microbes
Fluoride	mg/L	0.90	0.61 - 1.23	0.79	0.42 - 1.09	4	4	NO	Water additive which promotes strong teeth; erosion of natural deposits
Nitrate	mg/L	1.4	0.6 - 2.3	1.6	<0.2 - 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	1	1	NO	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
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									
Atrazine	µg/L	n/d	n/d - <1	n/d	n/d - <1	3	3	NO	Runoff from herbicide used on row crops
Dalapon	µg/L	<1	n/d - 1.4	<1	n/d - 1.2	200	200	NO	Runoff from herbicide used on rights of way
Di(2-ethylhexyl) phthalate	µg/L	n/d	n/d - <5	n/d	n/d - <5	6	0	NO	Discharge from rubber & chemical factories
RADIONUCLIDES									
Gross Alpha	pCi/L	<2	<1 - <2	<2	<1 - <2	15	0	NO	Erosion of natural deposits
Gross Beta	pCi/L	2.8	<1.5 - 4.0	3.2	<1.5 - 4.1	50[2]	n/a	NO	Decay of natural and man-made deposits
Radium 228	pCi/L	0.9	0.7 - <1.0	1.2	<0.8 -2.1	5[3]	0[3]	NO	Erosion of natural deposits

SUBSTANCES	UNITS	CUSTOMER TAP[4]		AL	MCLG	VIOLATION?	MAJOR SOURCES IN DRINKING WATER
		90th PERCENTILE[5]	# 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	Corrosion of household plumbing systems

SUBSTANCES	UNITS	DISTRIBUTION SYSTEM		MCL	MCLG	VIOLATION?	MAJOR SOURCES IN DRINKING WATER
		LEVEL FOUND *	RANGE	(OR MRDL)	(OR MRDLG)		
BACTERIOLOGICAL							
Total Coliform	% Positive per month	0.37	0.00 - 1.75	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 Routines 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	1.35[6]	<0.10 - 3.40	4[7]	4[7]	NO	Water additive used to control microbes
Haloacetic Acids (HAA5)	µg/L	33.1[6]	11.0 - 67.2	60[8]	n/a	NO	By-product of drinking water chlorination
Total Trihalomethanes (TTHMs)	µg/L	41.1[6]	10.51 - 114	80[8]	n/a	NO	By-product of drinking water chlorination

DETECTED UNREGULATED CONTAMINANTS

SUBSTANCES	UNITS	PATUXENT TAP		POTOMAC TAP		MCL	MCLG	VIOLATION?	MAJOR SOURCES IN DRINKING WATER
		LEVEL FOUND*	RANGE	LEVEL FOUND*	RANGE	(OR TT)			
PESTICIDES & SYNTHETIC ORGANIC CHEMICALS									
Dicamba	µg/L	n/d	n/d - <2	n/d	n/d	n/a	n/a	n/a	
VOCs									
2,2-Dichloropropane	µg/L	n/d	n/d - <0.5	n/d	n/d++	n/a	n/a	n/a	
RADIONUCLIDES									
Tritium	pCi/L	<100	<100 - <100	<100	<100 - <100	n/a	n/a	n/a	

This report reflects minor textual/formatting changes from the original version that was printed and distributed in June 2011.
++Previously incorrectly reported as "n/a", amended to correct notation.

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 two 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, hourly maximum.
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 2008
5	If more than 10% of qualified customer taps exceed the action level, the water system is required to take additional steps to control corrosiveness of the water.
6	Highest running annual average
7	MRDL or MRDLG, based on running annual average.
8	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 exceed U.S. EPA standards.

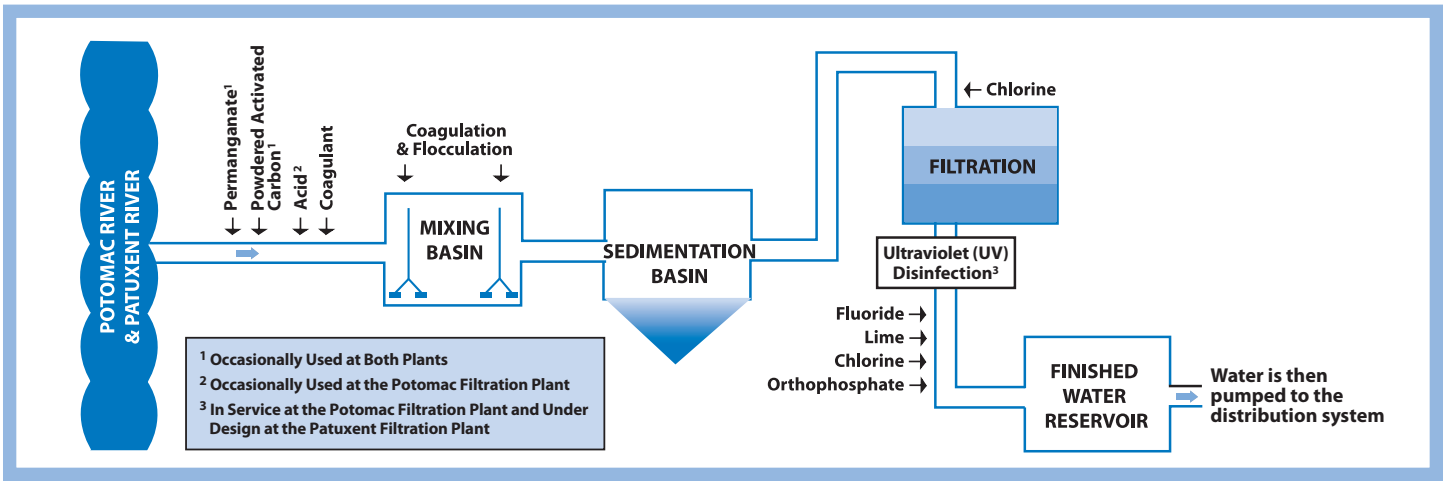
WSSC drinking water undergoes extensive purification and treatment after it arrives at the plant and before it is sent to the distribution system for delivery to half a million homes and businesses. Our water treatment process includes: coagulation and flocculation (to make small particles and microorganisms in the raw source water adhere to each other); sedimentation (to remove most of those particles); 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 have just completed a project at our Potomac plant to upgrade our drinking water treatment to include UV disinfection to provide an extra barrier of protection against microbial pathogens such as *Cryptosporidium*. The UV disinfection upgrade at our Patuxent plant is currently under design.

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. Symptoms of infection include nausea, diarrhea and abdominal cramps. Most healthy individuals can overcome the disease within a few weeks. However, immuno-compromised adults, 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. While our existing treatment processes meet pending EPA requirements for addressing concerns about *Cryptosporidium*, as an extra precaution, we have installed UV disinfection to provide an extra barrier of protection against *Cryptosporidium*.



Where does my water come from?

The Patuxent and Potomac Rivers 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.

Starting at the source

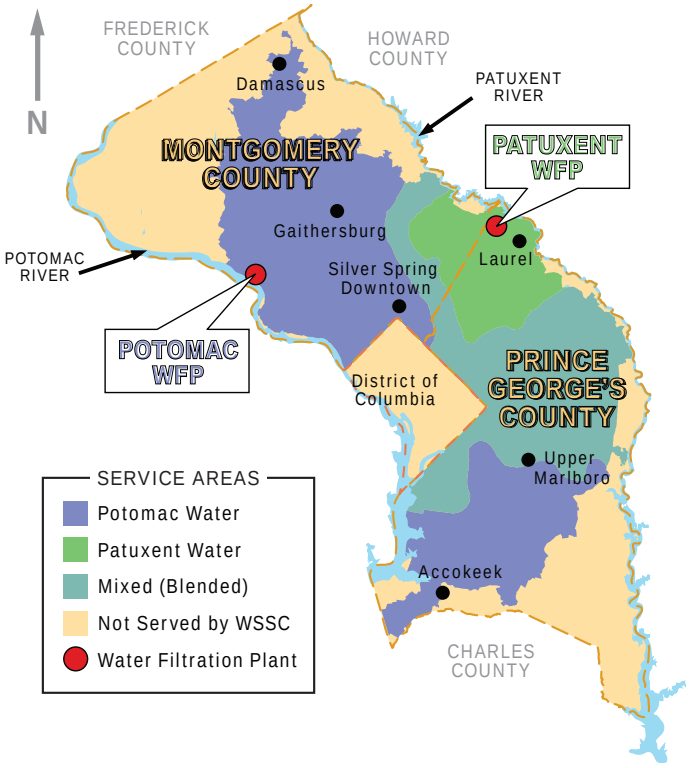
In 2002 and 2004, WSSC conducted source water assessments in cooperation with the MDE, evaluating the vulnerability of our two drinking water sources (Potomac and Patuxent) to contamination. The reports are available for public review at the main branches of the Montgomery and Prince George's county 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 also can 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 byproduct (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 from runoff from urban/suburban and agricultural land uses 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.



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 two 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 EPA's Safe Drinking Water Hotline (1-800-426-4791) or at www. epa.gov/safewater/lead.

Washington Suburban Sanitary Commission

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