

WSSC TAP WATER ANALYSIS - 2007

POTOMAC WATER FILTRATION PLANT					
PARAMETER	UNIT OF MEASURE	YEARLY AVERAGE	MAXIMUM	MINIMUM	EPA LIMIT
<u>GENERAL WATER QUALITY</u>					
Alkalinity	mg/L	90	126	42	
Color	Units	0	0	0	
Hardness	mg/L	138	228	74	
pH	S.U.	7.4	7.6	7.2	
Specific Conductance	µSiemens/cm@25°C	372	617	223	
Temperature	° C	17.4	32.2	1.0	
Threshold Odor	Units	1.0	1.0	1.0	
Turbidity ⁺	NTU	0.04	0.06	0.02	TT
<u>METALS</u>					
Aluminum	µg/L	60	500	20	
Antimony	µg/L	n/d	<2	n/d	6
Arsenic	µg/L	n/d	n/d	n/d	10
Barium	µg/L	34	44	20	2000
Beryllium	µg/L	n/d	n/d	n/d	4
Cadmium	µg/L	n/d	n/d	n/d	5
Calcium	mg/L	38.9	53.4	20.7	
Chromium	µg/L	2	5	n/d	100
Copper	µg/L	<2	8	n/d	
Iron	µg/L	<0.2	0.4	n/d	
Lead	µg/L	n/d	<2	n/d	
Magnesium	mg/L	10.3	17.5	5.01	
Manganese	µg/L	<2	6	n/d	
Mercury	µg/L	n/d	0.2	n/d	2
Potassium	mg/L	3.3	5.1	2.1	
Selenium	µg/L	n/d	<2	n/d	50
Sodium	mg/L	20.5	64.7	5.8	
Thallium	µg/L	n/d	n/d	n/d	2
Zinc	µg/L	<2	8	n/d	
<u>INORGANICS</u>					
Chloride	mg/L	39.3	105	23.1	
Residual Chlorine	mg/L	2.1	4.2	1.3	TT
Fluoride	mg/L	0.91	1.10	0.10	4
Nitrate	mg/L	1.31	3.06	<0.20	10
Nitrite	mg/L	n/d	<0.02	n/d	1
Perchlorate	µg/L	0.55	0.95	0.28	
Phosphorus	mg/L	0.31	0.36	0.25	
Sulfate	mg/L	40.7	72.3	13.6	
<u>DISINFECTION BYPRODUCT PRECURSOR</u>					
Total Organic Carbon	mg/L	2.01	6.93	1.35	TT
<u>PESTICIDES & SYNTHETIC ORGANIC CHEMICALS (SOCs)</u>					
2,3,7,8-TCDD (Dioxin)	pg/L	n/d	n/d	n/d	30
2,4,5 TP (Silvex)	µg/L	n/d	n/d	n/d	50
2,4-D	µg/L	n/d	n/d	n/d	70
Alachlor	µg/L	n/d	n/d	n/d	2
Aldicarb	µg/L	n/d	n/d	n/d	3
Aldicarb sulfone	µg/L	n/d	n/d	n/d	2
Aldicarb sulfoxide	µg/L	n/d	n/d	n/d	4
Atrazine	µg/L	n/d	n/d	n/d	3
Benzo(a)pyrene	µg/L	n/d	n/d	n/d	0.2
Carbofuran	µg/L	n/d	n/d	n/d	40
Chlorinated biphenyls (PCBs)	µg/L	n/d	n/d	n/d	0.5
Chlordane	µg/L	n/d	n/d	n/d	2
Dalapon	µg/L	n/d	n/d	n/d	200
1,2-Dibromo3-chloropropane (DBCP)	µg/L	n/d	n/d	n/d	0.2

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<u>PESTICIDES & SYNTHETIC ORGANIC CHEMICALS (SOCs)</u>					
Di(2-ethylhexyl)adipate	µg/L	n/d	n/d	n/d	400
Di(2-ethylhexyl)phthalate	µg/L	n/d	<2	n/d	6
Dinoseb	µg/L	n/d	n/d	n/d	7
Diquat	µg/L	n/d	n/d	n/d	20
1,2-Dibromoethane (EDB)	µg/L	n/d	n/d	n/d	0.05
Endothall	µg/L	n/d	n/d	n/d	100
Endrin	µg/L	n/d	n/d	n/d	2
Glyphosate	µg/L	n/d	n/d	n/d	700
Heptachlor	µg/L	n/d	n/d	n/d	0.4
Heptachlor epoxide	µg/L	n/d	n/d	n/d	0.2
Hexachlorobenzene	µg/L	n/d	n/d	n/d	1
Hexachlorocyclopentadiene	µg/L	n/d	n/d	n/d	50
Lindane	µg/L	n/d	n/d	n/d	0.2
Methoxychlor	µg/L	n/d	n/d	n/d	40
Oxamyl (vydate)	µg/L	n/d	n/d	n/d	200
Pentachlorophenol	µg/L	n/d	n/d	n/d	1
Picloram	µg/L	n/d	n/d	n/d	500
Simazine	µg/L	n/d	n/d	n/d	4
Toxaphene	µg/L	n/d	n/d	n/d	3
<u>VOLATILE ORGANIC CHEMICALS (VOCs)</u>					
1,1,1-Trichloroethane	µg/L	n/d	n/d	n/d	200
1,1,2-Trichloroethane	µg/L	n/d	n/d	n/d	5
1,1-Dichloroethene	µg/L	n/d	n/d	n/d	7
1,2,4-Trichlorobenzene	µg/L	n/d	n/d	n/d	70
1,2-Dichlorobenzene	µg/L	n/d	n/d	n/d	600
1,2-Dichloroethane	µg/L	n/d	n/d	n/d	5
1,2-Dichloropropane	µg/L	n/d	n/d	n/d	5
1,4-Dichlorobenzene	µg/L	n/d	n/d	n/d	75
Benzene	µg/L	n/d	n/d	n/d	5
Carbon Tetrachloride	µg/L	n/d	n/d	n/d	5
Chlorobenzene	µg/L	n/d	n/d	n/d	100
<i>cis</i> -1,2-Dichloroethene	µg/L	n/d	n/d	n/d	70
Dichloromethane	µg/L	n/d	n/d	n/d	5
Ethylbenzene	µg/L	n/d	n/d	n/d	700
Total Xylenes	µg/L	n/d	n/d	n/d	10000
Styrene	µg/L	n/d	n/d	n/d	100
Tetrachloroethene	µg/L	n/d	n/d	n/d	5
Toluene	µg/L	n/d	n/d	n/d	1000
<i>trans</i> -1,2-Dichloroethene	µg/L	n/d	n/d	n/d	100
Trichloroethene	µg/L	n/d	n/d	n/d	5
Vinyl Chloride	µg/L	n/d	n/d	n/d	2
Bromomethane	µg/L	<0.5	<0.5	n/d	
<u>RADIONUCLIDES</u>					
Gross Alpha	pCi/L	2	2	<1	15
Gross Beta	pCi/L	4	5	3	50 ¹
Radium 228	pCi/L	<1.5	<1.7	<0.9	
<u>BACTERIOLOGICAL</u>					
Cryptosporidium ⁺⁺	Oocyst/L	0.008	0.1	n/d	

CUSTOMER TAP ²					
PARAMETER	UNIT OF MEASURE	90th PERCENTILE ³	# of SITES ABOVE AL	ACTION LEVEL (AL)	EPA LIMIT
Copper	µg/L	123	0 sample	1300	
Lead	µg/L	2.1	1 sample	15	

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DISTRIBUTION SYSTEM					
PARAMETER	UNIT OF MEASURE	YEARLY AVERAGE	MAXIMUM	MINIMUM	EPA LIMIT
<u>BACTERIOLOGICAL</u>					
Samples Total Coliform Positive	%/month	0.34	1.98	0	5
Samples <i>E. coli</i> Positive	%/month	0.04	0.51	0	
No. of <i>E. coli</i> Positive Routine Samples	Count	0.2	2	0	
No. of <i>E. coli</i> Positive Repeat Samples	Count	0	0	0	0
<u>DISINFECTANT & DISINFECTION BYPRODUCTS</u>					
Residual Chlorine	mg/L	1.33 ⁴	4.90	n/d	4 ⁵
Haloacetic Acids (HAAs), Total	µg/L	38.7 ⁶	75.3 ⁺⁺⁺	2.71 ⁺⁺⁺	60
Trihalomethanes (THMs), Total	µg/L	43.8 ⁶	115 ⁺⁺⁺⁺	8.44	80

LEGENDS

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.

S.U. - Standard Unit

+ - Filtered water

++ - Source water

+++ - Previously reported "7.85" as Minimum and "75.1" as Maximum; amended to include inadvertently excluded special monitoring data.

++++ - Previously reported "113" as Maximum; amended to include inadvertently excluded special monitoring data.

NTU - Nephelometric Turbidity Unit

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.

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.

n/d - not detected

pg/L - picograms per liter

pCi/L - picocuries per liter

¹ - EPA considers 50 pCi/L to be the level of concern for beta particles.

² - Most recent sampling, between July and December 2005.

³ - If more than 10% of sites exceed action level, system is required to take additional steps to control corrosiveness of their water.

⁴ - Running annual average

⁵ - Maximum residual disinfectant level (MRDL). The highest level of a disinfectant allowed in drinking water.

⁶ - Highest running annual average

WSSC TAP WATER ANALYSIS - 2007

PATUXENT WATER FILTRATION PLANT					
PARAMETER	UNIT OF MEASURE	YEARLY AVERAGE	MAXIMUM	MINIMUM	EPA LIMIT
<u>GENERAL WATER QUALITY</u>					
Alkalinity	mg/L	32	42	25	
Color	Units	0	10	0	
Hardness	mg/L	61	106	36	
pH	S.U.	7.4	8.0	7.2	
Specific Conductance	µSiemens/cm@25°C	200	402	153	
Temperature	° C	15.9	28.2	2.9	
Threshold Odor	Units	1.1	2.3	1.0	
Turbidity ⁺	NTU	0.04	0.05	0.02	TT
<u>METALS</u>					
Aluminum	µg/L	24	205	9	
Antimony	µg/L	n/d	<2	n/d	6
Arsenic	µg/L	n/d	n/d	n/d	10
Barium	µg/L	24	34	16	2000
Beryllium	µg/L	n/d	n/d	n/d	4
Cadmium	µg/L	n/d	n/d	n/d	5
Calcium	mg/L	19.7	39.0	11.6	
Chromium	µg/L	<2	3	n/d	100
Copper	µg/L	18	36	4	
Iron	mg/L	<0.2	<0.2	n/d	
Lead	µg/L	n/d	<2	n/d	
Magnesium	mg/L	5.6	12.0	3.8	
Manganese	µg/L	<2	5	n/d	
Mercury	µg/L	n/d	0.4	n/d	2
Potassium	mg/L	3.0	3.9	2.4	
Selenium	µg/L	n/d	<2	n/d	50
Sodium	mg/L	13.2	37.6	4.3	
Thallium	µg/L	n/d	n/d	n/d	2
Zinc	µg/L	n/d	3	n/d	
<u>INORGANICS</u>					
Chloride	mg/L	31.0	62.8	21.1	
Residual Chlorine	mg/L	1.6	2.1	1.1	TT
Fluoride	mg/L	1.04	1.40	0.52	4
Nitrate	mg/L	1.18	2.03	0.27	10
Nitrite	mg/L	n/d	<0.02	n/d	1
Phosphorus	mg/L	0.34	0.47	<0.20	
Sulfate	mg/L	12.1	39.4	<10	
<u>DISINFECTION BYPRODUCT PRECURSOR</u>					
Total Organic Carbon	mg/L	1.79	5.47	1.25	TT
<u>PESTICIDES & SYNTHETIC ORGANIC CHEMICALS (SOCs)</u>					
2,3,7,8-TCDD (Dioxin)	pg/L	n/d	n/d	n/d	30
2,4,5 TP (Silvex)	µg/L	n/d	n/d	n/d	50
2,4-D	µg/L	n/d	n/d	n/d	70
Alachlor	µg/L	n/d	n/d	n/d	2
Aldicarb	µg/L	n/d	n/d	n/d	3
Aldicarb sulfone	µg/L	n/d	n/d	n/d	2
Aldicarb sulfoxide	µg/L	n/d	n/d	n/d	4
Atrazine	µg/L	n/d	n/d	n/d	3
Benzo(a)pyrene	µg/L	n/d	n/d	n/d	0.2
Carbofuran	µg/L	n/d	n/d	n/d	40
Chlorinated biphenyls (PCBs)	µg/L	n/d	n/d	n/d	0.5
Chlordane	µg/L	n/d	n/d	n/d	2
Dalapon	µg/L	n/d	n/d	n/d	200
1,2-Dibromo3-chloropropane (DBCP)	µg/L	n/d	n/d	n/d	0.2
Di(2-ethylhexyl)adipate	µg/L	n/d	n/d	n/d	400

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PATUXENT WATER FILTRATION PLANT					
PARAMETER	UNIT OF MEASURE	YEARLY AVERAGE	MAXIMUM	MINIMUM	EPA LIMIT

PESTICIDES & SYNTHETIC ORGANIC CHEMICALS (SOCs)

Di(2-ethylhexyl)phthalate	µg/L	n/d	<2	n/d	6
Dinoseb	µg/L	n/d	n/d	n/d	7
Diquat	µg/L	n/d	n/d	n/d	20
1,2-Dibromoethane (EDB)	µg/L	n/d	n/d	n/d	0.05
Endothall	µg/L	n/d	n/d	n/d	100
Endrin	µg/L	n/d	n/d	n/d	2
Glyphosate	µg/L	n/d	n/d	n/d	700
Heptachlor	µg/L	n/d	n/d	n/d	0.4
Heptachlor epoxide	µg/L	n/d	n/d	n/d	0.2
Hexachlorobenzene	µg/L	n/d	n/d	n/d	1
Hexachlorocyclopentadiene	µg/L	n/d	n/d	n/d	50
Lindane	µg/L	n/d	n/d	n/d	0.2
Methoxychlor	µg/L	n/d	n/d	n/d	40
Oxamyl (vydate)	µg/L	n/d	n/d	n/d	200
Pentachlorophenol	µg/L	n/d	n/d	n/d	1
Picloram	µg/L	n/d	n/d	n/d	500
Simazine	µg/L	n/d	n/d	n/d	4
Toxaphene	µg/L	n/d	n/d	n/d	3

VOLATILE ORGANIC CHEMICALS (VOCs)

1,1,1-Trichloroethane	µg/L	n/d	n/d	n/d	200
1,1,2-Trichloroethane	µg/L	n/d	n/d	n/d	5
1,1-Dichloroethene	µg/L	n/d	n/d	n/d	7
1,2,4-Trichlorobenzene	µg/L	n/d	<0.5	n/d	70
1,2-Dichlorobenzene	µg/L	n/d	n/d	n/d	600
1,2-Dichloroethane	µg/L	n/d	n/d	n/d	5
1,2-Dichloropropane	µg/L	n/d	n/d	n/d	5
1,4-Dichlorobenzene	µg/L	n/d	n/d	n/d	75
Benzene	µg/L	n/d	n/d	n/d	5
Carbon Tetrachloride	µg/L	n/d	<0.5	n/d	5
Chlorobenzene	µg/L	n/d	n/d	n/d	100
<i>cis</i> -1,2-Dichloroethene	µg/L	n/d	n/d	n/d	70
Dichloromethane	µg/L	n/d	n/d	n/d	5
Ethylbenzene	µg/L	n/d	n/d	n/d	700
Total Xylenes	µg/L	n/d	n/d	n/d	10000
Styrene	µg/L	n/d	n/d	n/d	100
Tetrachloroethene	µg/L	n/d	n/d	n/d	5
Toluene	µg/L	n/d	n/d	n/d	1000
<i>trans</i> -1,2-Dichloroethene	µg/L	n/d	n/d	n/d	100
Trichloroethene	µg/L	n/d	n/d	n/d	5
Vinyl Chloride	µg/L	n/d	n/d	n/d	2
Bromomethane	µg/L	n/d	<0.5	n/d	
Chloromethane	µg/L	n/d	<0.5	n/d	

RADIONUCLIDES

Gross Alpha	pCi/L	1	2	<1	15
Gross Beta	pCi/L	4	5	<3	50 ¹
Radium 228	pCi/L	<1.5	<1.7	<0.8	

BACTERIOLOGICAL

Cryptosporidium ++	Oocyst/L	n/d	n/d	n/d	
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CUSTOMER TAP²

PARAMETER	UNIT OF MEASURE	90th PERCENTILE³	# of SITES ABOVE AL	ACTION LEVEL (AL)	EPA LIMIT
Copper	µg/L	123	0 sample	1300	
Lead	µg/L	2.1	1 sample	15	

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DISTRIBUTION SYSTEM					
PARAMETER	UNIT OF MEASURE	YEARLY AVERAGE	MAXIMUM	MINIMUM	EPA LIMIT
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Samples Total Coliform Positive	%/month	0.34	1.98	0	5
Samples <i>E. coli</i> Positive	%/month	0.04	0.51	0	
No. of <i>E. coli</i> Positive Routine Samples	Count	0.2	2	0	
No. of <i>E. coli</i> Positive Repeat Samples	Count	0	0	0	0
<u>DISINFECTANT & DISINFECTION BYPRODUCTS</u>					
Residual Chlorine	mg/L	1.33 ⁴	4.90	n/d	4 ⁵
Haloacetic Acids (HAAs), Total	µg/L	38.7 ⁶	75.3 ⁺⁺⁺	2.71 ⁺⁺⁺	60
Trihalomethanes (THMs), Total	µg/L	43.8 ⁶	115 ⁺⁺⁺⁺	8.44	80

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