



**WATER QUALITY LABORATORY  
INORGANIC ANALYSES  
PERIOD OF 01/01/2005 TO 12/31/2005  
Lorton Treatment Plants Finished Water**

Parameter	MCL <sup>1</sup>	Units <sup>2</sup>	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Avg	Max	Min	Quant Limit	# of Tests
Aggressive Index Number		Units	--	10	11	11	12	11	--	11	11	12	--	11	11	12	10	-	18
Alkalinity, Bicarbonate		mg/L	--	36	50	39	58	58	--	56	69	44	--	60	52	74	34	-	18
Alkalinity, Carbonate		mg/L	--	0	0	0	0	0	--	0	0	0	--	0	0	0	0	-	18
Alkalinity, Hydroxyl		mg/L	--	0	0	0	0	0	--	0	0	0	--	0	0	0	0	-	18
Alkalinity, Phenolphthalein		mg/L	--	0	0	0	0	0	--	0	0	0	--	0	0	0	0	-	18
Alkalinity, Total		mg/L	--	36	50	39	58	58	--	56	69	44	--	60	52	74	34	-	18
Bromate	10 P	µg/L	BQL	--	--	BQL	--	--	BQL	--	--	BQL	--	--	BQL	BQL	BQL	10	8
Bromide		mg/L	--	BQL	0.02	BQL	0.01	--	--	BQL	0.01	BQL	--	BQL	BQL	0.02	BQL	0.01	16
Carbon Dioxide		mg/L	--	6	3	4	4	5	--	9	11	1	--	6	5	16	0	-	18
Chloride	250.0 S	mg/L	--	28.7	58.9	27.0	34.0	29.9	--	37.1	38.4	27.5	--	34.0	35.0	59.9	25.2	5.0	18
Chlorine, Free		mg/L	--	0.1	0.1	4.3	4.4	4.2	--	0.7	0.4	0.2	--	0.2	1.6	4.6	0.0	0.0	18
Chlorine, Total		mg/L	--	3.8	3.3	4.6	4.6	4.5	--	4.2	4.5	3.9	--	3.8	4.1	5.0	2.6	0.0	18
Color	15 S	Units	--	2	2	0	0	1	--	10	5	4	--	2	3	12	0	0	18
Dissolved Oxygen		mg/L	--	10.8	12.1	9.8	8.4	4.9	--	4.4	3.5	3.8	--	7.5	7.2	13.1	3.3	0.0	18
Fluoride	4.0/2.0 P/S	mg/L	--	0.8	0.8	1.0	0.8	1.0	--	1.2	1.2	0.9	--	0.7	0.9	1.5	0.5	0.2	18
Hardness, Calcium		mg/L	--	65	86	63	79	81	--	87	106	71	--	86	80	109	60	-	18
Hardness, Total		mg/L	--	87	115	86	109	106	--	116	138	90	--	115	107	140	83	-	18
Methylene Blue Activated Substances	0.5 S	mg/L	--	--	--	--	BQL	BQL	--	--	--	--	--	--	BQL	0.054	BQL	0.050	3
N, Ammonia (Ammonia as N)		mg/L	--	1.09	1.09	0.06	BQL	BQL	--	0.84	1.19	--	--	1.14	0.67	1.35	BQL	0.05	16
N, Nitrate (Nitrate as N)	10 P	mg/L	--	1.4	1.3	0.7	1.2	1.3	--	1.1	1.8	1.2	--	2.8	1.4	2.8	0.7	0.2	18
N, Nitrite (Nitrite as N)	1 P	mg/L	--	BQL	BQL	--	BQL	BQL	--	BQL	--	0.01	--	BQL	BQL	0.02	BQL	0.01	14
pH	6.5-8.5 S	Units	--	7.1	7.6	7.3	7.6	7.4	--	7.1	7.2	8.1	--	7.4	7.4	8.5	6.9	-	18
Phosphate as Phosphorous		mg/L	--	0.52	0.53	0.43	0.49	--	--	0.46	0.51	0.57	--	0.64	0.52	0.64	0.38	0.20	16
Solids, Fixed		mg/L	--	139	--	149	124	191	--	183	209	146	--	170	164	214	120	1	16
Solids, Total		mg/L	--	245	295	273	252	289	--	289	332	217	--	259	272	333	207	1	18
Solids, Total Dissolved	500 S	mg/L	--	--	231	173	140	199	--	213	243	136	--	199	192	250	127	1	16
Solids, Total Suspended		mg/L	--	BQL	BQL	BQL	BQL	BQL	--	BQL	--	BQL	--	BQL	BQL	1	BQL	1	16
Solids, Volatile		mg/L	--	106	199	124	128	99	--	--	123	72	--	90	117	207	56	1	16
Specific Conductivity		µmhos/cm	--	258	390	245	309	280	--	328	370	241	--	324	305	398	238	0	18
Sulfate	250.0 S	mg/L	--	31.4	39.7	30.7	33.8	31.8	--	39.0	44.6	19.6	--	37.3	34.2	44.8	13.4	5.0	18
Taste		Units	--	2	3	4	2	2	--	2	3	4	--	2	3	4	2	1	18
Temperature		°C	--	10.8	10.9	14.7	18.1	21.0	--	26.1	25.2	17.5	--	9.3	17.1	26.4	9.3	-	18
Threshold Odor Number	3 S	Units	--	5	2	11	8	4	--	5	3	5	--	1	5	11	1	1	18
Total Organic Carbon		mg/L	--	2.3	1.8	2.1	2.3	2.7	--	3.0	3.0	4.0	--	3.0	2.7	4.2	1.8	0.5	18
Turbidity	≤5 P	NTU	--	0.15	0.23	0.43	0.23	0.33	--	2.25	0.75	0.38	--	0.28	0.56	3.10	0.15	0.00	18

Monthly result composed from an average of parameter results for Lorton Treatment Plant finished water points of entry to distribution system.

BQL = The lowest quantitation limit of all analyses for the particular parameter, Below Quantitation Limit.

<sup>1</sup> Environmental Protection Agency/Virginia Department of Health established levels for drinking water

P=Primary-enforceable, S=Secondary-non-enforceable, AL=Action Level on specific taps, MCL=Maximum Contaminant Level.

<sup>2</sup> mg/L=milligrams per liter, µg/L=micrograms per liter



**WATER QUALITY LABORATORY  
METAL ANALYSES  
PERIOD OF 01/01/2005 TO 12/31/2005  
Lorton Treatment Plants Finished Water**

Parameter	MCL <sup>1</sup>	Units <sup>2</sup>	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Avg	Max	Min	Quant Limit	# of Tests
Aluminum	50-200 S	µg/L	--	53	--	--	75	--	--	33	--	--	--	--	54	125	24	20	6
Antimony	6 P	µg/L	--	BQL	--	--	BQL	--	--	BQL	--	--	--	--	BQL	BQL	BQL	4	6
Arsenic	50 P	µg/L	--	BQL	--	--	BQL	--	--	BQL	--	--	--	--	BQL	BQL	BQL	2	6
Barium	2000 P	µg/L	--	81	--	--	36	--	--	29	--	--	--	--	49	82	28	2	6
Beryllium	4 P	µg/L	--	BQL	--	--	BQL	--	--	BQL	--	--	--	--	BQL	BQL	BQL	1	6
Cadmium	5 P	µg/L	--	BQL	--	--	BQL	--	--	BQL	--	--	--	--	BQL	BQL	BQL	1	6
Calcium		mg/L	--	27.5	--	--	32.2	--	--	39.1	--	--	--	--	32.9	39.2	26.7	0.5	6
Chromium	100 P	µg/L	--	BQL	--	--	BQL	--	--	BQL	--	--	--	--	BQL	BQL	BQL	1	6
Copper	1300 AL	µg/L	--	BQL	BQL	BQL	BQL	BQL	--	5	4	2	--	BQL	BQL	6	BQL	2	18
Iron	300 S	µg/L	--	BQL	BQL	BQL	BQL	BQL	--	BQL	BQL	BQL	--	BQL	BQL	BQL	BQL	20	18
Lead	15 AL	µg/L	--	BQL	--	--	BQL	--	--	BQL	--	--	--	--	BQL	BQL	BQL	0.37	6
Magnesium		mg/L	--	4.6	--	--	5.7	--	--	5.2	--	--	--	--	5.2	5.7	4.5	0.5	6
Manganese	50 S	µg/L	--	BQL	BQL	BQL	BQL	BQL	--	BQL	BQL	3	--	BQL	BQL	6	BQL	2	18
Mercury	2 P	µg/L	--	--	BQL	--	BQL	--	--	--	--	--	--	--	BQL	BQL	BQL	0.5	4
Nickel	100 P	µg/L	--	BQL	--	--	BQL	--	--	BQL	--	--	--	--	BQL	BQL	BQL	5	6
Potassium		mg/L	--	3.1	--	--	3.0	--	--	5.1	--	--	--	--	3.7	5.1	3.0	0.5	6
Selenium	50 P	µg/L	--	BQL	--	--	BQL	--	--	BQL	--	--	--	--	BQL	BQL	BQL	4	6
Silicon		mg/L	--	5	--	--	2	--	--	4	--	--	--	--	4	5	BQL	1	6
Silver	100 S	µg/L	--	BQL	--	--	BQL	--	--	BQL	--	--	--	--	BQL	BQL	BQL	0.5	6
Sodium		mg/L	--	12.3	26.9	12.1	17.7	15.2	--	18.8	22.0	10.3	--	18.0	17.0	27.1	9.7	1.0	18
Thallium	2 P	µg/L	--	BQL	--	--	BQL	--	--	BQL	--	--	--	--	BQL	BQL	BQL	2	6
Zinc	5000 S	µg/L	--	195	--	--	124	--	--	172	--	--	--	--	163	243	58	25	6

Monthly result composed from an average of parameter results for Lorton Treatment Plant finished water points of entry to distribution system.

BQL = The lowest quantitation limit of all analyses for the particular parameter, Below Quantitation Limit.

<sup>1</sup> Environmental Protection Agency/Virginia Department of Health established levels for drinking water

P=Primary-enforceable, S=Secondary-non-enforceable, AL=Action Level on specific taps, MCL=Maximum Contaminant Level.

<sup>2</sup> mg/L=milligrams per liter, µg/L=micrograms per liter