



**WATER QUALITY LABORATORY  
INORGANIC ANALYSES  
PERIOD OF 01/01/2004 TO 12/31/2004  
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	--	11	11	11	11	11	--	11	11	11	11	--	11	11	10	-	18
Alkalinity, Bicarbonate		mg/L	--	33	25	32	49	58	--	64	64	50	52	--	47	65	21	-	18
Alkalinity, Carbonate		mg/L	--	0	14	0	0	0	--	0	0	0	0	--	2	28	0	-	18
Alkalinity, Hydroxyl		mg/L	--	0	0	0	0	0	--	0	0	0	0	--	0	0	0	-	18
Alkalinity, Phenolphthalein		mg/L	--	0	7	0	0	0	--	0	0	0	0	--	1	14	0	-	18
Alkalinity, Total		mg/L	--	33	39	32	49	58	--	64	64	50	52	--	49	65	29	-	18
Bromate	10 P	µg/L	BQL	--	--	BQL	--	--	BQL	--	--	BQL	--	--	BQL	BQL	BQL	5	10
Bromide		mg/L	--	0.01	0.02	BQL	0.01	0.02	--	0.01	0.02	BQL	BQL	--	BQL	0.02	BQL	0.01	18
Carbon Dioxide		mg/L	--	4	4	4	15	10	--	12	7	3	9	--	7	21	1	-	18
Chemical Oxygen Demand		mg/L	--	5.9	--	--	--	BQL	--	--	--	--	--	--	BQL	5.9	BQL	5.0	4
Chloride	250.0 S	mg/L	--	81.3	44.1	31.5	30.9	33.8	--	38.2	37.4	28.3	32.5	--	39.8	81.7	28.1	5.0	18
Chlorine, Free		mg/L	--	0.1	0.2	4.5	3.8	4.4	--	0.3	0.3	0.0	0.3	--	1.5	4.5	0.0	0.0	18
Chlorine, Total		mg/L	--	3.7	4.5	4.5	4.0	4.5	--	3.1	4.3	3.7	3.8	--	4.0	4.8	2.3	0.0	18
Color	15 S	Units	--	5	3	2	2	0	--	3	5	0	--	--	2	6	0	0	16
Dissolved Oxygen		mg/L	--	13.8	14.3	10.3	5.0	5.0	--	3.5	5.2	4.8	9.2	--	7.9	14.6	3.4	0.0	18
Fluoride	4.0/2.0 P/S	mg/L	--	0.8	0.6	0.8	1.1	1.0	--	1.4	1.2	1.1	0.7	--	1.0	1.6	0.2	0.2	18
Hardness, Calcium		mg/L	--	70	67	62	73	94	--	99	92	76	80	--	79	99	60	-	18
Hardness, Total		mg/L	--	90	82	77	103	109	--	120	114	97	--	--	99	120	70	-	16
Methylene Blue Activated Substances	0.5 S	mg/L	--	--	--	--	BQL	--	--	--	--	--	--	--	BQL	BQL	BQL	0.050	2
N, Ammonia (Ammonia as N)		mg/L	--	1.30	0.86	--	BQL	0.10	--	1.13	1.12	1.29	--	--	0.83	1.37	BQL	0.05	14
N, Nitrate (Nitrate as N)	10 P	mg/L	--	1.1	1.0	0.8	1.0	1.5	--	1.0	1.2	1.0	1.3	--	1.1	1.5	0.8	0.2	18
N, Nitrite (Nitrite as N)	1 P	mg/L	--	0.03	0.02	BQL	BQL	BQL	--	BQL	BQL	BQL	BQL	--	BQL	0.03	BQL	0.01	18
pH	6.5-8.5 S	Units	--	7.4	7.2	7.3	6.9	7.1	--	7.1	7.3	7.6	7.1	--	7.2	7.7	6.6	-	18
Phosphate as Phosphorous		mg/L	--	0.64	0.55	0.34	0.38	0.39	--	0.38	0.31	0.44	0.44	--	0.43	0.80	0.25	0.20	18
Solids, Fixed		mg/L	--	172	150	116	158	173	--	184	193	145	170	--	162	199	106	1	18
Solids, Total		mg/L	--	266	229	217	249	296	--	296	250	220	252	--	253	303	173	1	18
Solids, Total Dissolved	500 S	mg/L	--	192	171	132	130	204	--	209	215	140	143	--	170	223	83	1	18
Solids, Total Suspended		mg/L	--	1	BQL	BQL	BQL	BQL	--	2	1	BQL	BQL	--	BQL	3	BQL	1	18
Solids, Volatile		mg/L	--	94	79	101	91	124	--	112	57	75	--	--	91	131	27	1	16
Specific Conductivity		µmhos/cm	--	367	285	191	265	314	--	340	321	266	277	--	292	368	186	0	18
Sulfate	250.0 S	mg/L	--	23.1	26.8	20.9	28.0	37.9	--	40.6	39.4	27.6	33.1	--	30.8	41.8	19.9	5.0	18
Taste		Units	--	3	3	4	3	2	--	3	2	2	2	--	2	4	2	1	17
Temperature		°C	--	6.2	10.8	15.1	19.9	22.8	--	24.4	21.5	17.1	13.3	--	16.8	24.9	5.9	-	18
Threshold Odor Number	3 S	Units	--	11	6	20	10	8	--	3	7	5	4	--	8	25	1	1	18
Total Organic Carbon		mg/L	--	2.7	1.5	2.0	2.2	1.9	--	2.0	2.3	2.7	2.7	--	2.2	2.8	1.5	0.5	18
Turbidity	≤5 P	NTU	--	0.50	0.55	0.23	0.33	0.23	--	0.70	0.60	0.23	0.15	--	0.39	1.00	0.10	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 01/01/2004 TO 12/31/2004  
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	--	174	--	--	35	--	--	37	--	--	--	--	82	212	27	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	2	4
Barium	2000 P	µg/L	--	55	--	--	--	--	--	50	--	--	--	--	52	56	47	10	4
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	--	28.1	--	--	34.5	--	--	37.7	--	--	31.8	--	33.0	38.4	27.1	0.5	8
Chromium	100 P	µg/L	--	BQL	--	--	BQL	--	--	BQL	--	--	--	--	BQL	BQL	BQL	1	6
Copper	1300 AL	µg/L	--	BQL	BQL	BQL	BQL	BQL	--	BQL	BQL	BQL	BQL	--	BQL	BQL	BQL	40	18
Iron	300 S	µg/L	--	BQL	BQL	BQL	BQL	BQL	--	BQL	BQL	BQL	BQL	--	BQL	BQL	BQL	60	18
Lead	15 AL	µg/L	--	BQL	--	--	BQL	--	--	BQL	--	--	--	--	BQL	BQL	BQL	0.29	6
Magnesium		mg/L	--	5.1	--	--	5.4	--	--	5.9	--	--	--	--	5.5	5.9	4.9	0.5	6
Manganese	50 S	µg/L	--	BQL	BQL	BQL	BQL	BQL	--	BQL	BQL	BQL	BQL	--	BQL	BQL	BQL	25	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	--	3.8	--	--	2.7	--	--	4.1	--	--	--	--	3.5	4.1	2.7	0.5	6
Selenium	50 P	µg/L	--	BQL	--	--	BQL	--	--	BQL	--	--	--	--	BQL	BQL	BQL	4	6
Silicon		mg/L	--	BQL	--	--	BQL	--	--	5	--	--	--	--	BQL	5	BQL	4	6
Silver	100 S	µg/L	--	BQL	--	--	BQL	--	--	BQL	--	--	--	--	BQL	BQL	BQL	0.5	6
Sodium		mg/L	--	37.3	19.4	12.7	14.2	18.5	--	20.1	20.2	13.7	16.1	--	19.1	37.4	12.6	5.0	18
Thallium	2 P	µg/L	--	BQL	--	--	BQL	--	--	BQL	--	--	--	--	BQL	BQL	BQL	1	6
Zinc	5000 S	µg/L	--	151	--	--	130	--	--	155	--	--	--	--	145	181	110	25	6

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