



**WATER QUALITY LABORATORY  
INORGANIC ANALYSES  
PERIOD OF 01/01/2011 TO 12/31/2011  
Occoquan Reservoir – Griffith Water Treatment Plant Source**

Parameter	Units <sup>1</sup>	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Avg	Max	Min	Quant Limit <sup>2</sup>	# of Tests
Aggressive Index Number	Units	--	11	10	10	10	--	11	11	10	10	11	11	11	11	10	-	10
Alkalinity, Bicarbonate	mg/L	61	50	37	44	41	--	60	70	41	40	51	62	51	70	37	-	11
Alkalinity, Carbonate	mg/L	0	0	0	0	0	--	0	0	0	0	0	0	0	0	0	-	11
Alkalinity, Hydroxyl	mg/L	0	0	0	0	0	--	0	0	0	0	0	0	0	0	0	-	11
Alkalinity, Phenolphthalein	mg/L	0	0	0	0	0	--	0	0	0	0	0	0	0	0	0	-	11
Alkalinity, Total	mg/L	61	50	37	44	41	--	60	70	41	40	51	62	51	70	37	-	11
Bromide	mg/L	0.03	0.05	0.02	0.03	0.02	--	0.03	0.04	0.02	0.02	0.02	0.03	0.03	0.05	0.02	0.01	11
Carbon Dioxide	mg/L	--	5	4	7	8	--	12	9	10	6	11	5	8	12	4	-	10
Chloride	mg/L	34.1	122.3	35.9	37.7	27.8	--	34.1	40.2	18.8	17.3	20.0	27.3	37.8	122.3	17.3	5.0	11
Color	Units	33	66	74	70	50	--	38	40	53	107	59	27	56	107	27	0	11
Dissolved Oxygen	mg/L	11.0	10.5	9.4	7.6	4.4	--	--	4.0	1.7	5.6	6.4	8.3	6.9	11.0	1.7	0.0	10
Fluoride	mg/L	0.3	BQL	BQL	BQL	BQL	--	0.2	0.3	0.2	BQL	BQL	BQL	BQL	0.3	BQL	0.2	11
Hardness, Calcium	mg/L	64	73	40	43	40	--	61	76	38	43	48	71	54	76	38	-	11
Hardness, Total	mg/L	98	113	61	72	52	--	86	101	59	62	70	98	79	113	52	-	11
Methylene Blue Activated Substances	mg/L	--	--	--	--	--	--	BQL	--	--	--	--	--	BQL	BQL	BQL	0.05	1
N, Ammonia (Ammonia as N)	mg/L	BQL	--	BQL	BQL	BQL	--	0.24	0.33	BQL	BQL	BQL	BQL	BQL	0.33	BQL	0.20	10
N, Nitrate (Nitrate as N)	mg/L	2.0	1.2	0.8	0.6	0.4	--	0.8	0.5	1.2	1.0	1.1	1.3	1.0	2.0	0.4	0.2	11
N, Nitrite (Nitrite as N)	mg/L	0.02	0.06	0.01	0.01	0.03	--	0.02	0.02	0.08	0.02	0.02	0.02	0.03	0.08	BQL	0.01	11
pH	Units	--	7.3	7.3	7.1	7.0	--	7.0	7.2	6.9	7.1	7.2	7.4	7.2	7.4	6.9	-	10
Phosphate as Phosphorous	mg/L	BQL	BQL	BQL	BQL	BQL	--	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	0.10	11
Solids, Total	mg/L	205	353	155	170	158	--	178	217	144	151	141	197	188	353	141	1	11
Solids, Total Dissolved	mg/L	196	319	146	152	136	--	165	203	99	142	157	110	166	319	99	1	11
Solids, Total Suspended	mg/L	2	4	6	12	2	--	2	3	2	6	5	4	4	12	2	1	11
Specific Conductivity	µmhos/cm	337	611	252	260	220	--	288	365	192	180	--	291	300	611	180	0	10
Sulfate	mg/L	37.6	30.8	16.1	20.1	15.8	--	27.0	34.4	19.1	17.5	19.3	33.3	24.6	37.6	15.8	5.0	11
Temperature	°C	--	4.7	10.8	14.3	16.5	--	23.4	25.4	21.4	18.6	14.0	11.4	16.1	25.4	4.7	-	10
Threshold Odor Number	Units	12	11	5	7	5	--	16	25	9	7	7	3	10	25	3	0	11
Total Organic Carbon	mg/L	4.7	4.8	4.8	5.5	6.2	--	5.6	5.2	6.8	7.0	6.5	4.2	5.6	7.0	4.2	0.5	11
Turbidity	NTU	2.4	12	14	21	4.1	--	3.2	2.8	3.9	18	7.1	4.5	8.5	21	2.4	0.00	11

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

<sup>1</sup> mg/L = milligrams per liter, µg/L = micrograms per liter, µmhos/cm = micromhos per centimeter, NTU = Nephelometric Turbidity Units

<sup>2</sup> Quant Limit = Quantitation Limit = lowest level of measurement



**WATER QUALITY LABORATORY  
METAL ANALYSES  
PERIOD OF 01/01/2011 TO 12/31/2011  
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Parameter	Units <sup>1</sup>	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Avg	Max	Min	Quant Limit <sup>2</sup>	# of Tests
Aluminum	µg/L	63.0	--	--	1125	--	--	45.6	--	--	1019	--	--	563	1125	45.6	25.0	4
Antimony	µg/L	BQL	--	--	BQL	--	--	BQL	--	--	BQL	--	--	BQL	BQL	BQL	2.0	4
Arsenic	µg/L	BQL	--	--	BQL	--	--	BQL	--	--	BQL	--	--	BQL	BQL	BQL	2.0	4
Barium	µg/L	36.0	--	--	36.9	--	--	39.0	--	--	31.9	--	--	36.0	39.0	31.9	25.0	4
Beryllium	µg/L	BQL	--	--	BQL	--	--	BQL	--	--	BQL	--	--	BQL	BQL	BQL	2.0	4
Cadmium	µg/L	BQL	--	--	BQL	--	--	BQL	--	--	BQL	--	--	BQL	BQL	BQL	2.0	4
Calcium	mg/L	29.3	--	--	19.8	--	--	24.8	--	--	16.8	--	--	22.7	29.3	16.8	1.0	4
Chromium	µg/L	BQL	--	--	BQL	--	--	BQL	--	--	BQL	--	--	BQL	BQL	BQL	5.0	4
Copper	µg/L	BQL	BQL	BQL	BQL	BQL	--	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	25.0	11
Iron	µg/L	184	654	786	1450	347	--	277	508	338	830	643	273	572	1450	184	25.0	11
Lead	µg/L	BQL	--	--	BQL	--	--	BQL	--	--	BQL	--	--	BQL	BQL	BQL	2.0	4
Magnesium	mg/L	6.6	--	--	5.6	--	--	5.8	--	--	4.4	--	--	5.6	6.6	4.4	1.0	4
Manganese	µg/L	131	112	105	151	63.1	--	433	564	239	53.1	167	94.6	192	564	53.1	25.0	11
Mercury	µg/L	BQL	--	--	--	--	--	BQL	--	--	--	--	--	BQL	BQL	BQL	0.50	2
Nickel	µg/L	BQL	--	--	BQL	--	--	BQL	--	--	BQL	--	--	BQL	BQL	BQL	5.0	4
Potassium	mg/L	5.2	--	--	2.8	--	--	4.2	--	--	3.9	--	--	4.0	5.2	2.8	1.0	4
Selenium	µg/L	BQL	--	--	BQL	--	--	BQL	--	--	BQL	--	--	BQL	BQL	BQL	5.0	4
Silicon	mg/L	4.4	--	--	--	--	--	3.7	--	--	4.5	--	--	4.2	4.5	3.7	1.0	3
Silver	µg/L	BQL	--	--	BQL	--	--	BQL	--	--	BQL	--	--	BQL	BQL	BQL	5.0	4
Sodium	mg/L	23.6	60.9	19.1	21.9	16.8	--	22.5	25.4	13.3	11.9	13.4	18.6	22.5	60.9	11.9	1.0	11
Thallium	µg/L	BQL	--	--	BQL	--	--	BQL	--	--	BQL	--	--	BQL	BQL	BQL	2.0	4
Zinc	µg/L	BQL	--	--	BQL	--	--	BQL	--	--	BQL	--	--	BQL	BQL	BQL	25.0	4

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

<sup>1</sup> mg/L = milligrams per liter, µg/L = micrograms per liter

<sup>2</sup> Quant Limit = Quantitation Limit = lowest level of measurement