

**TABLE 2-3
ATTAWAPISKAT RIVER WATER QUALITY SAMPLES (1999 to August 2003) AND SUPPLEMENTAL STATIONS**

Parameters	Units	MDL	PWQO CRITERIA	CEQG PAL CRITERIA	ODWS CRITERIA	CDWQG CRITERIA	Near Victor Site (1999 - 2003)						Near Community of Attawapiskat					
							UPSTREAM (45 samples)			DOWNSTREAM (46 samples)			At Barge Site July 2, 2002	Upstream Island July 2, 2002	High Tide (July 2003)		Low Tide (July 2003)	
							Observed Range	Mean	75th Percentile	Observed Range	Mean	75th Percentile			At Surface	Near Bottom	At Surface	Near Bottom
pH			6.5 - 8.5	6.5 - 9	6.5 - 8.5	6.5-8.5	6.80 - 7.93	7.332	7.50	6.92 - 7.93	7.356	7.50	7.74	7.04	7.25	7.41	7.2	7.44
Conductivity	(µs/cm)	1					53 - 216	117.1	141	68 - 264	126.9	156	277	105	179	178	276	275
Total Alkalinity (CaCO ₃)	(mg/L)	1			30-500 (OG)		29 - 103	64.6	82	37 - 137	69.8	90	86	45	-	-	-	-
Hardness (CaCO ₃)	(mg/L)	0.3			80-100 (OG)		31 - 146	69.1	81.2	13 - 134	70.7	87.8	45.1	47.8	-	-	-	-
Total Suspended Solids	(mg/L)	1					1 - 60	<11.1	11	1 - 336	<21.4	20	9	14	10	93	16	19
Total Dissolved Solids	(mg/L)	10			500 (AO)	500 (AO)	14 - 180	96.4	123	18 - 208	108.5	130.5	105	103	118	109	173	178
Chloride	(mg/L)	0.1			250 (AO)	250 (AO)	<0.1 - 5.2	1.75	2.8	0.3 - 15.0	2.56	3.2	3	1.8	11	11.1	32.4	31.2
Nitrate as N	(mg/L)	0.1			10 ⁺		<0.01 - 0.2	<0.11	<0.1	<0.01 - 0.7	<0.13	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Nitrite as N	(mg/L)	0.1			1		<0.01 - 0.2	<0.10	<0.1	<0.01 - 3.5	<0.18	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Sulphate	(mg/L)	0.1			500(AO)**	500 (AO)**	<0.1 - 2.9	<0.90	1.1	<0.1 - 3.3	<1.00	1.5	0.8	0.7	-	-	-	-
Total Phosphorus	(mg/L)	0.01	0.03 ¹				<0.01 - 0.15	<0.029	0.03	<0.01 - 0.16	<0.030	0.04	0.02	0.02	0.02	0.08	0.03	0.04
Ammonia as N	(mg/L)	0.025					<0.010 - 0.517	<0.0770	0.04	<0.010 - 0.306	<0.0516	0.057	0.026	0.028	0.13	0.02	0.05	0.02
Aluminum	(mg/L)	0.005	0.075 ^{^^}	0.10	0.10 (OG)	0.10 (OG)	<0.005 - 0.293	<0.0346	0.036	<0.005 - 0.41	<0.0371	0.036	0.041	0.119	0.021	0.059	0.058	0.083
Antimony	(mg/L)	0.001	0.02			0.006	<0.001 - <0.001	<0.0010	<0.001	<0.001 - <0.001	<0.0010	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Arsenic	(mg/L)	0.001	0.1	0.05	0.025 ¹	0.025	<0.001 - <0.01	<0.0013	<0.001	<0.001 - <0.01	<0.0012	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Cadmium ¹	(mg/L)	0.0001	0.0002	0.000017	0.005	0.005	<0.0001 - <0.0003 [^]	<0.00011	<0.0001	<0.0001 - <0.0003 [^]	<0.00011	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Calcium	(mg/L)	0.05					9.6 - 42.0	20.99	25.3	4.2 - 41	21.79	27.30	14.3	15.3	18.9	18.9	22.4	21.7
Chromium	(mg/L)	0.001	0.0089 (as Cr III)	0.002	0.05	0.05	<0.001 - <0.004 [^]	<0.0011	<0.001	<0.001 - 0.004	<0.0012	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Cobalt	(mg/L)	0.0005	0.0009				<0.0005 - 0.005	<0.00065	<0.0005	<0.0005 - <0.005	<0.00063	<0.0005	<0.0005	<0.0005	<0.005	<0.005	<0.005	<0.005
Copper	(mg/L)	0.001	0.005	0.002	1.0 (AO)	1.0 (AO)	<0.001 - 0.012	<0.0016	0.001	<0.001 - <0.005	<0.0014	0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Iron	(mg/L)	0.01	0.3	0.3	0.30 (AO)	0.30 (AO)	<0.01 - 1.07	<0.182	0.20	<0.01 - 0.68	<0.189	0.24	0.1	0.23	0.08	0.13	0.17	0.2
Lead	(mg/L)	0.001	0.025	0.002	0.01	0.010	0.0003 - 0.017	<0.0014	<0.001	0.0003 - <0.003 [^]	<0.0010	<0.001	<0.001	<0.001	<0.001	<0.001	0.007	<0.001
Magnesium	(mg/L)	0.05					1.49 - 9.86	3.784	4.57	0.70 - 7.00	3.783	4.65	2.28	2.33	3.92	3.99	5.4	5.28
Manganese	(mg/L)	0.005				0.05(AO)	0.001 - 0.039	<0.0095	0.008	0.001 - 0.038	<0.0087	0.007	0.005	0.006	<0.005	0.006	0.005	0.007
Mercury	(mg/L)	0.0001	0.0002 ^{^^}	0.0001	0.001	0.001	0.00002 - <0.0001	<0.00010	<0.0001	0.00002 - <0.0001	<0.00010	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Molybdenum	(mg/L)	0.005	0.04 ¹				<0.005 - 0.005	<0.0050	<0.005	<0.005 - 0.005	<0.0050	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Nickel	(mg/L)	0.005	0.025	0.025			<0.001 - <0.01	<0.0050	<0.005	<0.001 - <0.010	<0.0050	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Potassium	(mg/L)	0.050					<0.05 - 1.65	<0.538	0.63	<0.05 - 1.530	<0.502	0.68	0.53	0.54	0.57	0.57	0.89	0.85
Sodium	(mg/L)	0.05			200 (AO), (20) ²	200 (AO), (20) ²	0.39 - 12.0	2.236	2.8	0.46 - 12.00	2.516	2.93	2.69	2.18	7.65	8.17	20.4	20
Zinc	(mg/L)	0.005	0.03	0.03	5.0 (AO)	5.0 (AO)	0.002 - 0.052	<0.0080	0.005	<0.001 - 0.042	<0.0065	<0.005	<0.005	<0.005	<0.005	<0.005	0.017	<0.005

Note 1 Method Detection Limit higher than CEQG PAL limit
 Note 2 The lower ODWS for sodium is for persons on a sodium restricted diet.
 Anomalous values not included in Observed Range, Mean, and 75th Percentile calculations.
 CDWQG: Canadian Drinking Water Quality Guidelines
 CEQG PAL Candian Environmental Quality Guidelines for the Protection of Aquatic Life
 PWQO: Provincial Water Quality Objectives (for the protection of Aquatic Life)
 ODWS: Ontario Drinking Water Standards
 (OG): Operational Guideline
 (AO): Aesthetic Objective
⁺: Where nitrate and nitrite are both present, the total of the two should not exceed 10 mg/L (as nitrogen)
^{**}: When sulphate levels exceed 500 mg/L, water may have a laxative effect on some people.
⁺⁺⁺: Local Medical Officer of health should be notified when sodium concentration exceeds 20 mg/L, so that physicians caring for patients on sodium restricted diets may be informed.
^{^^}: PWQO is an Interim value, and is based on filtered samples.
[^]: Inconclusive result - method detection limit used was above criteria.
 0.04¹: Interim PWQO
^{||}: Interim Maximum Acceptable concentration. All other limits are Maximum Acceptable concentrations.

Exceeds PWQO or CEQG PAL Criteria
 Exceeds ODWS or CDWQG Criteria
 Exceeds CDWQG or ODWS, and PWQO or CEQG. PAL