

**Table 17-2**  
**Average (April and May) Water Quality of Streams and Rivers in Proximity to the Proposed PolyMet Mine Site, Plant Site, and Tailings Basin**

Parameter	Sampling Location (See Figure 17-2)															
	PM-1	PM-2	PM-3	PM-4	PM-5	PM-6	PM-7	PM-8	PM-9	PM-10	PM-11	PM-12	PM-13	PM-14	PM-15	PM-16
Alkalinity, Total (mg/L)	94	49	42	14.5	101	61	359	255	209	329	129	18	31	77	48	31
Aluminum, Total (ug/L)	10	53	80	186	13	45	11	30	24	10	28	122	347	16	54	121
Antimony, Total (ug/L)	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3
Barium, Total (ug/L)	<10	<10	<10	<10	<10	<10	17.6	11.5	20.5	63.5	16.1	<10	15.4	12.2	<10	<10
Beryllium, Total (ug/L)	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Boron, Total (ug/L)	90.3	36.4	41.9	<35	49.4	<35	211.5	259.0	281.0	268.5	154.5	<35	40.5	209	114	39.0
Cadmium, Total (ug/L)	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	0.2	<0.2	<0.2
Calcium, Total (mg/L)	24.7	13.6	11.4	4.4	25.4	16.3	63.1	39.5	37	47.1	22	4.95	7.55	25.45	16.3	8.95
Carbon, Total Organic (mg/L)	1.9	12.4	15.7	20.5	5.1	7.1	4.8	5.2	6.5	6.1	8.6	17.1	16.7	6.8	11.9	17.5
Chloride (mg/L)	1.1	1.3	3.0	1.1	2.0	1.0	18.5	20.2	20.0	21.9	11.1	2.2	4.3	51.8	28.7	2.3
Chromium, Total (ug/L)	<1	1.3	1.2	1.1	<1	<1	1.1	1.3	1.1	1.2	1.3	1.9	2.9	<1	1.5	2
Cobalt, Total (ug/L)	<1	<1	<1	<1	4.4	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
COD (mg/L)	12.5	39	47.5	43.5	9.4	25	2.65	9.85	8.05	17	21.5	39.5	30.5	24.75	38	43.5
Copper, Total (ug/L)	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Cyanide, Total (mg/L)	<0.02	<0.02	<0.02	<0.02	<0.02	4.96	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Disolved Oxygen (mg/L)	12.3	10.0	11.7	10.8	11.4	8.6	12.1	10.5	9.7	9.5	10.5	9.8	10.2	11.1	11.1	10.8
Fluoride (mg/L)	0.14	0.12	0.11	<0.1	0.12	0.15	3.05	2.05	1.36	1.5	0.97	0.11	0.2	0.18	0.13	0.1
Hardness (mg/L)	48.8	82.7	50.4	190	211	154	335	143	213	222	109	19	35.6	91.9	68.3	30.3
Iron, Total (mg/L)	0.03	0.63	1.08	0.81	0.24	0.92	0.25	0.39	0.24	0.455	0.33	0.48	0.73	0.28	0.43	0.89
Lead, Total (ug/L)	<1	<1	<1	1.1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Magnesium, Total (mg/L)	10.25	5.15	4.75	2.9	20	9.9	63.8	49.7	41.8	49.7	23.5	2.75	6.15	14.15	9.4	4.1

Parameter	Sampling Location (See Figure 17-2)															
	PM-1	PM-2	PM-3	PM-4	PM-5	PM-6	PM-7	PM-8	PM-9	PM-10	PM-11	PM-12	PM-13	PM-14	PM-15	PM-16
Manganese, Total (mg/L)	0.01	0.07	0.11	0.05	0.15	0.12	0.24	0.08	0.05	0.68	0.05	0.02	0.04	0.06	0.1	0.08
Mercury, Total (ng/L)	1.5	3.2	3.05	4.75	2	1.05	1.05	1.6	4	1.85	2.3	6.6	4.6	1.5	3.4	3.5
Molybdenum, Total (ug/L)	<5	<5	<5	<5	<5	<5	21.5	47.1	19.8	13	18.6	<5	<5	<5	<5	<5
Nickel, Total (ug/L)	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Nitrite Plus Nitrate, Total (mg/L)	0.17	<0.1	<0.1	0.12	0.43	<0.1	<0.1	0.14	0.11	<0.1	0.11	<0.1	0.13	3.3	1.48	<0.1
Nitrogen, Ammonia, Total (mg/L)	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Palladium (ug/L)	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25
pH	7.9	6.9	6.9	7.0	7.3	7.0	7.9	8.0	7.7	7.5	7.7	6.5	7.0	7.1	6.9	7.0
Phosphorus, Total (mg/L)	0.105	<0.1	<0.1	<0.1	<0.1	0.13	<0.1	<0.1	<0.1	0.14	<0.1	0.11	<0.1	<0.1	0.14	<0.1
Platinum (ug/L)	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25
Potassium, Total (mg/L)	2.5	2.0	2.0	0.8	5.2	2.1	8.0	9.1	6.8	5.7	4.3	0.8	1.9	4.0	3.0	1.5
Selenium, Total (ug/L)	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
Silver, Total (ug/L)	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Sodium, Total (mg/L)	4.35	2.25	2.5	1.45	12.1	4.85	46.4	53.1	39.9	64.7	23.5	2.35	5.8	26.7	14.6	2.15
Solids, Total Dissolved (mg/L)	111.5	79	75.5	57	204	104	537	423	371	460.5	220	54	78	221	136	67.5
Solids, Total Suspended (mg/L)	2	<1	1.85	6	2.5	7	5.5	8.15	6.5	6.5	1.15	1.5	10.5	1.85	3.65	8
Specific Conductance (umhos/cm)	231	122	107	49.5	358	191	934	760	656	845	399	55.1	117	407	243	83.6
Strontium, Total (ug/L)	152	71.6	60.6	19.9	97.7	55	246	195	200	222.5	117	19.2	31.8	217.5	127	46.3
Sulfate (mg/L)	20	10.1	5.85	4.55	67.6	27.7	135	123	148	110.8	53.4	6.1	16.3	29.15	17.3	7.2
Thallium, Total (ug/L)	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
Titanium (ug/L)	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	13	<10	<10	<10
Turbidity (NTU)	1.1	1.6	2.7	2	2.5	4	1.5	3	1.5	5.5	2.1	1.05	4	0.85	1.3	3
Zinc, Total (ug/L)	<10	<10	<10	11.1	<10	<10	<10	10.6	<10	12.7	<10	<10	<10	<10	13.6	<10

