



Mount Polley Mining Corporation

an Imperial Metals company

Box 12 • Likely, BC V0L 1N0 • T 250.790.2215 • F 250.790.2613

January 7, 2016

Ministry of Environment
Mining Operations Environmental Protection
2080 Labieux Road
Nanaimo, BC
V9T 6J9

WEEKLY UPDATE REPORT – DECEMBER 31, 2015 TO JANUARY 7, 2016

Water Management

Springer Pit

The total volume of tailings deposited in the Springer Pit as of January 5, 2016 is 1,836,846 tonnes (1,331,047 m³ including water retained in tailings).

Water elevations are recorded daily at the Springer Pit and the surrounding groundwater wells and presented here in table 1.

Monthly water quality monitoring is conducted at Springer Pit and the surrounding groundwater wells. All results are reported to Ministry of Environment each quarter, and parameters of interest for the last 6 sampling events are presented here. Table 2 presents the results from Springer Pit sampling, and tables 3 through 8 present the sampling results from the groundwater wells.

A map of the groundwater well locations is included as Figure 1 of the July 23rd weekly report available here <http://www.imperialmetals.com/assets/docs/mt-polley/07.23.15.weekly-update-SEC.pdf>

Note that the suffix “a” indicates the deep well in the pair, and the suffix “b” indicates the shallow well in the pair.

Water Treatment and Discharge

Water discharge continued this week, with discharge rates ranging from 0.15 m³/s to 0.23 m³/s. (Flow may be disrupted when routine maintenance and cleaning is performed).

Rehabilitation Work

Hazeltine Creek Rehabilitation

There were no new projects started this week in Hazeltine due to weather conditions. Final work on the bridge at the Ditch Road is schedule to commence next week.

Environmental Monitoring Program

Water Quality Monitoring

All water quality monitoring as required by Permit 11678 is current. Quesnel Lake water discharge sampling included collection of in-situ profile data and a sample at station QUL-58 only as weather conditions caused the sampling equipment to freeze. Samples were also collected at end of pipe at the water treatment plant (station HAD-03) and throughout Hazeltine Creek. There were no new data available since the last report. New data will be provided in this report as it comes available from the lab. For previous results see the December 30, 2015 report available on the imperial metals website. <http://www.imperialmetals.com/assets/docs/mt-polley/12.30.15-weekly-report.pdf>

A map of monitoring stations is available on the Imperial Metals website. <http://www.imperialmetals.com/assets/docs/mt-polley/12.03.15.weekly-update.pdf>

Figure 1 shows field parameter profile results for turbidity and temperature at station QUL-58 in Quesnel Lake (station 100m from the Hazeltine Creek outflow diffusers, at the edge of the initial dilution zone).

Figure 2 shows field turbidity readings for upper, middle and lower Hazeltine Creek.

Figure 3 shows a time series graph of turbidity readings at site QUR-1 in the upper Quesnel River.

Table 1. Water elevations for Springer Pit and groundwater wells

	Last Week	This Week	Change
	29-Dec-15	7-Jan-16	(m)
Springer	1025.22	1025.29	0.07
GW12-2a	1015.17	1015.26	0.09
GW12-2b	1015.54	1015.69	0.15
GW15-1a	1025.52	1025.63	0.11
GW15-1b	1025.49	1025.59	0.10
GW15-2a	1025.15	1025.21	0.06
GW15-2b	1025.77	1025.96	0.19

Table 2. Springer Pit supernatant water chemistry results (September –December 2015)

Sample Location	Springer Pit Supernatant						
Date Sampled		15-Sep-15	30-Sep-15	13-Oct-15	29-Oct-15	11-Nov-15	1-Dec-15
Physical Tests							
Conductivity	uS/cm	1110	1120	1100	1130	1120	1140
Hardness (as CaCO3)	mg/L	562	537	537	529	534	552
pH	pH	8.50	8.07	8.05	8.04	8.03	8.07
Total Suspended Solids	mg/L	6.20	<3.0	3.30	<3.0	6.20	9.10
Turbidity	NTU	2.04	0.61	0.45	1.00	3.28	4.52
Anions and Nutrients							
Nitrate (as N)	mg/L	8.31	8.26	8.13	8.44	8.34	8.22
Sulfate (SO4)	mg/L	502	497	490	513	511	501
Total Metals							
Aluminum (Al)-Total	mg/L	0.0725	0.0373	0.03	0.09	0.26	0.31
Arsenic (As)-Total	mg/L	0.00155	0.00117	0.00091	0.00106	0.00124	0.00120
Cadmium (Cd)-Total	mg/L	0.0000075	<0.00002	0.0000108	0.0000121	<0.000025	<0.000020
Copper (Cu)-Total	mg/L	0.0112	0.00845	0.00702	0.00829	0.03140	0.01790
Iron (Fe)-Total	mg/L	0.047	<0.030	<0.03	0.059	0.21	0.256
Lead (Pb)-Total	mg/L	0.000056	<0.00005	<0.000050	<0.000050	0.000268	0.000069
Molybdenum (Mo)-Total	mg/L	0.147	0.153	0.148	0.152	0.145	0.154
Selenium (Se)-Total	mg/L	0.0332	0.0354	0.0336	0.0334	0.0323	0.0366
Dissolved Metals							
Aluminum (Al)-Dissolved	mg/L	0.0171	0.0123	0.0145	0.0143	0.0151	0.0137
Arsenic (As)-Dissolved	mg/L	0.00084	0.00100	0.00087	0.00099	0.00093	0.00097
Cadmium (Cd)-Dissolved	mg/L	0.0000084	<0.00002	0.0000083	0.0000064	<0.000020	<0.000020
Copper (Cu)-Dissolved	mg/L	0.0052	0.0054	0.00498	0.00363	0.00409	0.00377
Iron (Fe)-Dissolved	mg/L	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030
Lead (Pb)-Dissolved	mg/L	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Molybdenum (Mo)-Dissolved	mg/L	0.147	0.137	0.149	0.148	0.149	0.149
Selenium (Se)-Dissolved	mg/L	0.0335	0.0363	0.0321	0.0318	0.0319	0.0351

Table 3. GW 12-2a water chemistry results (July – December 2015)

GW12-2A						
Date Sampled	27-Jul-15	2-Sep-15	29-Sep-15	21-Oct-15	17-Nov-15	17-Dec-15
Physical Tests						
Conductivity (µS/cm)	226	219	224	230	227	232
Hardness (as CaCO3) (mg/L)	47.1	47.4	47.8	50.1	49.7	50.7
pH - in situ (pH)	8.21	8.24	8.1	8.08	8.16	8.27
Anions and Nutrients						
Nitrate (as N) (mg/L)	0.01	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Sulfate (SO4) (mg/L)	53.2	54.1	56.1	59.6	60.8	63.7
Dissolved Metals						
Aluminum (Al)-Dissolved (mg/L)	0.0085	0.0066	0.0072	0.0057	0.0056	0.0054
Arsenic (As)-Dissolved (mg/L)	0.00233	0.00224	0.00231	0.00215	0.00224	0.00232
Cadmium (Cd)-Dissolved (mg/L)	0.0000083	0.0000076	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Copper (Cu)-Dissolved (mg/L)	<0.00050	0.00066	<0.00050	<0.00050	<0.00050	<0.00050
Iron (Fe)-Dissolved (mg/L)	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030
Lead (Pb)-Dissolved (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Molybdenum (Mo)-Dissolved (mg/L)	0.0402	0.0397	0.0394	0.0400	0.0398	0.0398
Selenium (Se)-Dissolved (mg/L)	0.00008	0.000075	<0.000050	<0.000050	<0.000050	<0.000050

Table 4. GW 12-2b water chemistry results (July – December 2015)

GW12-2B						
Date Sampled	27-Jul-15	2-Sep-15	29-Sep-15	21-Oct-15	17-Nov-15	17-Dec-15
Physical Tests						
Conductivity (µS/cm)	484	510	557	593	653	663
Hardness (as CaCO3) (mg/L)	243	264	283	311.0	331.0	336.0
pH - in situ (pH)	7.64	7.63	7.85	8.10	8.09	7.82
Anions and Nutrients						
Nitrate (as N) (mg/L)	2.94	3.5	3.86	4.28	4.67	4.86
Sulfate (SO4) (mg/L)	63.3	93.7	119	137.0	160.0	169.0
Dissolved Metals						
Aluminum (Al)-Dissolved (mg/L)	<0.0030	0.0031	<0.0030	<0.0030	<0.0030	<0.0030
Arsenic (As)-Dissolved (mg/L)	0.00051	0.00051	0.00051	0.00047	0.00049	0.00051
Cadmium (Cd)-Dissolved (mg/L)	0.0000113	0.0000076	<0.000005	0.0000088	0.0000071	0.0000051
Copper (Cu)-Dissolved (mg/L)	<0.00050	0.00118	0.00066	0.00177	0.00074	0.00081
Iron (Fe)-Dissolved (mg/L)	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030
Lead (Pb)-Dissolved (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Molybdenum (Mo)-Dissolved (mg/L)	0.0247	0.0244	0.0235	0.0230	0.0223	0.0219
Selenium (Se)-Dissolved (mg/L)	0.00816	0.0122	0.0151	0.015100	0.017500	0.016100

Table 5. GW 15-1a water chemistry results (July – December 2015)

	GW15-1A					
Date Sampled	23-Jul-2015	9-Sep-2015	1-Oct-2015	21-Oct-2015	18-Nov-2015	17-Dec-2015
Physical Tests						
Conductivity (µS/cm)	299	322	303	296	304	292
Hardness (as CaCO3) (mg/L)	24.8		93	93.5	94.5	86.7
pH - in situ (pH)	9.95	8.17	8.06	8.10	7.99	7.97
Anions and Nutrients						
Nitrate (as N) (mg/L)	<0.0050	<0.0050	<0.005	<0.0050	<0.0050	<0.0050
Sulfate (SO4) (mg/L)	64.8	71.4	67.8	63.9	63.3	64.2
Dissolved Metals						
Aluminum (Al)-Dissolved (mg/L)	0.0062	0.0037	0.0054	0.0031	0.0040	0.0035
Arsenic (As)-Dissolved (mg/L)	0.00485	0.00586	0.00649	0.00563	0.00540	0.00560
Cadmium (Cd)-Dissolved (mg/L)	<0.0000050	0.0000061	0.0000084	0.0000071	0.0000241	0.000016
Copper (Cu)-Dissolved (mg/L)	0.00109	0.00085	<0.00050	<0.00050	0.00058	<0.00050
Iron (Fe)-Dissolved (mg/L)	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030
Lead (Pb)-Dissolved (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Molybdenum (Mo)-Dissolved (mg/L)	0.0281	0.0221	0.0259	0.0249	0.0257	0.0249
Selenium (Se)-Dissolved (mg/L)	0.000997	0.000400	0.000162	0.000116	0.000186	0.000115

Table 6. GW 15-1b water chemistry results (July – December 2015)

	GW15-1B					
Date Sampled	23-Jul-2015	9-Sep-2015	1-Oct-2015	21-Oct-2015	17-Nov-2015	17-Dec-2015
Physical Tests						
Conductivity (µS/cm)	520	559	543	568	577	570
Hardness (as CaCO3) (mg/L)	231		249	272	260	254
pH - in situ (pH)	7.75	7.72	7.94	8.12	8.12	7.91
Anions and Nutrients						
Nitrate (as N) (mg/L)	1.19	1.09	1.14	1.05	1.06	1.11
Sulfate (SO4) (mg/L)	114.0	118.0	118.0	118.0	118.0	125.0
Dissolved Metals						
Aluminum (Al)-Dissolved (mg/L)	<0.0030	<0.0030	<0.003	<0.0030	<0.0030	<0.0030
Arsenic (As)-Dissolved (mg/L)	0.00131	0.00164	0.00159	0.00156	0.00157	0.00164
Cadmium (Cd)-Dissolved (mg/L)	0.0000054	<0.0000050	0.000005	<0.0000050	0.0000057	0.000005
Copper (Cu)-Dissolved (mg/L)	0.00063	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Iron (Fe)-Dissolved (mg/L)	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030
Lead (Pb)-Dissolved (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Molybdenum (Mo)-Dissolved (mg/L)	0.00535	0.00548	0.00528	0.0053	0.0053	0.0055
Selenium (Se)-Dissolved (mg/L)	0.0172	0.0150	0.0132	0.0129	0.0138	0.0148

Table 7. GW 15-2a water chemistry results (July – December 2015)

	GW15-2A					
Date Sampled	27-Jul-2015	9-Sep-2015	29-Sep-2105	21-Oct-2015	17-Nov-2015	17-Dec-2015
Physical Tests (Water)						
Conductivity	261	214	209	208	208	210
Hardness (as CaCO ₃)	71.8		61.3	62	61.5	61.9
pH	8.95	8.09	8.04	8.17	8.19	8.26
Anions and Nutrients (Water)						
Nitrate (as N)	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Sulfate (SO ₄)	48.9	39.7	38.8	38.2	38.1	39.4
Dissolved Metals (Water)						
Aluminum (Al)-Dissolved	0.0047	0.0035	0.0034	0.0067	<0.0030	<0.0030
Arsenic (As)-Dissolved	0.00299	0.00325	0.00355	0.0033	0.0034	0.00352
Cadmium (Cd)-Dissolved	<0.0000050	<0.0000050	<0.0000050	0.0000125	<0.0000050	<0.0000050
Copper (Cu)-Dissolved	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Iron (Fe)-Dissolved	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030
Lead (Pb)-Dissolved	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Molybdenum (Mo)-Dissolved	0.0359	0.0402	0.0415	0.0410	0.0419	0.0422
Selenium (Se)-Dissolved	0.000171	0.000088	0.000056	<0.000050	0.000075	0.000186

Table 8. GW 15-2b water chemistry results (July – December 2015)

	GW15-2B					
Date Sampled	27-Jul-2015	9-Sep-2015	29-Sep-2105	21-Oct-2015	17-Nov-2015	17-Dec-2015
Physical Tests (Water)						
Conductivity	344	333	340	344	358	364
Hardness (as CaCO ₃)	134		127	135	140	143
pH	8.05	8.15	7.98	8.10	8.04	8.07
Anions and Nutrients (Water)						
Nitrate (as N)	0.02	0.14	0.10	0.23	0.44	0.57
Sulfate (SO ₄)	73	68	69.3	70	73.3	78
Dissolved Metals (Water)						
Aluminum (Al)-Dissolved	0.0038	0.0035	0.0032	<0.0030	<0.0030	<0.0030
Arsenic (As)-Dissolved	0.00269	0.00261	0.00285	0.00261	0.00240	0.00242
Cadmium (Cd)-Dissolved	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Copper (Cu)-Dissolved	<0.00050	<0.00050	0.00013	<0.00050	<0.00050	<0.00050
Iron (Fe)-Dissolved	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030
Lead (Pb)-Dissolved	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Molybdenum (Mo)-Dissolved	0.04090	0.04240	0.0432	0.04440	0.04400	0.03830
Selenium (Se)-Dissolved	0.0001	0.0001	0.000084	0.000117	0.000187	0.000186

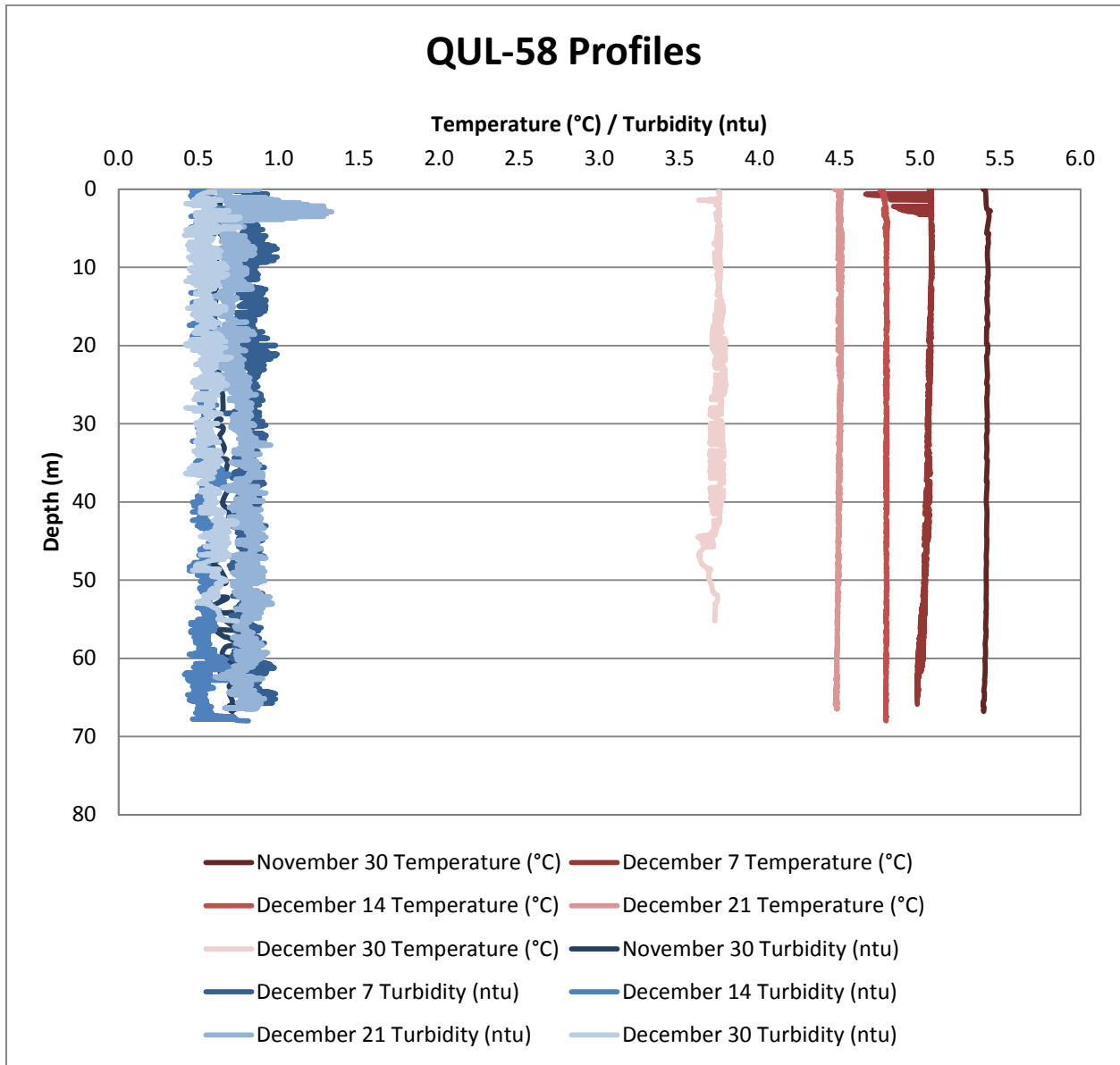


Figure 1. Turbidity and temperature profiles at QUL-58 on November 30, December 7, 14, 21 and 30.

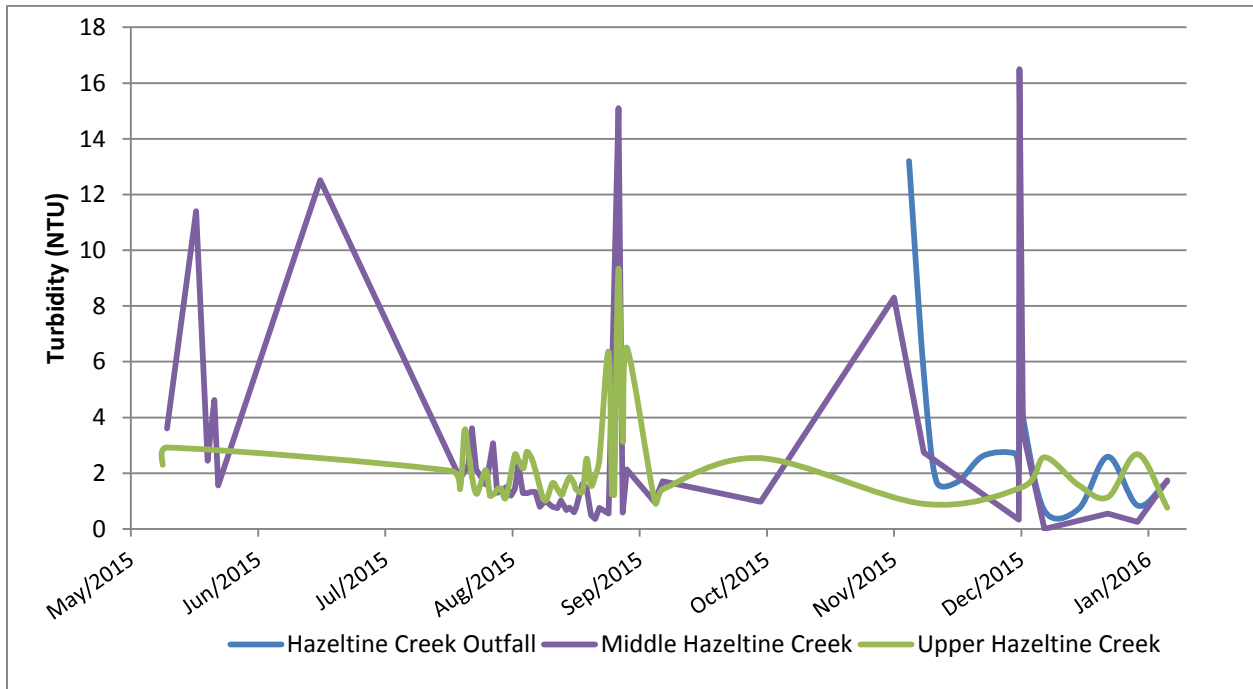


Figure 2. Time series graph for May 15, 2015 – January 5, 2016 showing turbidity levels at monitoring locations in upper and lower Hazeltine Creek

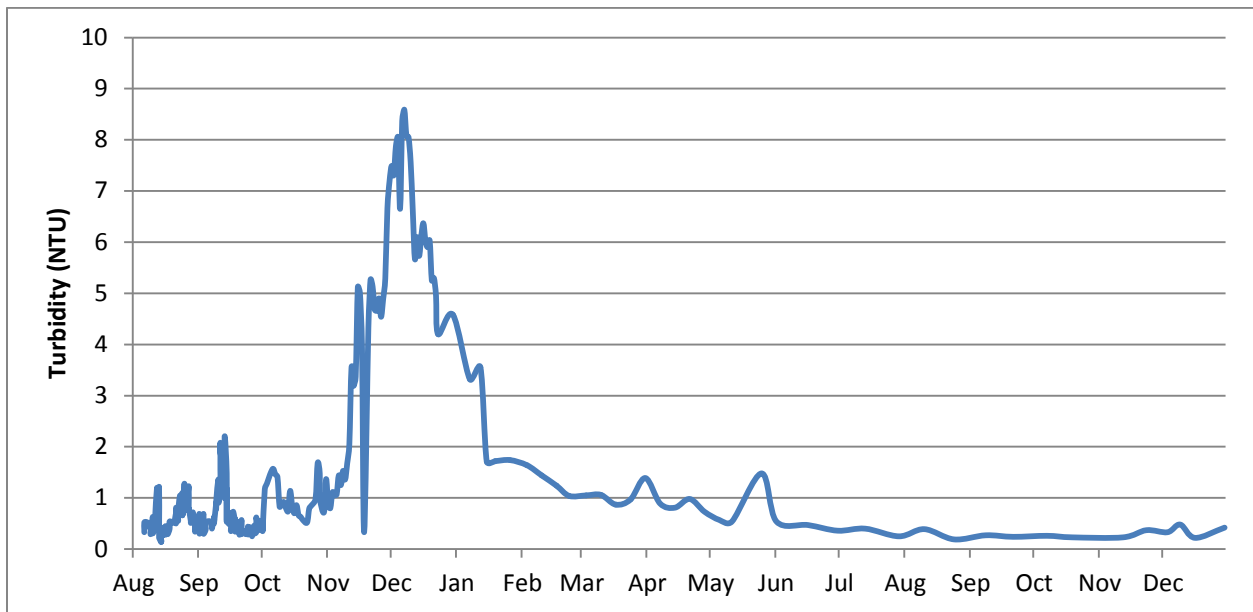


Figure 3. Time series of turbidity readings at site QUR-1 in the upper Quesnel River.