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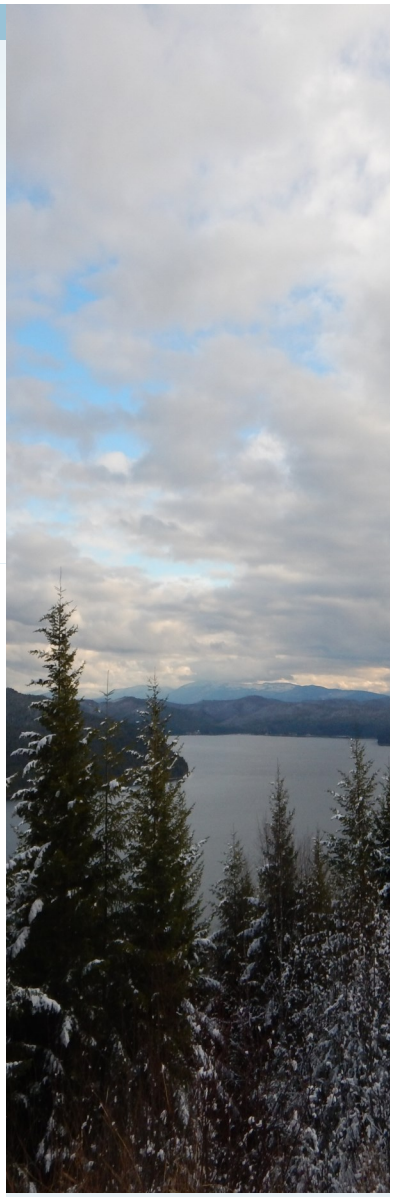
Community Update



Introduction

Welcome to Mount Polley Mining Corporation's (MPMC) new Community Update Newsletter. Four to five times per year, a newsletter will be issued to provide the local communities with updates about what is happening at the mine. In addition, MPMC plans to host an annual site visit in the summer, to give local community members an opportunity to tour the mine site and observe the remediation activity around Quesnel Lake.

If you would like to participate in the site tour, please send an email to vbremner@mountpolley.com or chughes@mountpolley.com.

Also, if you have any ideas for information that you would like to have included in the upcoming Community Updates, please do not hesitate to send an email to the addresses above.

Quesnel Lake Monitoring in Mitchell Bay

Mount Polley Mining Corporation (MPMC) continues to monitor a variety of sites in Quesnel Lake following the breach in August 2014. According to the Comprehensive Environmental Monitoring Plan (CEMP), there are five monthly sampling sites, including those along the immediate location of the treated water discharge, and one reference station sampled seasonally by the MPMC environmental staff. In addition to these sampling events, other sites may be visited due to seasonal changes or public concern.

The potential impacts on the water quality in Mitchell Bay has been a source of interest from a few local residents since the breach. The Ministry of Environment (MOE) established a site in Mitchell Bay in August 2014 which included collecting water at multiple depths and water column profiles. Since September 2015, MPMC has sampled and profiled the water column at the Mitchell Bay

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Inside this issue

How many samples were taken in 2016?

- Total samples: **3246**

Including:

- Quesnel Lake and River samples: **260**
- Hazeltine Creek and discharge samples: **370**
- Toxicity testing samples at outlet of Hazeltine Creek and discharge: **39**
- Polley Lake samples: **113**
- Water Treatment Plant samples (sent to laboratory): **418**
- Groundwater samples: **162**

Quesnel Lake and shoreline August 2016

(Continued from page 1)

site (labeled as QUL-42) eight (8) times at the surface (0m), mid-depth (10m) and bottom(20m); with the most recent occurring on October 26th, 2016. All the recent results at all three depths are below the British Columbia Water Quality Guidelines (BCWQG) for drinking water (see Table 1 on page 3) set by the MOE.

In addition to QUL-42, the table displays the water quality results taken from QUL-58 at 30m depth on October 5th, 2016. This site is situated along the discharge location, and the analysis concludes that the water also meets the drinking water guidelines. The water quality for the discharge site below the water treatment plant in Hazeltine Creek (HAD-3) is also included; only three parameters, total dissolved solids, sulphate and selenium exceed the drinking water guidelines in the sample taken on October 24th, 2016.

For comparative purposes, water quality results from a residential tap sample taken on December 7th, 2016 in Williams Lake is included. Williams Lake draws water from an aquifer located below the lake and both results meet the BCWQG for drinking water. Note that the BCWQG for total phosphorous concentration only extends to lakes used as drinking sources, therefore does not apply to the total phosphorous result from the Williams Lake tap sample.

All water chemistry samples taken by MPMC (including the Williams Lake tap water) were analyzed by ALS laboratories in Burnaby, BC.

References:

BC Water Quality Guidelines, Approved Water Quality Guidelines http://www2.gov.bc.ca/gov/content/environment/air-land-water/water/water-quality/water-quality-guidelines/approved-water-quality-guidelines

Williams Lake Building Maintenance and Utilities http://www.williamslake.ca/278/Building-Maintenance-Utilities

Table 1. Comparison of Quesnel Lake, MPMC treated water discharge, and Williams Lake Tap Water

		Quesnel Lake – Mitchell Bay site			*Quesnel Lake— Discharge Location*	*MPMC Site*	*Other sources*
Sample Locations	BC WQG – Drinking Water (Maximum)	QUL-42-0m	QUL-42-10m	QUL-42-20m	QUL-58-30m	HAD-3 Discharge Pipe	Williams Lake Tap Water
Date		26-Oct-16	26-Oct-16	26-Oct-16	5-Oct-16	24-Oct-16	7-Dec-16
Parameters							
Conductivity (µS/cm)	-	106	107	108	121	1130	775
Hardness (as CaCO3) (mg/L)	-	49.5	49.4	49.4	59.2	481	327
pH (pH)	6.5[1]-8.5	7.76	7.75	7.78	7.8	7.84	8.16
Total Dissolved Solids (mg/L)	500	68	64	71	85	882	461
Total Suspended Solids (mg/L)	-	<1.0	<1.0	<1.0	<1.0	1.4	<1.0
Turbidity (ntu)	-	0.28	0.43	0.27	0.26	1.09	0.3
Alkalinity (CaCO3) (mg/L)	-	49	49.1	49.2	51.5	51.9	335
Ammonia (as N) (mg/L)	-	<0.0050	<0.0050	0.0071	<0.0050	0.0311	0.0914
Chloride (Cl) (mg/L)	250	<0.50	<0.50	<0.50	<0.50	12.3	22.5
Fluoride (F) (mg/L)	-	0.032	0.032	0.032	0.038	0.62	0.14
Nitrate (as N) (mg/L)	10	0.0806	0.0806	0.0802	0.24	8.82	<0.025
Nitrite (as N) (mg/L)	1	<0.0010	<0.0010	<0.0010	<0.0010	0.0521	0.0113
Phosphorus (P) Total (mg/L)	0.01[2]	<0.0020	0.0022	0.0023	0.0035	0.0086	0.257
Sulphate (mg/L)	500	6.52	6.54	6.56	12.9	548	73.4
Total Nitrogen (mg/L)	-	0.174	0.148	0.148	0.27	8.93	0.367
Dissolved Organic Carbon (mg/L)	-	1.73	1.65	1.74	1.83	2.11	6.76
Aluminum (Al)-Total (mg/L)	-	0.0126	0.0187	0.0224	0.022	0.0942	<0.0030
Antimony (Sb)-Total (mg/L)	0.014	<0.00010	<0.00010	<0.00010	<0.00010	0.00182	<0.00010
Arsenic (As)-Total (mg/L)	0.025	0.00011	0.0001	0.00011	0.00012	0.00111	0.0055
Barium (Ba)-Total (mg/L)	-	0.00501	0.00517	0.00504	0.00636	0.0615	0.0116
Boron (B)-Total (mg/L)	5	<0.010	<0.010	<0.010	<0.010	0.147	0.05
Cadmium (Cd)-Total (mg/L)	0.005	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.000020	<0.0000050
Calcium (Ca)-Total (mg/L)	-	16.8	16.7	16.8	20.7	147	33.9
Chromium (Cr)-Total (mg/L)	0.05	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Copper (Cu)-Total (mg/L)	0.5	0.00051	0.00092	0.00081	0.00152	0.00621	0.00918
Iron (Fe)-Total (mg/L)	-	<0.030	<0.030	<0.030	<0.030	0.061	0.053
Lead (Pb)-Total (mg/L)	0.05	<0.000050	0.000196	0.000146	0.000378	<0.000050	0.000103
Lithium (Li)-Total (mg/L)	-	<0.0010	<0.0010	<0.0010	0.0013	0.016	0.0015
Magnesium (Mg)-Total (mg/L)	-	1.91	1.86	1.87	2.32	29.1	59.3
Manganese (Mn)-Total (mg/L)	-	0.00087	0.00102	0.0012	0.00195	0.0159	0.137
Mercury (Hg)-Total (mg/L)	-	-	-	-		<0.0000050	-
Molybdenum (Mo)-Total (mg/L)	0.25	0.000349	0.000351	0.000365	0.00265	0.174	0.00787
Nickel (Ni)-Total (mg/L)	-	<0.00050	<0.00050	<0.00050	<0.00050	0.00055	0.00135
Potassium (K)-Total (mg/L)	-	0.497	0.484	0.484	0.712	16.5	6.4
Selenium (Se)-Total (mg/L)	0.01	0.000096	0.000091	0.000107	0.000476	0.0345	<0.000050
Silicon (Si)-Total (mg/L)	-	1.57	1.59	1.6	1.88	4.11	13.3
Silver (Ag)-Total (mg/L)	-	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Sodium (Na)-Total (mg/L)	-	0.92	0.903	0.911	1.7	59.8	48.5
Strontium (Sr)-Total (mg/L)	-	0.131	0.132	0.132	0.173	2.44	0.159
Uranium (U)-Total (mg/L)	-	0.000157	0.000154	0.000158	0.000187	0.00129	0.001
Vanadium (V)-Total (mg/L)	-	<0.00050	<0.00050	<0.00050	<0.00050	0.00119	0.00058
Zinc (Zn)-Total (mg/L)	5	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030

[1] the minimum BC Water Quality Guideline – Drinking Water;

[2] this guideline is only for lakes used a source of drinking water

Remediation Update— Upper Hazeltine Creek

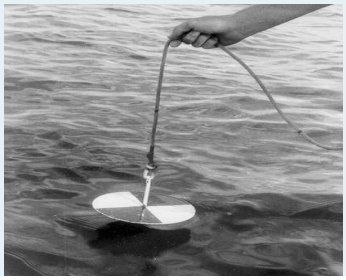
The purpose of the upper Hazeltine Creek remediation project was to add fish habitat and spawning features to allow future use of the creek by Polley Lake fish. The work included rebuilding and recontouring of the creek channel to create additional meanders, and installation of fish habitat features such as spawning gravels, riffles, pools, and woody covering. The construction extended from the Polley Lake weir to the outlet of the water treatment plant discharge pipe and was completed in early October 2016. Planting of 7,800 sitka alder seedlings continued during the fall of 2016 and covered approximately 6.5 hectares of the creek bank.

The rehabilitation of Hazeltine Creek floodplain will be an ongoing project set to continue from the discharge pipe location to the canyon in 2017 once the discharge is removed from the creek.

Did you know that MPMC collected and relocated approximately 75,200 western toads, 315 long-toed salamanders and 89 Columbia spotted frogs during the amphibian salvage in the spring/summer of 2016 prior to the upper Hazeltine Creek restoration project?

Equipment Profile— Secchi Disk

Secchi depth is a commonly used method to measure water clarity. It involves lowering a black and white disk into the water and recording the depth (usually in metres) until it is no longer visible.



What does lake monitoring entail?

Monitoring a lake includes many things—sampling the water column at various depths is one of the most effective ways. This may be time consuming and require expensive equipment. However, there are many ways for interested individuals to get involved in monitoring their lake, like becoming a member of the British Columbia Lake Stewardship Society (BCLSS). BCLSS coordinates a yearly event called the Secchi Dip-In that occurs during Lakes Appreciation Month in July. The Secchi disk provides a measurement of water transparency according to the depth. In 2016, the deepest Secchi reading was 21.4m at Gun Lake in the Thompson-Nicola region.

What is your lake's Secchi reading?

To learn more, please visit:

BC Lake Stewardship Society http://www.bclss.org/

Secchi Dip-In http://www.secchidipin.org/

Please visit the Imperial Metals website for more information about MPMC's reports and ongoing projects: https://www.imperialmetals.com/our-operations-and-projects/operations/mount-polley-mine/mount-polley-updates/remediation-and-monitoring

All data is available for download on the MOE EMS site: https://catalogue.data.gov.bc.ca/dataset/bc-environmental-monitoring-system-results