



## Mount Polley Mining Corporation

an Imperial Metals company

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# Community Update

## Public Liaison Committee Tour and Meeting Report

The Public Liaison Committee (PLC) is comprised of representatives from local communities, public, government agencies, First Nations, and Mount Polley Mining Corporation (MPMC). The intended goal for this committee is for MPMC to provide members of the PLC with information about the mine’s current operations and future plans. The PLC is required to meet on a quarterly basis, with the most recent meeting occurring on May 29, 2019 which also included a site tour.

### Site Tour Summary

Eight people participated on the tour including one representative from the Ministry of Environment and Climate Change (ENV) and the Ministry of Energy, Mines and Petroleum Resources (EMPR) respectively, two Likely residents, three MPMC staff and the Chief Operating Officer (COO) from Imperial Metals. The tour included four stops:

- 1) Top of Reach 2 of Hazeltine Creek to view the creek remediation and new fish habitat.
- 2) Water Treatment Plant (WTP) influent pond.
- 3) WTP in operation. Samples of influent and effluent were collected in glass jars so that tour participants could see the clarity of the water.
- 4) Springer Pit dredging operation.



Tour group with additional MPMC environmental field staff explaining the different components of the WTP on top of the cells at the plant.

There was not enough time to visit the 5<sup>th</sup> stop, the Constructed Wetlands Treatment System (CWTS) pilot project, part of the mine’s passive water treatment on-site research. This was postponed for another tour in Q3 or Q4.

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### MPMC EVENTS

#### Quarter 2 2019

**April 25:**  
Implementation Committee (IC) “extraordinary meeting” for permit amendment consultation

**April 29:**  
PLC “extraordinary meeting” for permit amendment consultation

**May 29:**  
Q2 PLC meeting including site tour & conference call

**May 31:**  
Mount Polley into Care and Maintenance period

#### Quarter 3 2019

**June 4:**  
Vernon High School and Quesnel Rivers Research Center tour

**June 6:**  
Habitat Remediation Working Group meeting and tour

**August 21:**  
Q3 PLC meeting

**TBD:**  
Williams Lake and Soda Creek Indian Bands elders’ tour

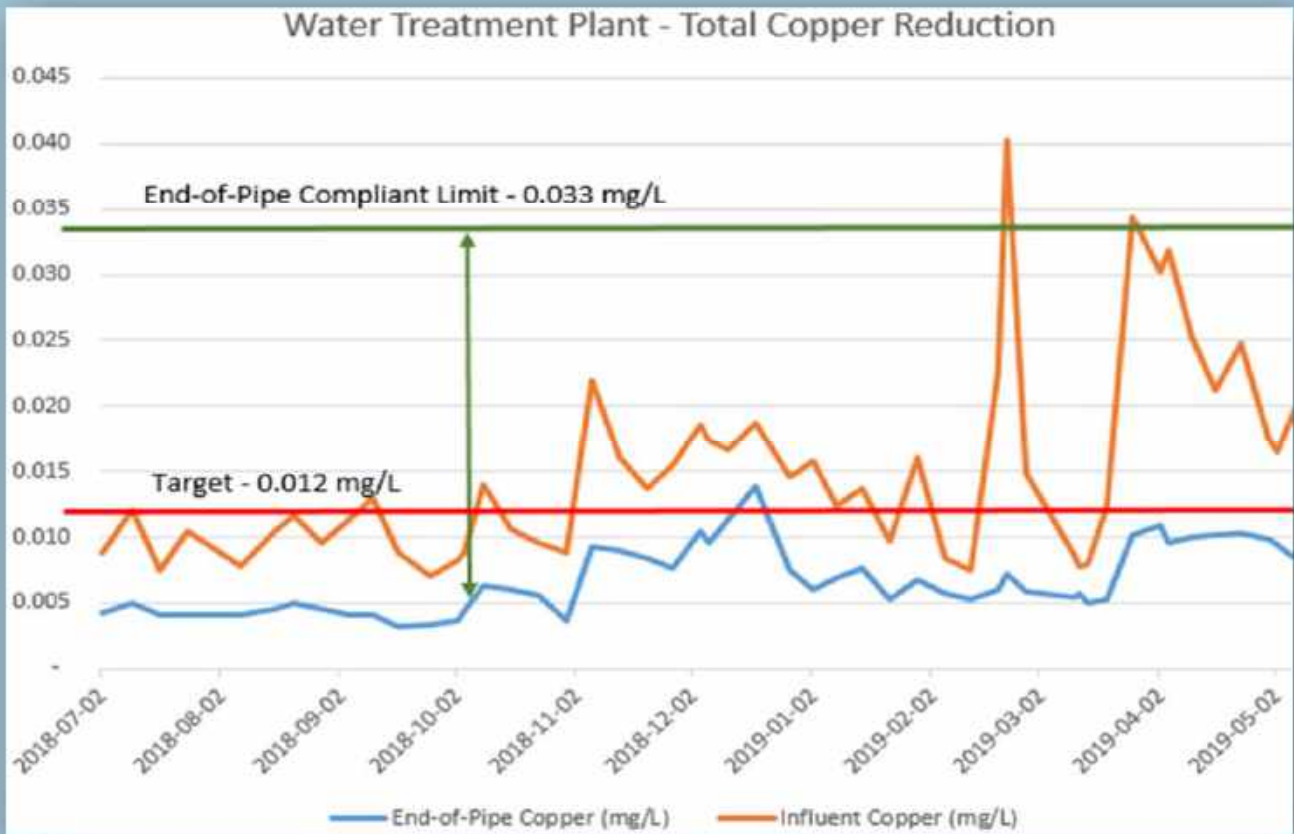
### Water Treatment Update and Response to Williams Lake Tribune Letter to Editor

The COO provided a review of a Letter to the Editor sent to the Williams Lake Tribune by Doug Watt and corrected some inaccuracies associated with the letter.



Edney Creek Delta, August 2017

- 1) The photo used to illustrate the letter was of Hazeltine Creek delta immediately after the breach in August 2014. Don provided a more recent photo showing the cleaned up and replanted delta.
- 2) The letter refers to the mine discharging “untreated” effluent. This is incorrect. The mine has been operating the WTP for about 3.5 years. The WTP is a Veolia ACTIFLO™ system, which **actively** treats the water with



Copper concentrations at the influent and end-of-pipe (HAD-3), July 2018-May 2019

coagulant, flocculant, and microsand. The operating permit requires assessment and optimization of the treatment plant. A new system for enhanced copper treatment was tested during freshet in 2019, however, copper levels were so low that the additional treatment was not required. The system was installed in case the treatment is ever required. The mine's discharge permit limit is 0.033 mg/L, however, ENV requested that the mine attempt to meet a more ambitious target of 0.012 mg/L. The graph above shows that since July 2018, the treated discharge has only once been above this target, and this was still well below the mine's permit level of 0.033 mg/L.

- 3) The letter suggested that the mine had said in the 1990s that they would never need to discharge water. The original Socioeconomic Impact Assessment for the mine from January 1991 (on EMPR's website) noted that "When surface runoff is greater than can be diverted to the tailings area, it will be discharged via sediment ponds from the site."

### Remediation and Monitoring

There are no changes planned to the mine's environmental monitoring program while the mine is on care and maintenance.



Spawning fish in remediated area of upper Hazeltine Creek (Reach 1), May 2019

#### Environmental monitoring update

- Bootjack, Polley, and Quesnel Lake sampling
  - ◇ 5 week intensive sampling at the initial dilution zone was completed in Quesnel Lake during spring turnover
- Weekly sampling at the end-of-pipe (HAD-3); no exceedances since May 2018.
- Other required monitoring completed: Hazeltine Creek, site water, and groundwater
- Biological monitoring completed by Minnow Environmental:
  - ◇ Spawning surveys and fish tissue - Hazeltine Creek & Bootjack Lake
  - ◇ Fish tissue, community, and population - Quesnel Lake

- ◇ Diffusive gradients in thin films (DGT) - Quesnel, Polley, and Bootjack Lakes
  - ◇ In Quesnel Lake, the DGT concentrations of copper are very stable, and very low. This is a very strong indication that the materials on the bottom of Quesnel Lake are not releasing metals.
  - ◇ Copper concentrations in Quesnel Lake are also well below levels that would have an effect on sensitive aquatic life.
- Terrestrial Ecosystem Monitoring by Environmental Dynamics Inc. (EDI)
  - ◇ Using a biogeoclimatic system to measure progress of indicator species in disturbed areas.

#### Remediation update

- Fish habitat construction for Reach 3 of Hazeltine Creek commenced at the beginning of June 2019.
- Tree, shrub, and willow planting started in May 2019 along floodplains of the Hazeltine Creek corridor.

**ASK YOUR RESPECTIVE PLC MEMBER FOR MORE DETAILS ABOUT THE MINNOW, EDI, AND MOUNT POLLEY UPDATES FROM THE PLC MEETING ON MAY 29, 2019!**

### Future of Water Management

Based on three and a half years of research and monitoring data on the operation of the WTP and the discharge into Quesnel Lake, this approach to water treatment and management has been determined to be protective of aquatic life. The original Technical Assessment Report that was completed in support of the water discharge permit recommended this option as the Best Achievable Technology for the site. While the mine plans to continue passive treatment and distributed discharge studies, these technologies may not be able to manage all the water on site, and the best option at closure is probably going to be management and treatment of site water in pit lakes. Therefore, the mine is considering approaching ENV to extend the permit allowing the discharge into Quesnel Lake to continue beyond the Dec 31, 2022 deadline in the present permit. The option of discharge into Quesnel River was discussed with the PLC. In the options analysis, discharge into the river was deemed not protective of aquatic life as the provincial government fish biologists had identified the river as spawning habitat. Also, the engineers considered the river too shallow for the diffusers. The mine noted that community consultations and public meetings will be held when Mount Polley submits its amendment requests.

### Care and Maintenance Update

- The mine is in care and maintenance as of May 31, 2019.
- Active mining ceased Dec 2018 and milling of stockpiled ore ceased on May 27, 2019.
- Dredging of the tailings remaining in Springer Pit restarted in June 2019.
- The WTP operated until June 18, 2019, with copper well below permit guidelines since July 2018.
- The care and maintenance crew consists of 11 people, plus the environmental team.
- Environmental monitoring and remediation activity is ongoing.



Black bear sighted on site, April 2019

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