



# COMMUNITY UPDATE Q4 2020

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## **A letter from the Mount Polley Team,**

Happy Holidays - we hope that everyone enjoyed a joyous holiday season and wish you all the best for 2021.

A Covid-19 update - Mount Polley employees continue to take additional precautions to minimize the risks of COVID19 transmission and illness as recommended by the Provincial Health Officer. All personnel continued to report to work in Q4.

Employees and site visitors are required to sign off on a daily COVID-19 Questionnaire before entering the site and will be turned away if showing symptoms of illness.

# MOUNT POLLEY MINE: CARE AND MAINTENANCE

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Below we cover key bulletins that highlight areas of focus with regards to Mount Polley mine's care and maintenance:

1. The environmental monitoring programs continue and are on track

2. Closure research projects continue as planned

3. Remediation of Hazeltine Creek continued at Lower Hazeltine, projected to be complete in 2021

4. Workforce consists of thirteen staff plus additional contractors

5. Site water management continues, including the near-continuous operation of the water treatment plant

6. Exploration Geological Mapping of new areas on mine site

7. CANMAG shipping magnetite

# ENVIRONMENTAL MONITORING UPDATE

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***Environmental team:* Matt O’Leary, Gabriel Holmes, Kala Ivens, Alicia Lalonde (DWB Consultant), Kim Sandy, Don Parsons (Corporate Office)**

## **New Hire**

Kimberly Sandy was hired on November 16 as the newest member of the Mount Polley environmental team. She has been hired as an Environmental Technician and extensive on-site training is underway.

## **New ENV Permit**

A new ENV permit 11678 was issued on December 31, 2020 that incorporates conditions from a previous consent order because of ongoing appeals of conditions within the permit as issued on February 1, 2020.

Quarter 4 routine monitoring activities completed:

- Weekly WTP water quality sampling including monthly/quarterly toxicity sampling
- Monthly water quality sampling at Hazeltine Creek
- Monthly & Quarterly water quality sampling of surface & mine affected waters including groundwater, mine seepage
- Hydrological monitoring
- Polley Lake, Bootjack Lake, & Quesnel Lake water quality sampling
- All critical ditches, sumps, ponds, and pipeline inspections
- Monthly/quarterly Waste Inspections
- Continued investigation of unauthorized discharges and exceedances
- Reporting—monthly, quarterly, investigations
- Monitoring planning as per the Comprehensive Environmental Management Plan (CEMP) and ENV Permit 11678



*Figure 1 Snow corer for evaluating snowpack.*

### **Specialized Environmentally Related Work –**

During the course of the year, we enlist the help of numerous environmental consulting companies to complete some of the specialized components of the environmental monitoring done at Mount Polley Mine. Examples include bird song surveys or benthic and invertebrate studies in the remediated areas of Hazeltine Creek. Most of our consultants completing specialized environmental work have wrapped up their field seasons and are processing data and interpreting their field observations in preparation for delivering their reports. Some of these reports satisfy CEMP requirements and some are stand alone studies. The results of this work can be found in the upcoming Mount Polley Mine Annual Environmental Report. Some of the companies that we engage with include Golder Associates Ltd, Minnow Environmental Inc., DWB Consulting Services Ltd., Ensero Solutions, and Watersmith.

**Environmental monitoring is conducted in accordance with the Environmental Management Act (EMA) Permit 11678 and the approved Comprehensive Environmental Monitoring Plan (CEMP) requirements.**

# MPMC Water Treatment Plant (WTP) Update

In Quarter 4, the total treated water discharged to Quesnel Lake was  $\sim 1,592,581 \text{ m}^3$  with an average discharge rate of  $\sim 0.2 \text{ m}^3/\text{second}$ . The plant operated continuously for most of Quarter 4. Water quality samples were collected weekly at the Water Treatment Plant (WTP) at the influent (E19) and effluent (HAD-3) sites throughout the quarter. To further optimize the plant operations the WTP operators have been utilizing a Hanna Multiparameter Photometer to assess influent and effluent copper concentrations to help guide daily plant operations. We are developing a data set comparing the field readings to the lab results to verify the reliability of the instrument.



*Figure 2 Water Treatment Plant Laboratory*

## **Permit Exceedance**

On November 11, 2020, a permit exceedance for elevated copper was observed at the WTP. Through the course of the resulting investigation the plant was shut down for four days, additional samples were collected (in recirculation mode), a site contact water review was completed, the source of copper was identified, plant operations and site conditions were assessed key findings were identified and operational recommendations were compiled. The plant resumed normal operation on November 27, 2020.



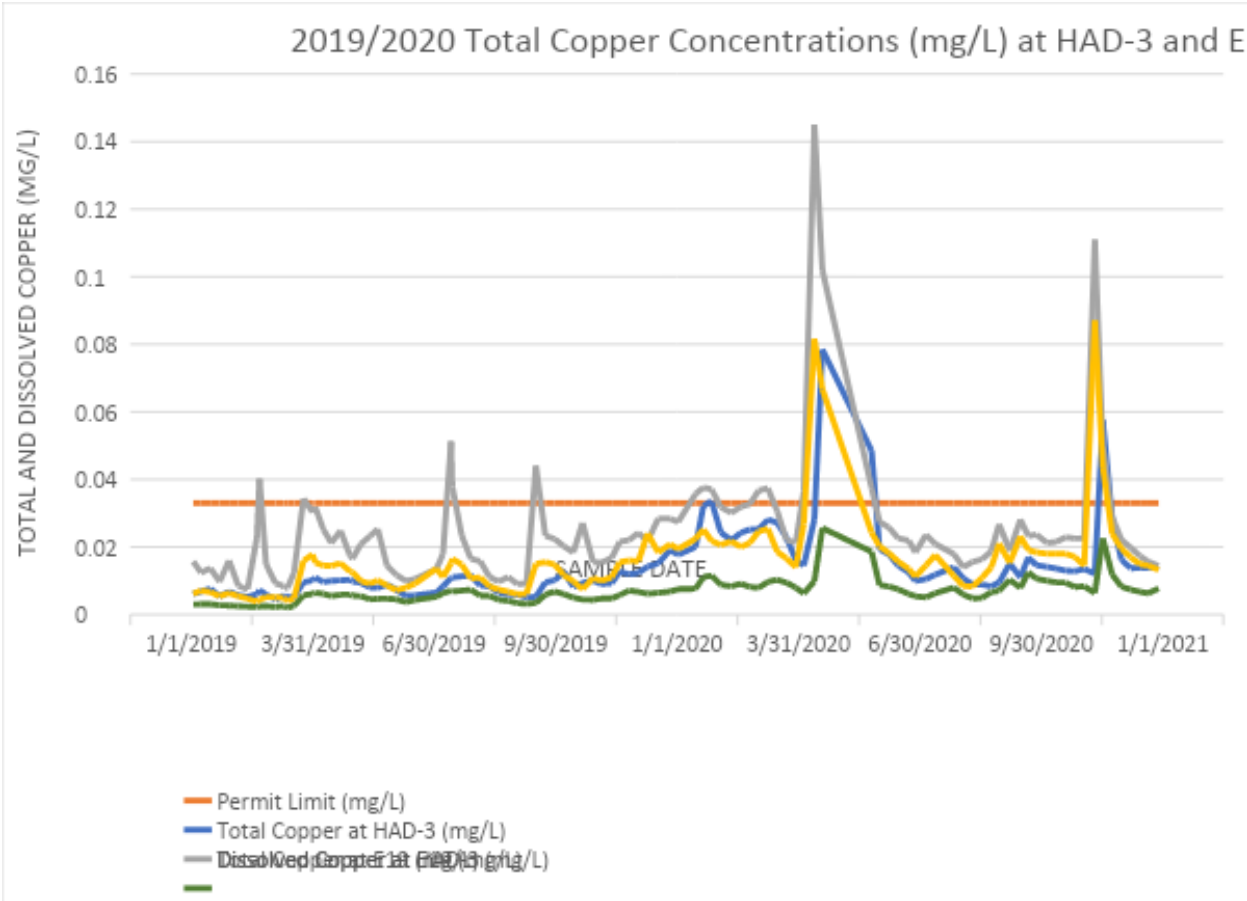
*Figure 3 Water Treatment Plant and Discharge Pipeline to Quesnel Lake*

## **Bypass Request**

On October 26, 2020 MPMC requested a bypass of the authorized works (the WTP) to discharge mine site contact water that is being stored in the Springer Pit without active treatment. Through the course of the last year the water quality in the pit has improved greatly and meets the end of pipe permit limits as indicated by the sample results taken during on site monitoring. This is the result of the water clarifying and passive in-situ treatment occurring in the pit. The bypass request also included water from the Tailings Storage Facility (TSF) and the Cariboo Pit provided that they meet the end of pipe permit limits. Significant water quality fluctuations are not expected because of the single source nature of the bypass. Monitoring is planned to increase in the Springer Pit to provide early warning of water quality changes and will remain at the same frequency at the end of pipe.

Another driver for this request is to aid MPMC in eliminating surplus water currently being stored on site. The quantity of water stored on site currently exceeds Best Practices as advised by the Tailings Storage Facility Engineer of Record. A bypass authorization will enable MPMC to increase discharge volumes while still meeting permit limits and BC Water Quality Guidelines. This will also limit year over year accumulation of stored water on site. A similar bypass authorization request was submitted by MPMC in 2016 and approved by British Columbia Ministry of Environment (MoE) on March 11, 2016.

# MPMC WATER TREATMENT PLANT (WTP) GRAPH - UPDATE





# HAZELTINE AND EDNEY CREEK REMEDIATION

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Remediation work was limited in Q4 to ground cover seeding and seed collection efforts. All areas that were disturbed by the 2020 construction near Hazeltine and Edney Creek were seeded. Additional Sitka Alder and Cattail seed was collected for distribution. The native ground cover seed blend that is used in the remediation is comprised of Mountain Brome, Native Red Fescue, Rocky Mountain Fescue, Bluebunch Wheatgrass, Blue Wildrye, Fireweed and Big Leaf Lupine.

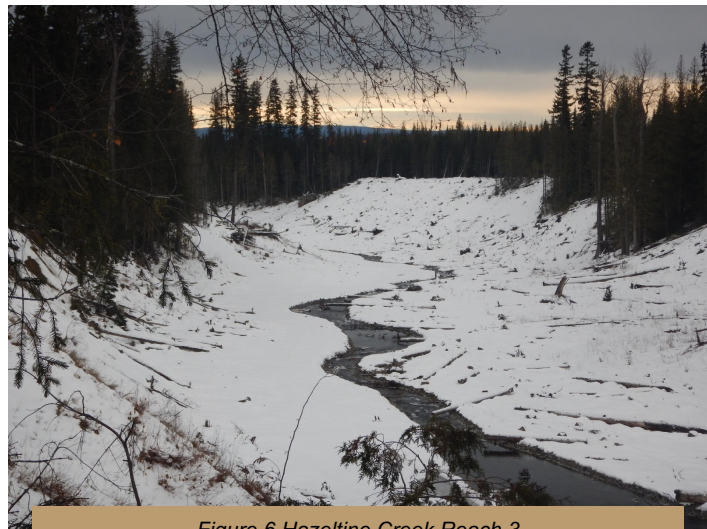
## Remediation Update Gallery



*Figure 4 Lower Edney Creek and Secondary High Flow Channel*



*Figure 5 Newly Constructed Edney Creek Outfall to Quesnel Lake*



*Figure 6 Hazeltine Creek Reach 3*



*Figure 7 Ice Forming in Lower Edney Creek*

# EXPLORATION UPDATE

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In late 2019, a comprehensive exploration program consisting of a geochemical MMI-soil sample survey and geophysical 3D-IP survey was carried out over the Frypan/Morehead area located west and north of the Mount Polley mine. The target area is roughly 3 by 3 kilometers in size, largely till covered, and shows a similar magnetic response to that obtained over the Mount Polley mine host rock of monzonite and hydrothermally altered monzonite breccia pipes.

During June 2020, an additional 3D-IP survey was conducted over the Mount Polley mine site to identify the geophysical response of the known mineralization.

Interpretation of the new geophysical data sets led to numerous high priority targets both in the Frypan/Morehead area and on the mine site.

A drill program was planned to test the new high priority targets on and off the mine site and to expand zones of known mineralization on the mine site. The first phase of drilling was carried out at the end of 2020.

# MPMC EVENTS

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*Quarter 4, 2020*

October 7

**Public Liaison Committee (PLC) Meeting via conference call**

*Upcoming*

February 3, 2020

**Public Liaison Committee (PLC) Meeting via conference call**

# RESOURCES

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[mountpolley.com](http://mountpolley.com)

[imperialmetals.com](http://imperialmetals.com)

BC Mine Information Page: <https://mines.nrs.gov.bc.ca/>

BC Ministry of Environment Natural Resource and Enforcement Database:  
<https://a100.gov.bc.ca/pub/ocers/searchApproved.do?submitType=menu>

*If you have any questions regarding the Community Update, please email Gabriel Holmes at [gabriel.holmes@mountpolley.com](mailto:gabriel.holmes@mountpolley.com)*