



Mount Polley Mining Corporation

an Imperial Metals company
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MOUNT POLLEY MINING CORPORATION (MPMC) PUBLIC LIAISON COMMITTEE (PLC) MEETING SUMMARY

Meeting Details

In person Meeting and Conference Call Hybrid Meeting
General Meeting – Q1 2023

January 5, 2023

9:00 am to 1:00 pm

Meeting held at the WLFN office in Williams Lake

Meeting called by: MPMC Designated Representation

Meeting Chaired by: Gabriel Holmes

Minutes by: Alicia Lalonde

Member	Present	Call-in	Organization
Aaron Higginbottom			T'exelc - Williams Lake First Nation
Abhirosh Chandran (AC)		x	Ministry of Environment and Climate Change Strategy
Alicia Lalonde (AL)	x		DWB Consulting (MPMC)
Alexander Kaul (AK)		x	Ministry of Energy, Mines and Low Carbon Innovation
Alex Gresl			Williams Lake Chamber of Commerce
Bee Hooker			Big Lake Community
Bill Carruthers			Williams Lake Community
Christine McLean (CM)		x	Mitchell Bay Community
Claudine Kadonaga			Likely Business
Don Parsons (DP)	x		Imperial Metals (MPMC)
Doug Watt (DW)		x	Likely Resident
Emily Sonnag			Xat'sùll - Soda Creek First Nation
Gabe Holmes (GH)	x		Mount Polley Mining Corporation (MPMC)
Kelly Parker			MPMC
Jackie Sarginson		x	MLA Cariboo North Coralee Oaks Office
Jason Raine (JR)		x	University of Northern BC and Quesnel River Research Centre
Johanna Godt		x	Sedgewick Strategies (MPMC)
Linda Bartsch			Horsefly Business
Lisa Kraus			Likely and District Chamber of Commerce
Lyn Anglin (LA)		x	Consultant to Imperial Metals (MPMC)
Luc Lachance (LL)		x	Ministry of Environment and Climate Change Strategy
Mathieu O'Leary			Mount Polley Mining Corporation
Maureen LeBourdais			Cariboo Regional District
Micky McIntosh			Likely Resident
Mike Stinson (MS)		x	Xat'sùll - Soda Creek First Nation
Nishitha Singi			T'exelc - Williams Lake First Nation
Richard Holmes			Little Lake Community
Steve Hocquard			Horsefly Community
Taylor Strosher (TS)		x	Ministry of Environment and Climate Change Strategy
Victoria Stevens			Ministry of Energy, Mines, and Low Carbon Innovation
Walt Cobb			Williams Lake Resident
Guests			
Nina Solomon	x		T'exelc- Williams Lake First Nation
Willie Sellars	x		T'exelc- Williams Lake First Nation

Meeting Start: 9:05 am

Roll Call – Introductions and acknowledgements – Gabriel Holmes

- I'd like to acknowledge that we operate on unceded traditional territories and work in partnership with the Williams Lake and Xatsull First Nations.

Additions to Agenda, and Approval of Agenda – Gabriel Holmes

- As I have indicated in the agenda, we are going to go over the following:
 - COVID-19 Update
 - PLC Membership and Terms of Reference Review
 - ENV/EMLI Discussion/Compliance Review
 - Permitting/Amendment Applications
 - Environmental Monitoring Update
 - Owens et al. (2022) paper
 - NaHS Observations/TSF Water Quality
 - Hazeltine Creek Water Quality
 - Discharge/WTP Update
 - NPM
 - Water Management Update
 - Remediation/Reclamation Update
 - Mining Update
 - Job Opportunities/Production Mining
 - Roundtable Discussion
 - PLC Questions/Comments
 - Next Meeting- April 6, 2023?
- Note that most photos in the presentation are from around the mine site in the last quarter.
- Does anyone have additions to the agenda, or have objections to it? If not, we are going to move on through what we have planned.
- Agenda approved.

COVID-19 Update – Gabriel Holmes

- We are up and running. Most COVID protocols have been rescinded (eg. room occupancy). Sanitary stations are still located throughout the facility and employees are expected to stay home if sick. We have rescinded the vaccine requirement and as stated, employees are required to stay home if sick. I hope that the end is near but COVID is still circulating around our communities.

PLC Membership and Terms of Reference Review – Gabriel Holmes

- I previously sent out the Terms of Reference (ToR) for your review. The ToR should be updated, as there are a couple of items in need of updating.
- Each of us as members can identify people and reach out to people that may be interested in joining the committee. If anyone has someone in mind, an individual or organization, please forward that to me.
- There are still numerous vacancies on the committee.

Communications

- I don't often receive feedback but I want to reaffirm that our doors are always open. We are committed to our communications plan.
- I would like to offer more tours to our membership going forward as going to the site and seeing the work we've been doing is very valuable.

ENV/EMLI Discussion/ Compliance Review

- Luc Lachance (LL): Our compliance officers are working through inspection reports. When their reports are completed, the most up to date information can be brought to the Q2 or Q3 meeting. People can bring forward any questions they may have today.
- GH: Inspection reports are public documents.
- LL: The inspections are done and then the reports are completed so there is a waiting period before they are available to the public.
- Alexander Kaul (AK): No comments from me.

Care and Maintenance to Operations- Gabriel Holmes

- We are nearing full scale operations; we are seeing some of our targets being hit in our pits.
- We have ongoing water management, water treatment plant operations, environmental monitoring, and pit, and mill operations are ongoing.
- Tailings dam construction ceased in Q4.
- CanMag production is on hold. The facility is going to be in care and maintenance until Q2 2023. They do intend to operate that facility again.
- Equipment is being refurbished, repaired, or replaced.
- We are still hiring in many departments. We are struggling to get every position filled. We are filling the voids with consultants and contractors. There are still many positions available so if you know anyone who may be interested, please reach out.
- We do a lot of health and safety training to ensure we are providing a safe work environment for our employees.
- I need to remove scrap metal from this slide; we haven't gotten rid of any since Q3.
- I would like to reiterate that you can learn a lot from a tour of our site, so please come up. We encourage you to come and take a look.

Permitting/Amendment Applications – Don Parsons

- Joint Application:
 - The Springer Expansion/Southeast Rock Disposal Site (SERDS)/Northwest PAG (Potentially Acid Generating) Stockpile/Quesnel Lake Discharge: This phase requires amendments to the M-200 and 11678 permits. We are planning to push back walls of the Springer Pit and extend Quesnel Lake discharge.
- Individual Applications:
 - Dry stack tailings and NAG (Non-Acid Generating) tailings on the SERDS: The technical assessment report has been reviewed. We are hoping to start that in March.
 - NAG/PAG reduction: We are looking to reduce the NAG/PAG ratio from 2:1 to 1.5:1.

- Tailings Design and Construction Above 970m: We are looking at a slightly different design. Golder is working on Issue for Construction drawings and we are hoping to receive those shortly. We want to start that in July/August.
- Notice of Departure:
 - Bonanza Ledge Ore: Bonanza has 20,000 tonnes of extra ore that they would like to bring to Mount Polley to process. We completed the same process in 2004/2005.

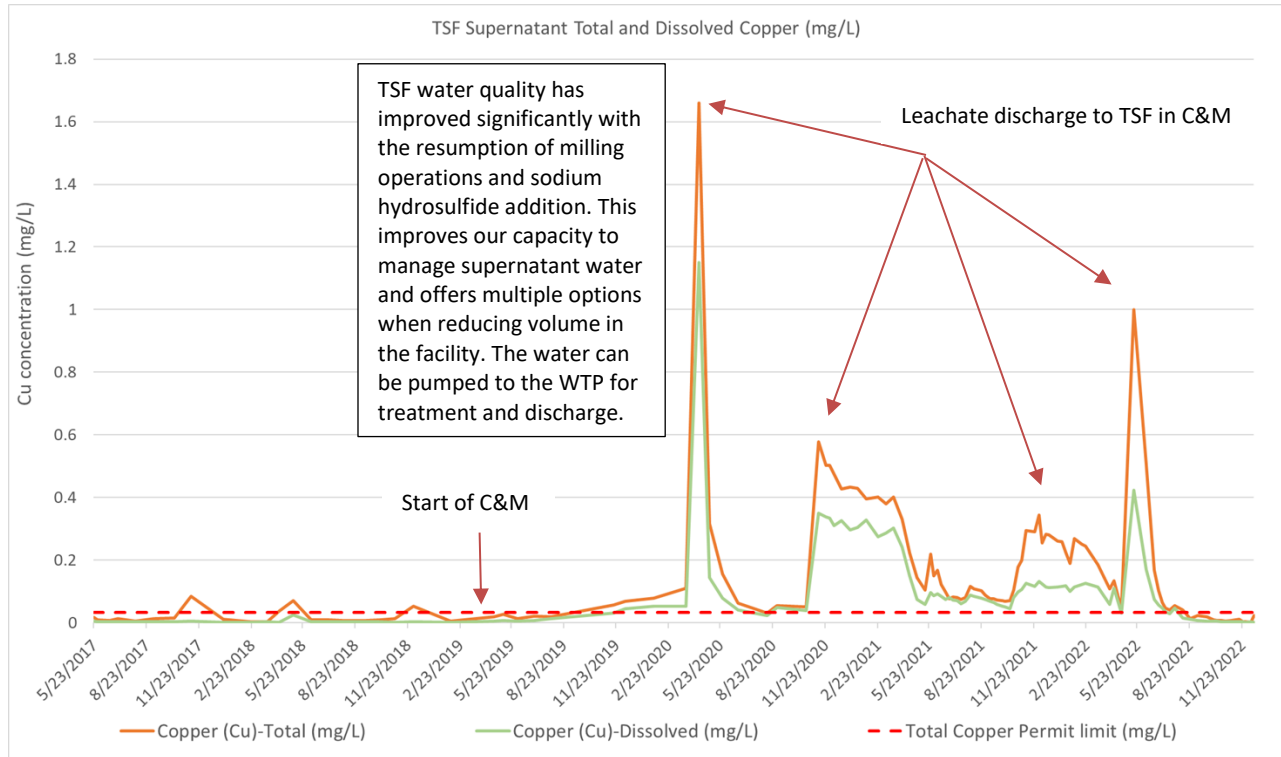
Environmental Monitoring Update – Gabriel Holmes

- We have a comprehensive environmental monitoring program: we spend a lot of time monitoring and sampling water to inform water management decisions.
 - Sites include: Polley Lake, pit lakes, Wight Pit, Hazeltine Creek, Edney Creek, mine site seepage, groundwater and the WTP (Water Treatment Plant).
 - We complete routine weekly, monthly, quarterly, semi-annual and annual sampling.
 - We do sample various other sites around the mine site for supplemental information.
- We have undertaken a comprehensive wildlife monitoring program which is ongoing. It is taking up more time than we initially thought.
- Weather stations are collecting data.
- Specialized sampling is conducted by our consultants (e.g., fish population, fish tissue, spawning surveys, habitat, etc.).
- Waste management, it is critical that we manage our waste efficiently now that we are in operations.
- Sump and ditch inspections which occur twice per year.
- Reporting and planning to make sure we execute these items effectively.
- **Owens et al. Paper**
 - I hope everyone had a chance to review this paper. Mount Polley's consultants did prepare a response to the paper:

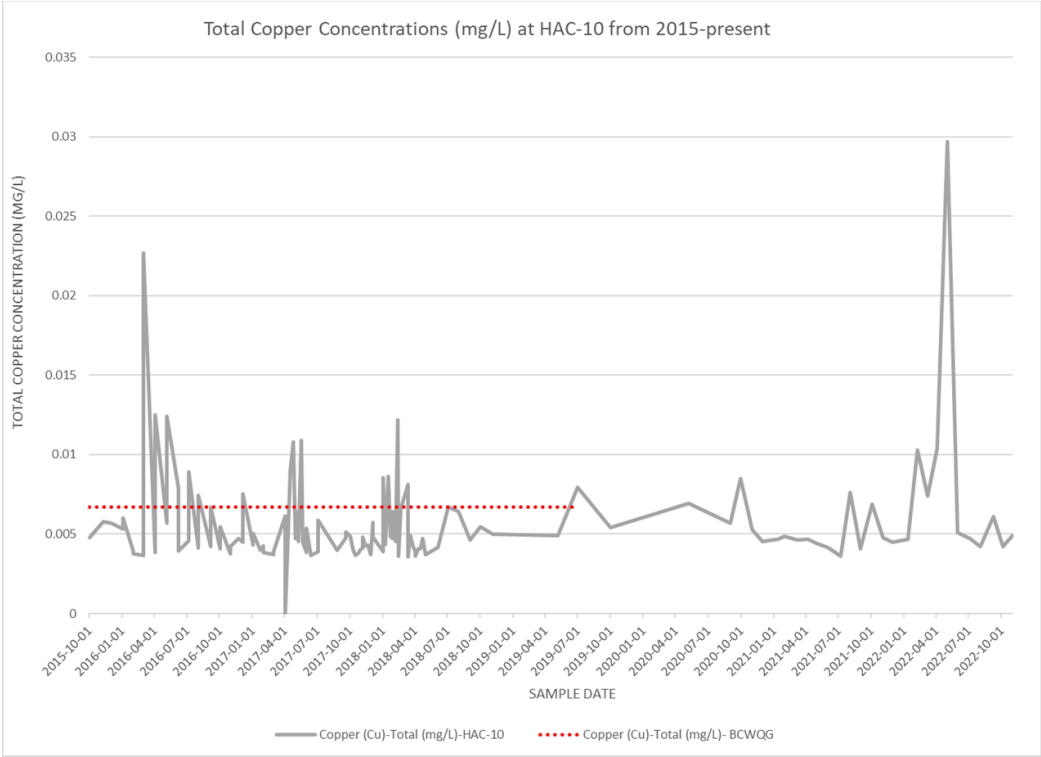
3.0 SUMMARY

Owens et al. [1] present data showing small increases in seasonal resuspension of settled sediments from the bed of Quesnel River, which is consistent with studies conducted in Quesnel Lake (e.g., [20]). Unfortunately, the authors go on to make inferences about the potential for environmental effects from copper associated with the resuspended sediments, which are erroneous for two primary reasons: incorrect application of environmental quality benchmarks, and failure to consider publicly-available data that provide direct measures of exposure and effects for aquatic organisms. Quesnel River copper concentrations in water, early life stage toxicity testing with Rainbow Trout, zooplankton and fish tissue concentrations, and other fish metrics contradict the statements made by Owens et al. [1].

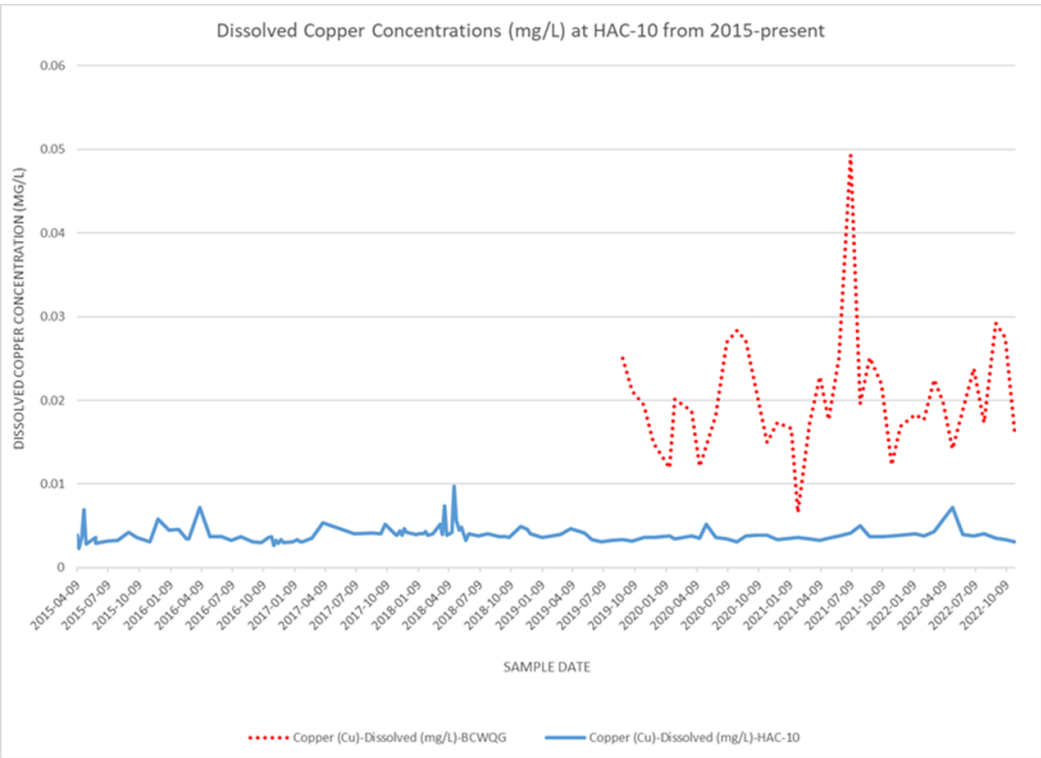
- **Water Quality Results**



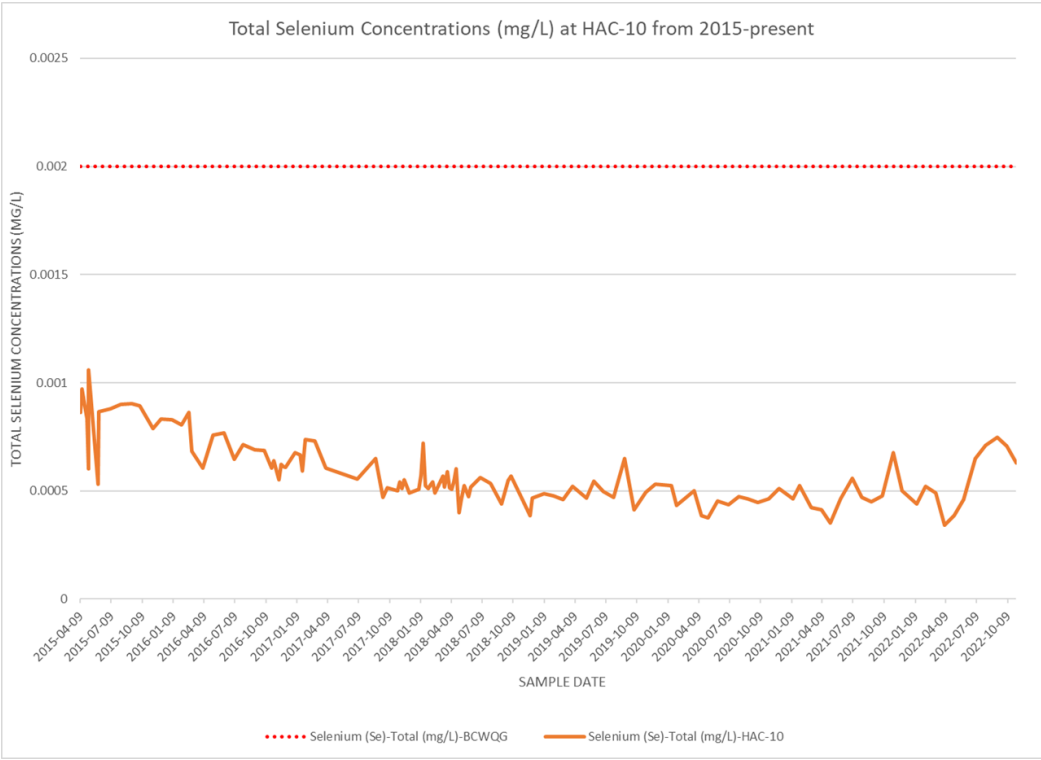
- This graph shows total and dissolved copper going from care and maintenance (C&M) to operations. You can see high concentrations of total and dissolved copper but you can see a large decline as well. In the last 4 weeks we have seen concentrations below the permit limit and NPM (Numeric Performance Metric). We have seen great improvements in water quality. These effects that we are seeing we are attributing to our milling process and the addition of NaHS (sodium hydrosulfide). We might meet the permit limits for discharge of our TSF (Tailings Storage Facility) Supernatant. This gives us more options for managing our TSF water. We monitor the toe drains that come out of our dam regularly and it would complement this graph to show some of those results.
- Chemistry data from Hazeltine Creek was requested so I'll go through that now.



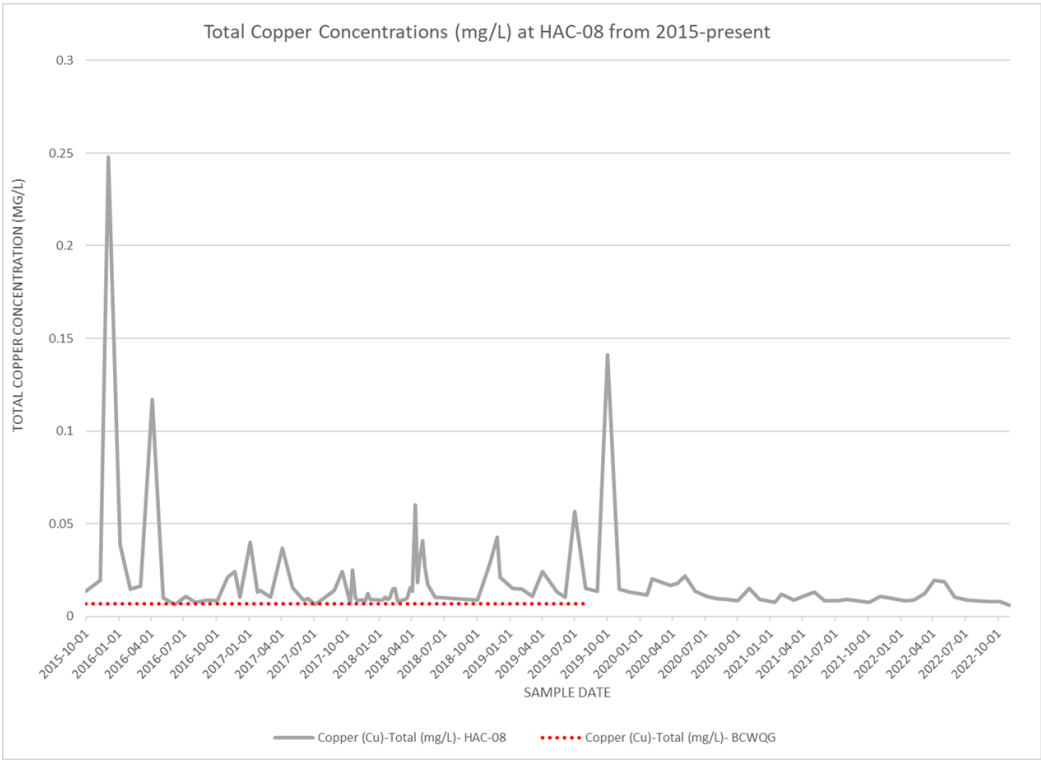
- This graph shows total copper concentrations at HAC-10, which is located immediately below the control structure, downstream of outlet of Polley Lake. The increases in 2015 going forward are due to construction of the creek following the breach. The total copper BCWQG (BC Water Quality Guideline) changed from a total copper guideline in 2019 to a dissolved copper BLM (Biotic Ligand Model) guideline. The BLM calculation uses pH, hardness and dissolved organic carbon.



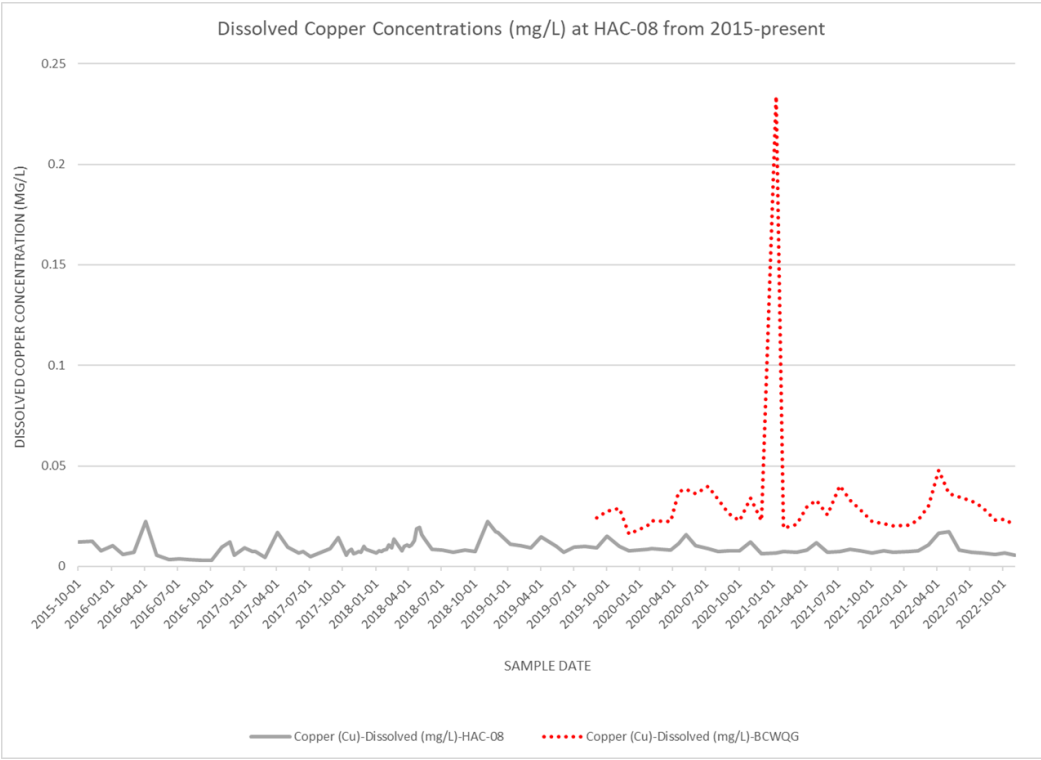
- Concentrations of dissolved copper are consistently below the BCWQG at this site. The erratic values in the total copper graph are associated with total suspended solids from construction activities in the creek.



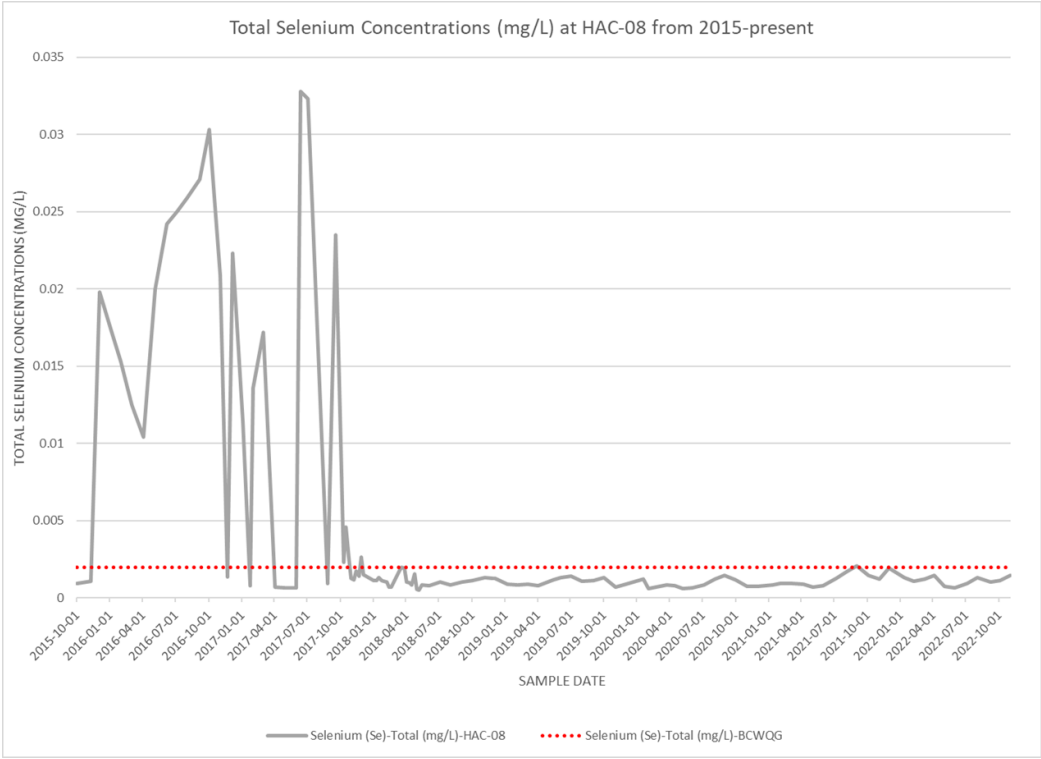
- Selenium is also consistently below the BCWQG.



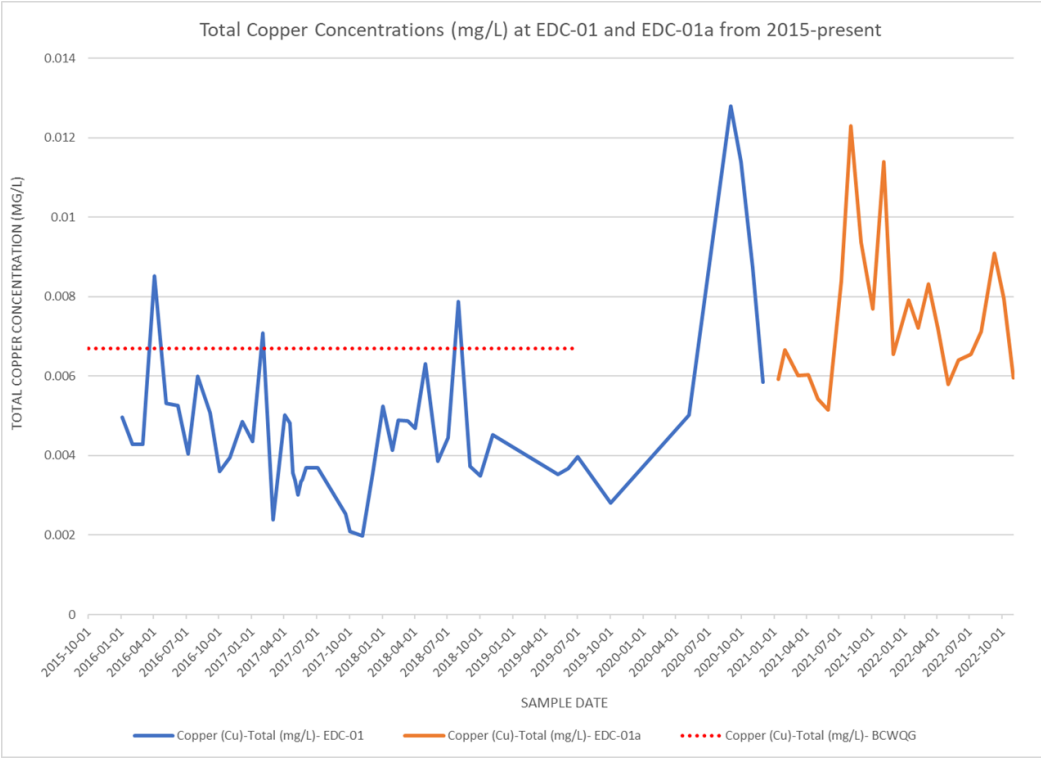
- This graph shows total copper at HAC-08 which is located at the Ditch Road bridge at Hazeltine Creek. Prior to the change in the working guideline, we see fairly consistent exceedances of the guideline, some associated with construction.



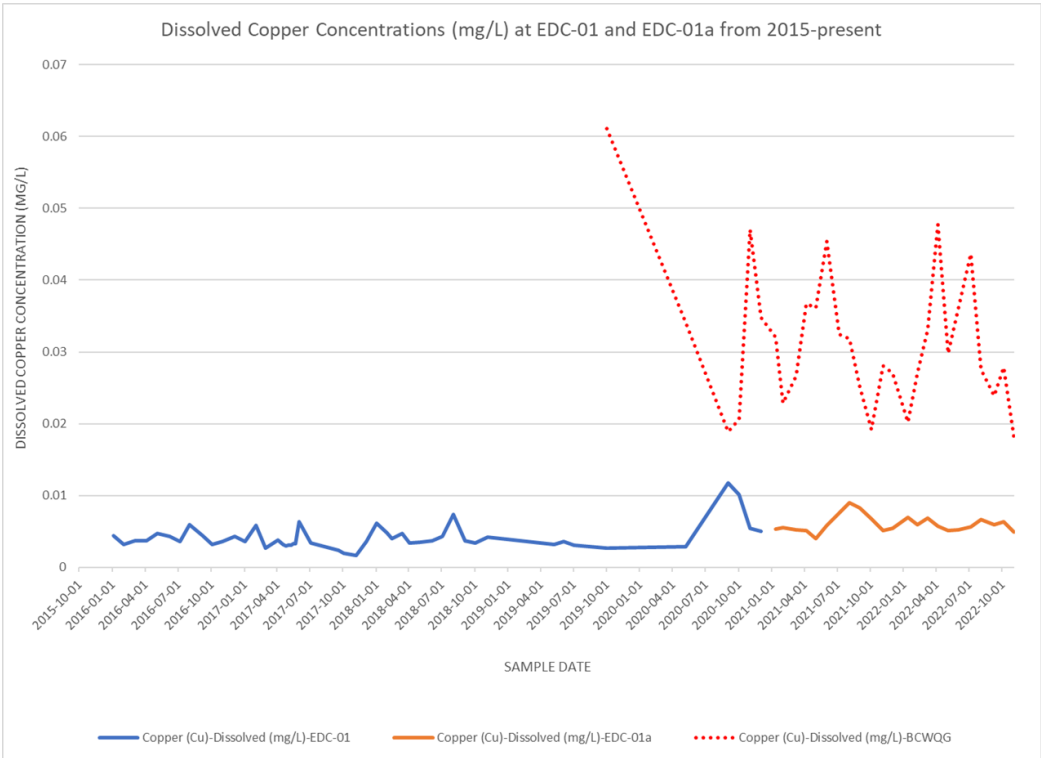
- The working guidelines changed in 2019, and we are regularly below the newer guideline. Those values are derived from the BLM calculation.

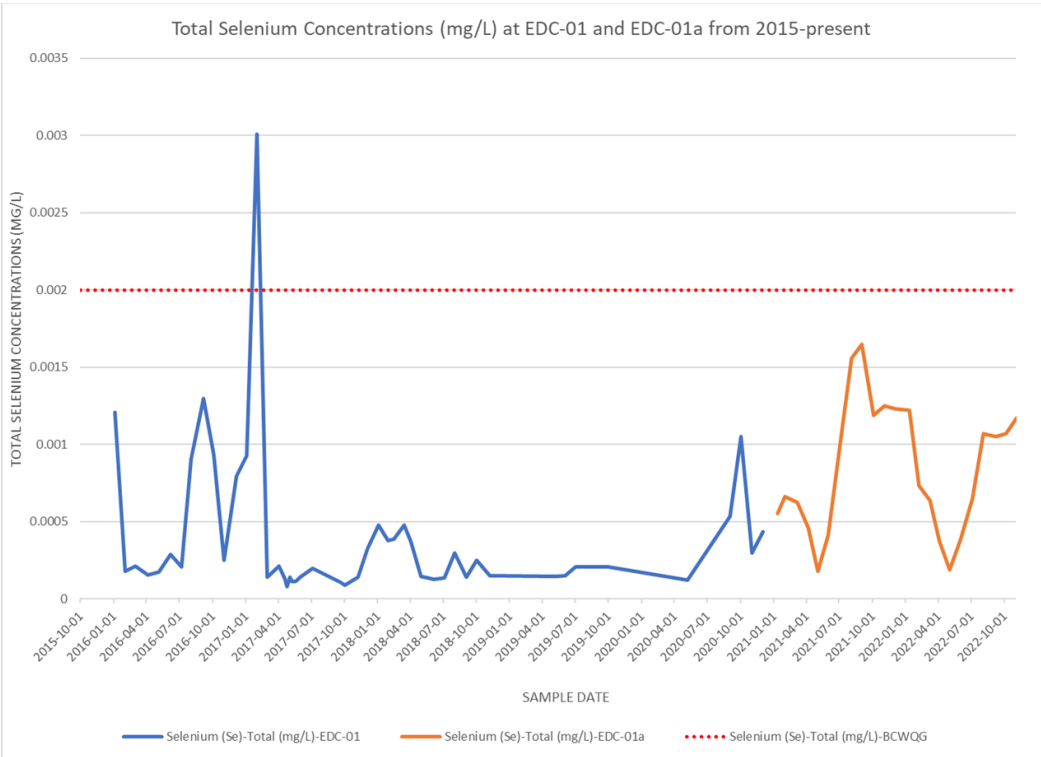


- Total selenium concentrations are erratic during 2015/2016 due to construction activities but are regularly below that guideline from 2018 onward.

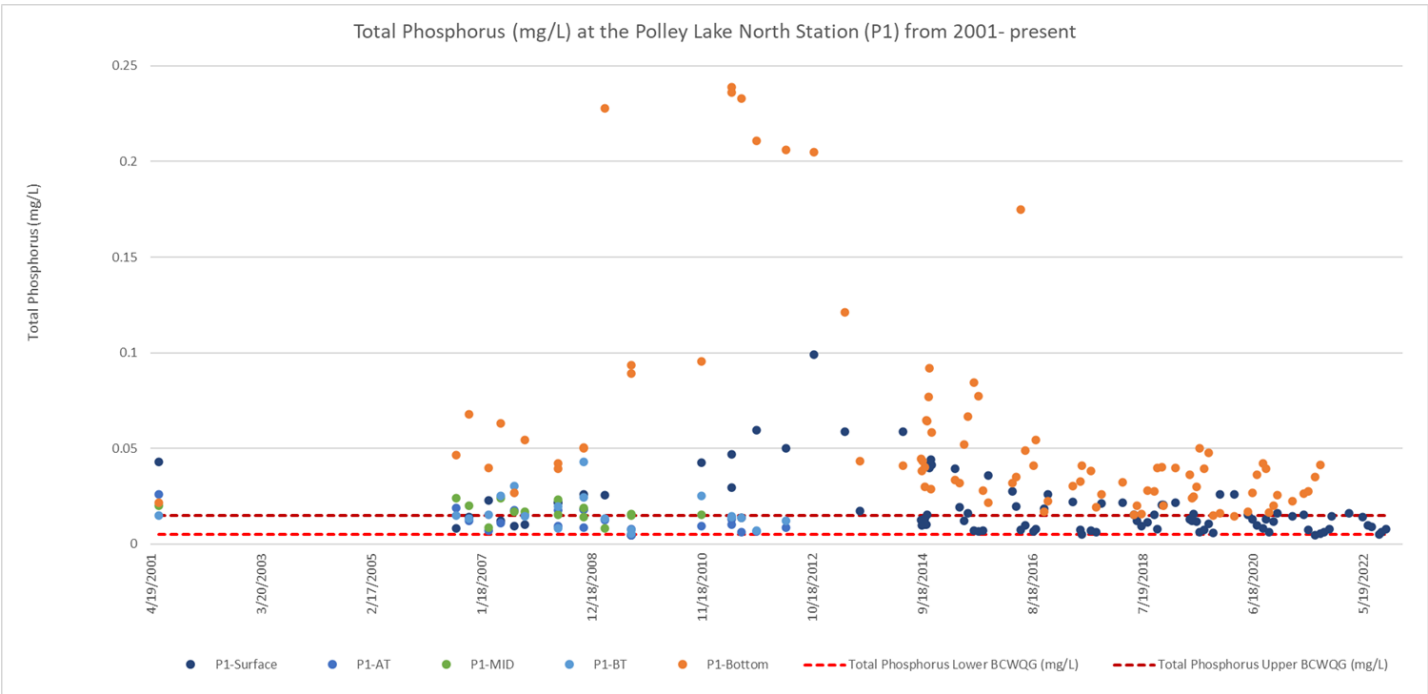


- EDC-01 was located in Edney Creek before the confluence with Hazeltine Creek. EDC-01a represents its current configuration with the creeks conjoined. Once again, we are well below the guidelines.



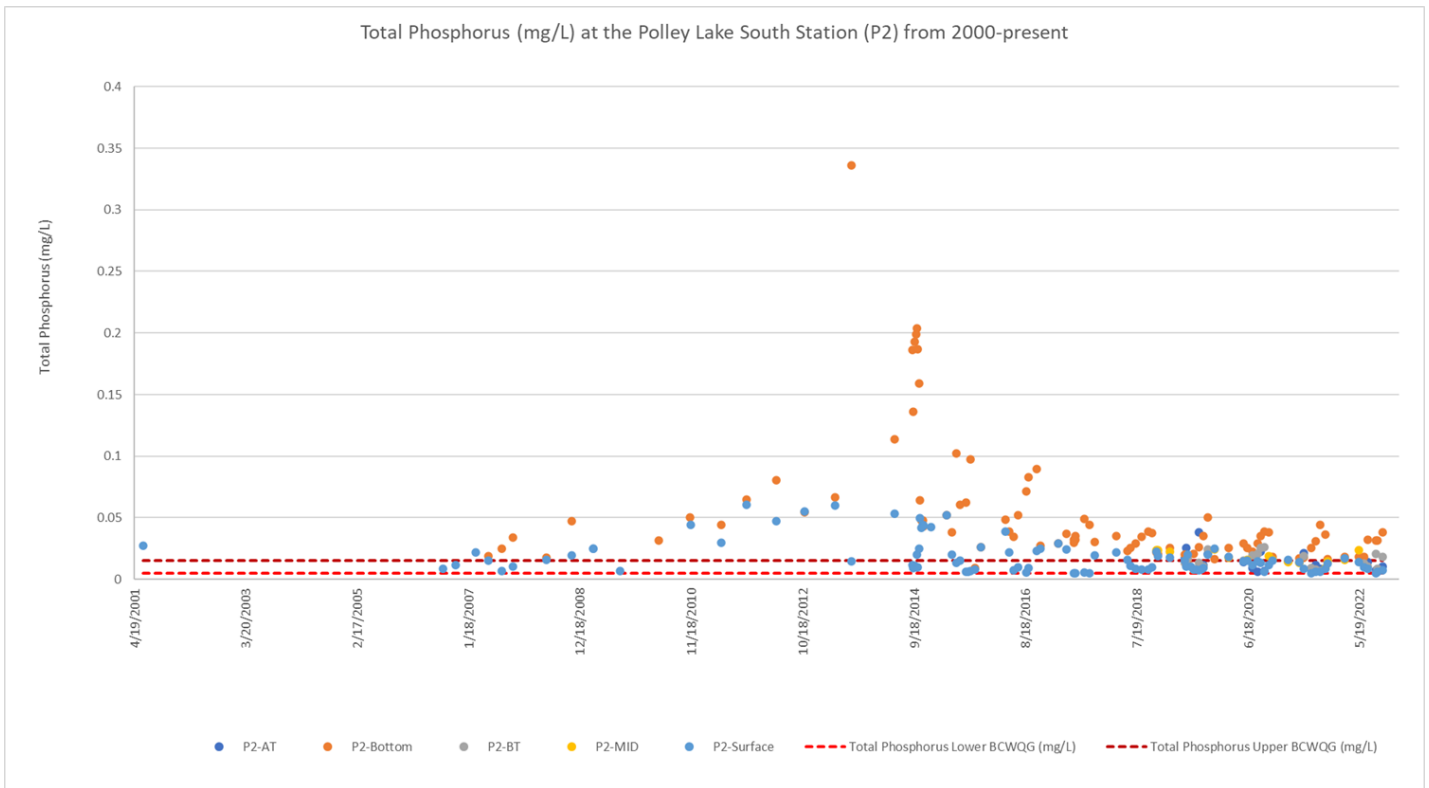


- With selenium we still see some erratic concentrations though they are below the guidelines. We are still seeing construction being implemented.



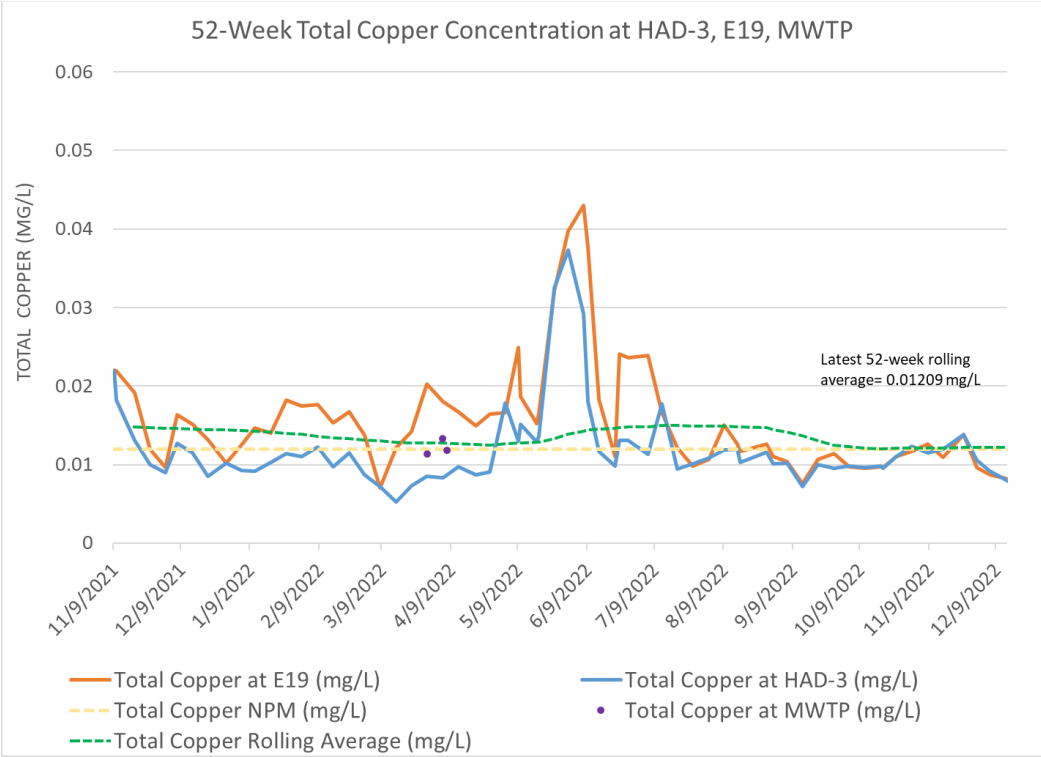
- We do intensive monitoring at Polley Lake. We have two sites at Polley Lake that have been sampled since 2001. This chart shows the P1 site (north sampling location). The sampling depths include P1-AT (above thermocline), P1-Mid, P1-BT (below thermocline) and P1-B (bottom). There is an upper and lower guideline for copper. We see conditions quite similar to before 2014 and the TSF breach currently. We

had some concerns before we constructed the Long Ditch, some of those concentrations are prior to its construction. You can see how those concentrations have changed over time. We are seeing a pretty static conditions with regard to phosphorus which is encouraging.

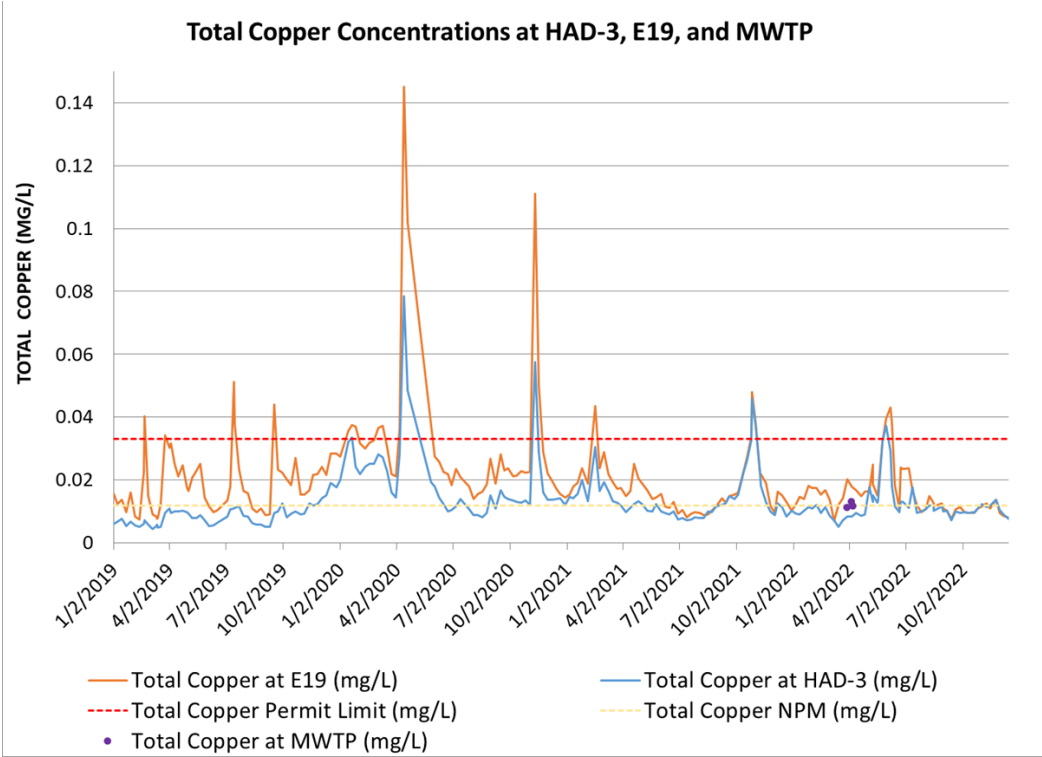


This graph shows P2, which is the southern site on the lake, and we see the same sort of trend is occurring. If you are interested in concentrations of any other parameters, you will find them in the appendices of the most recent annual report.

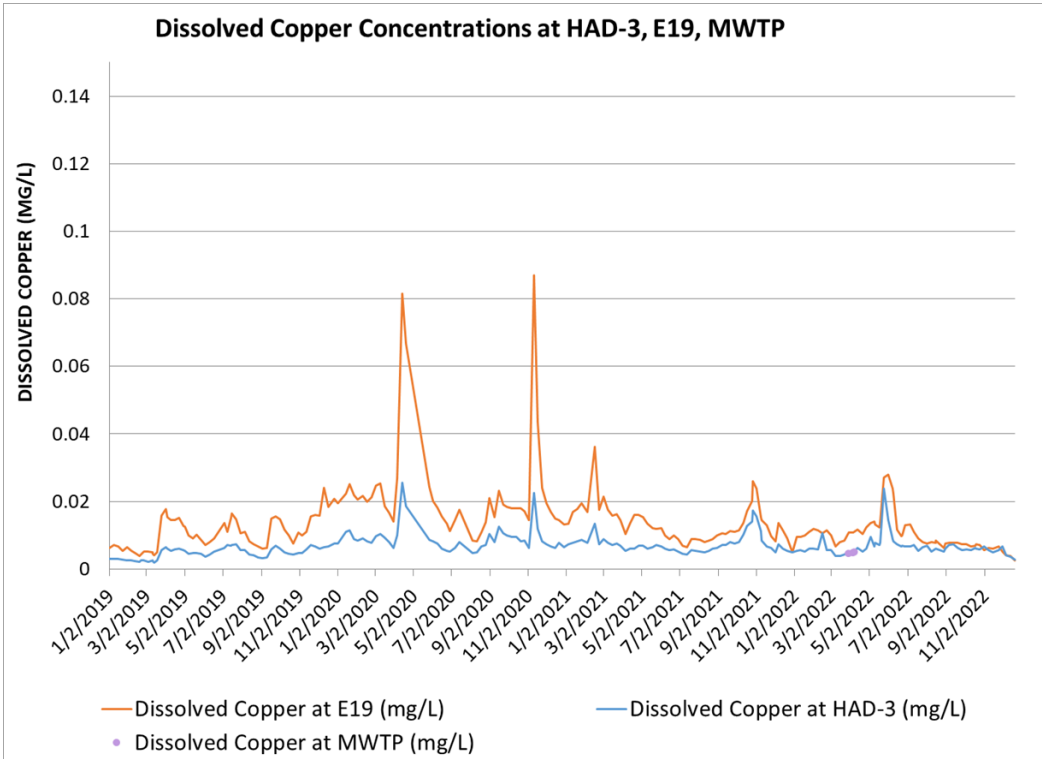
- Weather
 - We have 2 stations on site that monitor parameters every 5 minutes (rain, temperature, wind direction, wind speed, gust speed, solar radiation, relative humidity, dew point, battery)
 - MPMC has been collecting climate data since 1995
 - We collect snowpack measurements manually
 - We are at 60.3mm snow water equivalent in December which is below average. We measure that snowpack twice per month.
 - Above average snowpack for 2022
 - Above average precipitation in May and June 2022
- Waste Management
 - We generate a lot of waste at a facility such as this and it is important that it be disposed of in a responsible fashion.
 - As part of the orientation package, there are a number of slides that are dedicated to waste management. There are many waste streams in effect and resources available to employees.
 - We have a permitted landfill on site and many recycling initiatives underway.



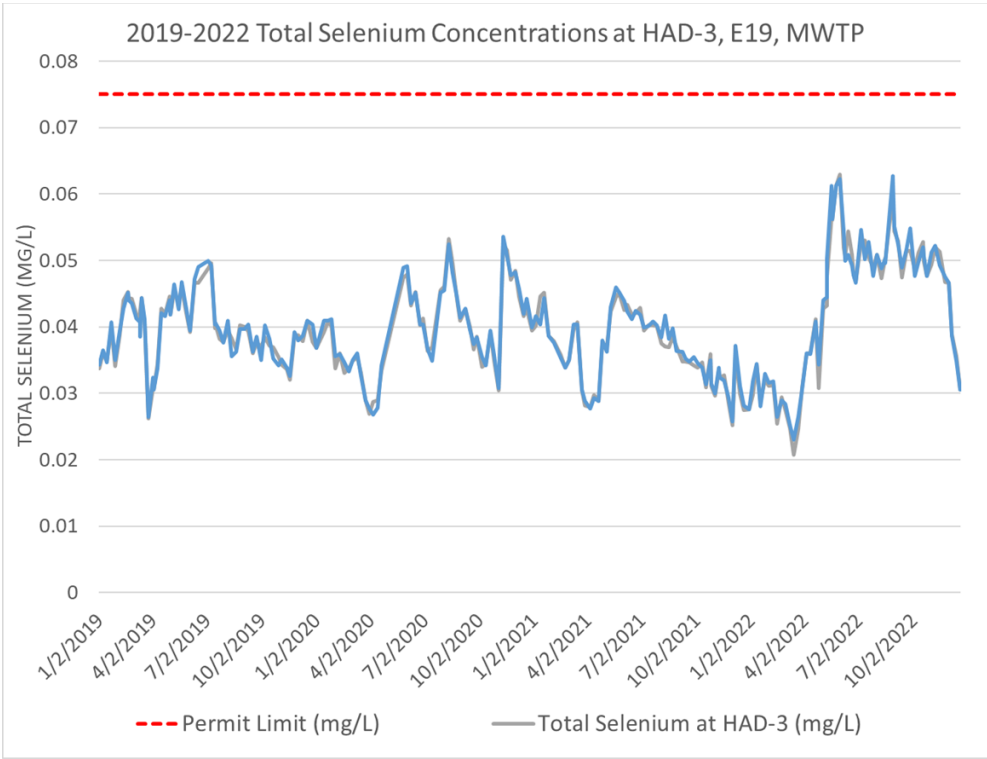
- We have monitoring infrastructure that we are going to install at the Booster Station that will remove the risk of accidental influx of water into the PETBP. With the changes in the water chemistry of TSF Supernatant, that was a source of poor quality water from 2019-2022 that had increased our rolling average in those years as a result of introducing it into the water treatment stream. We have a number of water bodies on site that do not pose a risk to our water quality. We do still have an abundance of water on site but we are well poised to be able to run the WTP at a higher throughput. We need to be vigilant with the water management on site.



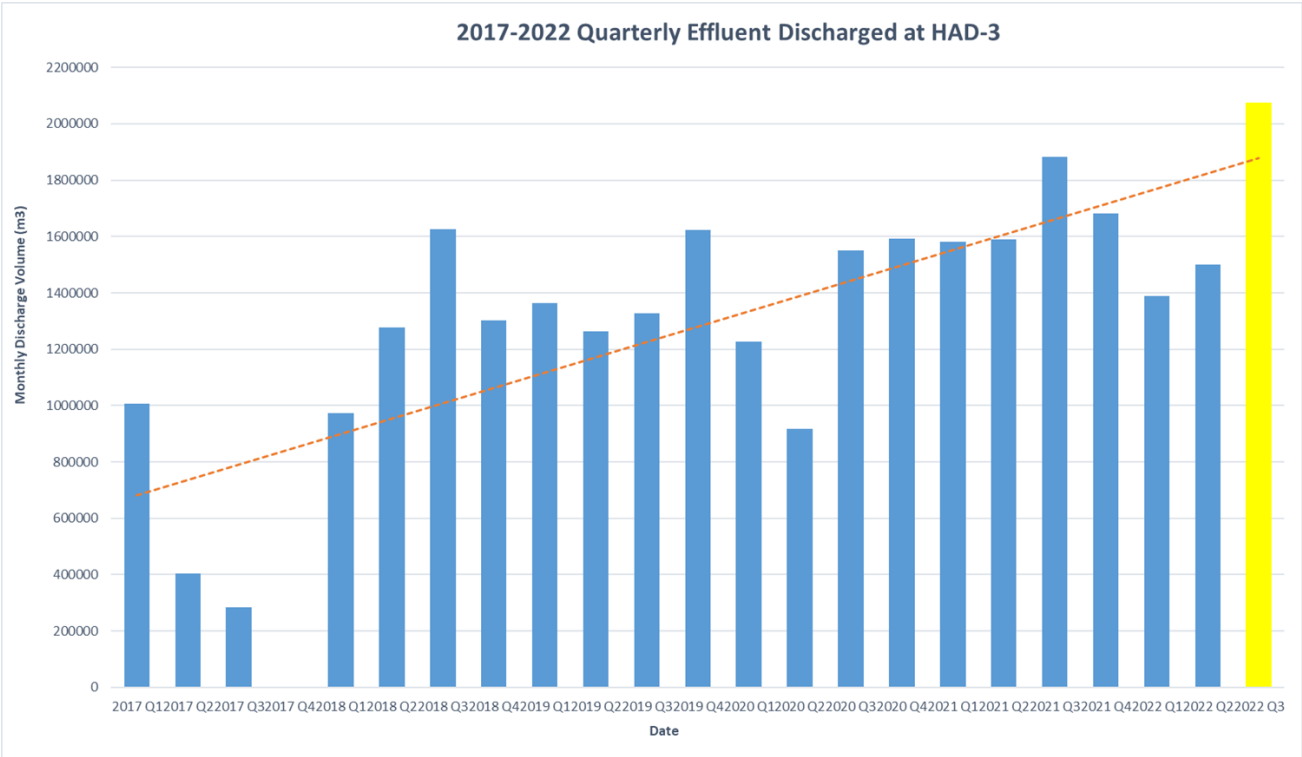
- You can see exceedances in previous years on this graph and that is what we are hoping to avoid now that we have better water quality on site. The 3 purple dots represent the MWTP during its commissioning. Following the MWTP’s commissioning the sample port was installed downstream where the permanent WTP and MWTP lines conjoin.



- This graph shows dissolved copper which includes particles that pass through a 0.45 micron filter.

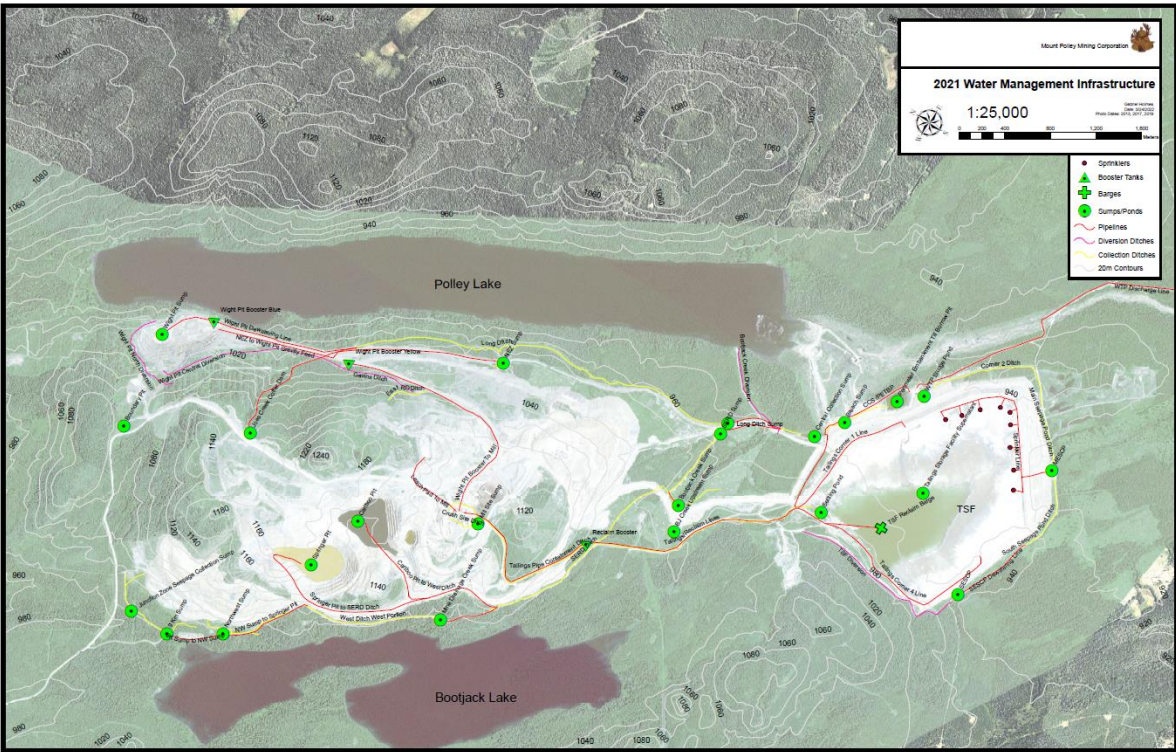


- We see a slight upward trend in selenium that was from one of our source waters onsite but we are trending downward again.



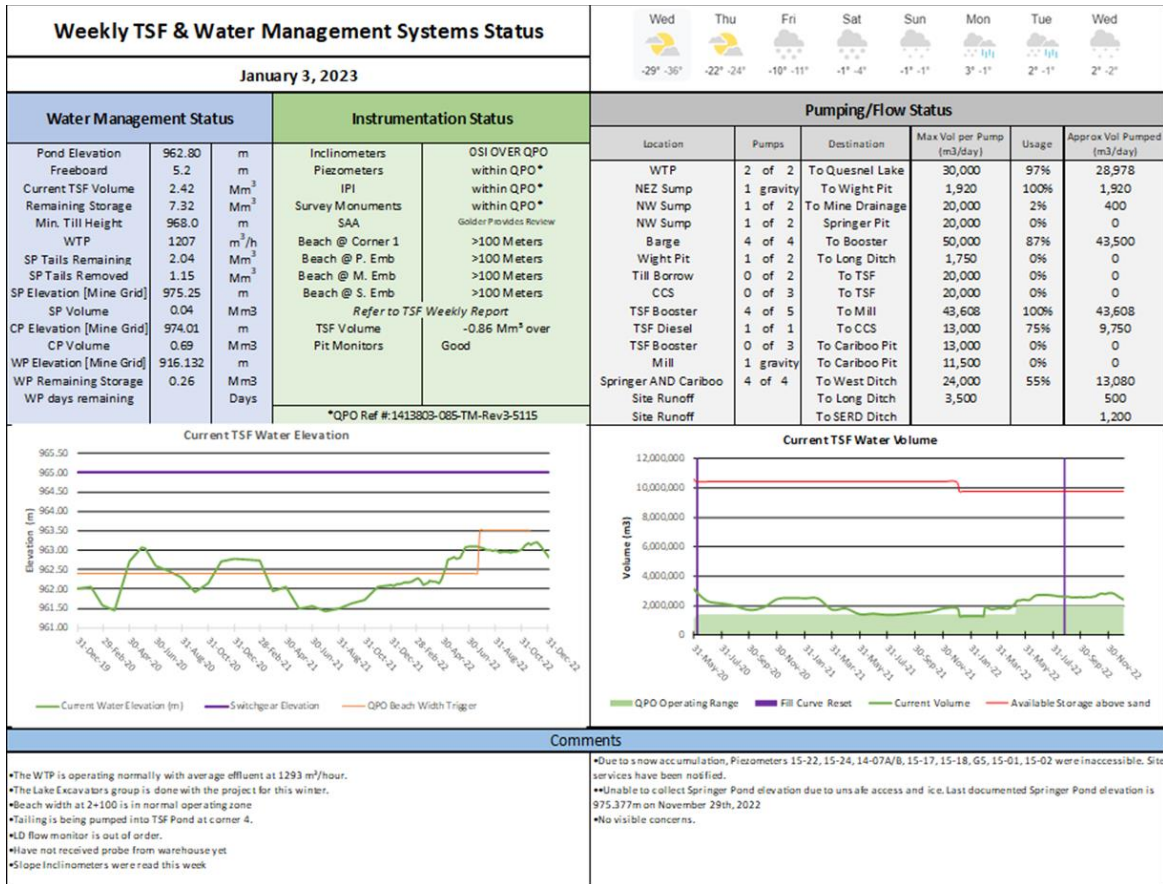
- This graph shows quarterly effluent discharged. Q4 was the highest discharge to date which is what we want to see. We have seen great successes in our water management on site.

- Water Management Infrastructure
 - Inspected daily by pump watch personnel. A comprehensive inspection is conducted twice per year per our permit requirements.



Site Water Balance			
	Volume –Jan 3 (Mm ³)	Volume – Previous Week (Mm ³)	Total Change (Mm ³)
TSF	2.42	2.58	(0.16)
Cariboo Pit	0.69	0.77	(0.07)
Springer Pit	0.04	0.04	(0.00)
Wight Pit	3.01	3.01	0.00
Total	6.17	6.40	(0.23)

- We have a total volume of 6.17Mm³ on site as of January 3rd.



- This is the TSF Dashboard. It is a management tool used to inform the Engineer of Record (EoR). It includes piezometer and inclinometer readings. Instrumentation technicians manage that and provide it to the EoR on a weekly basis. This summarizes water storage locations and what is happening around the dam.
- Tailings Storage Facility
 - Pumping down to meet QPOs (Quantitative Performance Objectives)
 - Favorable water quality amenable to treatment
 - Working to meet EoR QPOs
- Springer Pit
 - Pit treatment was successful and the pit has been dewatered
 - Dewatering wells installed in the tailings are used to dewater interstitial water in tailings
- Cariboo Pit
 - Maintaining water elevation to permit mining
 - Providing water to the concentrator for processing
 - Partially backfilled to facilitate mining near the north wall of the Springer Pit
 - Ongoing monitoring at the end of pipe
- Wight Pit
 - Currently flooded
 - Possible Saturated Rock Fill Treatment facility investigation on hold
 - Ongoing monitoring at end of pipe
 - Under ice monitoring planned
- Maintenance / Improvements

- Pipeline from Cariboo Pit to Wight Pit completed and in use
- NEZ seep water pipeline to the mill
- Mobile WTP operations

Remediation/Reclamation Update – Gabriel Holmes

- No remediation work was done in Q4. Environmental monitoring activities are ongoing in the remediated areas and planning is underway for the completion of the project.
- Outstanding work:
 - Polley Lake Shoreline – re-contouring, soil and CWD (coarse woody debris) addition, rough and loose
 - Polley Flats roads – re-contouring, soil and CWD addition, rough and loose
 - Reach 3 “Blowout Area” – Re-contouring, soil and CWD addition, rough and loose
 - Planting – ground cover, shrubs and conifers - has been completed and has gone very well, in 2020 we had drought conditions but in 2022 far less mortality occurred, we have replanted some of it and it’s looking great
 - The number of salmon observed in Q4 was very encouraging. These results are showing the resilience of the ecosystem and the rehabilitation work being successful.

Mining Update – Gabriel Holmes

- Current Life of Mine Plan – Surface Mining Operations
 - 11 years of mining with the Springer/Cariboo Expansion pit
 - 1 year of backfill of PAG material into the Springer Pit (subaqueous disposal)
 - TSF annual construction
 - Ongoing considerations
 - Site water management
 - Mill production
 - Mill maintenance/upgrades
 - Concentrate production
 - Mobile equipment maintenance and upgrades
 - Pit mining
 - TSF construction is ongoing
- Economic Impact
 - Benefits
 - Quick restart of local economic generator during COVID-19 recovery
 - Direct Employment Benefit – 350 jobs with average wages and benefits exceeding \$123,000 per annum
 - Indirect Employment Benefit – some 700 indirect jobs
 - Payments to suppliers in BC – estimated at an average of \$75 million per operating year
 - Employment for 2022 Operations: 341 full time employees, 42 part time employees
 - First Nations: 27 full time employees, 12 temporary/part time employees

Meeting End 11:45pm

Resources

PLC SharePoint Site:

<https://imperialmetals.sharepoint.com/sites/MountPolleyPLC>

BC Ministry of Environment Natural Resource and Enforcement Database:

<https://a100.gov.bc.ca/pub/ocers/searchApproved.do?submitType=menu>

BC Mine Information page:

<https://mines.nrs.gov.bc.ca/>

mountpolley.com

imperialmetals.com

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