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X0C0G0

From: Luis Manzo, Director of Lands, Kivalliq Inuit Association

Date: August 9, 2022

Arviat

Baker Lake

Chesterfield
Inlet

Coral
Harbour

Naujaat

Rankin Inlet

Whale Cove

The KIA has reviewed the 2021 Meliadine Annual Report and have the following comments on water quality:



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Comment No. 1 Nutrient Enrichment in Meliadine Lake

Comment: As set out by the AEMP Design Report, 2016, the Low Action Levels for Nutrient Enrichment in Water quality are as follows: Concentrations of nutrients in the NF area above the normal range, Concentration exceeds a defined percentage of AEMP benchmark, and Divergence of Trends in comparison to reference areas. Total Phosphorus measured at the NF sites in 2021 average 0.00731 mg/L, which is a significant increase from baseline measurement and within error of the 0.0075 mg/L Action Level. Of 23 measurements taken from March to September, 2021, 14 exceeded the 0.0075 mg/L benchmark. Further, Figure 4-8, Appendix 18 suggests that total phosphorus concentrations at the Near and Mid Field sites do not follow the same trend as the Mel-03 Reference sites from 2016 on.

Notwithstanding Agnico Eagle's responses to Annual Report comments under the NIRB process, total phosphorus in the east basin of Meliadine Lake is routinely exceeding the Low Action Level in a manner that diverges significantly from trends observed in the reference areas (Fig. 1). While adverse impacts may be unlikely to be observed at this stage, the exceedance of the Low Action Level necessitates exploring strategies to curtail further nutrient enrichment, with the commensurate change of trophic status.

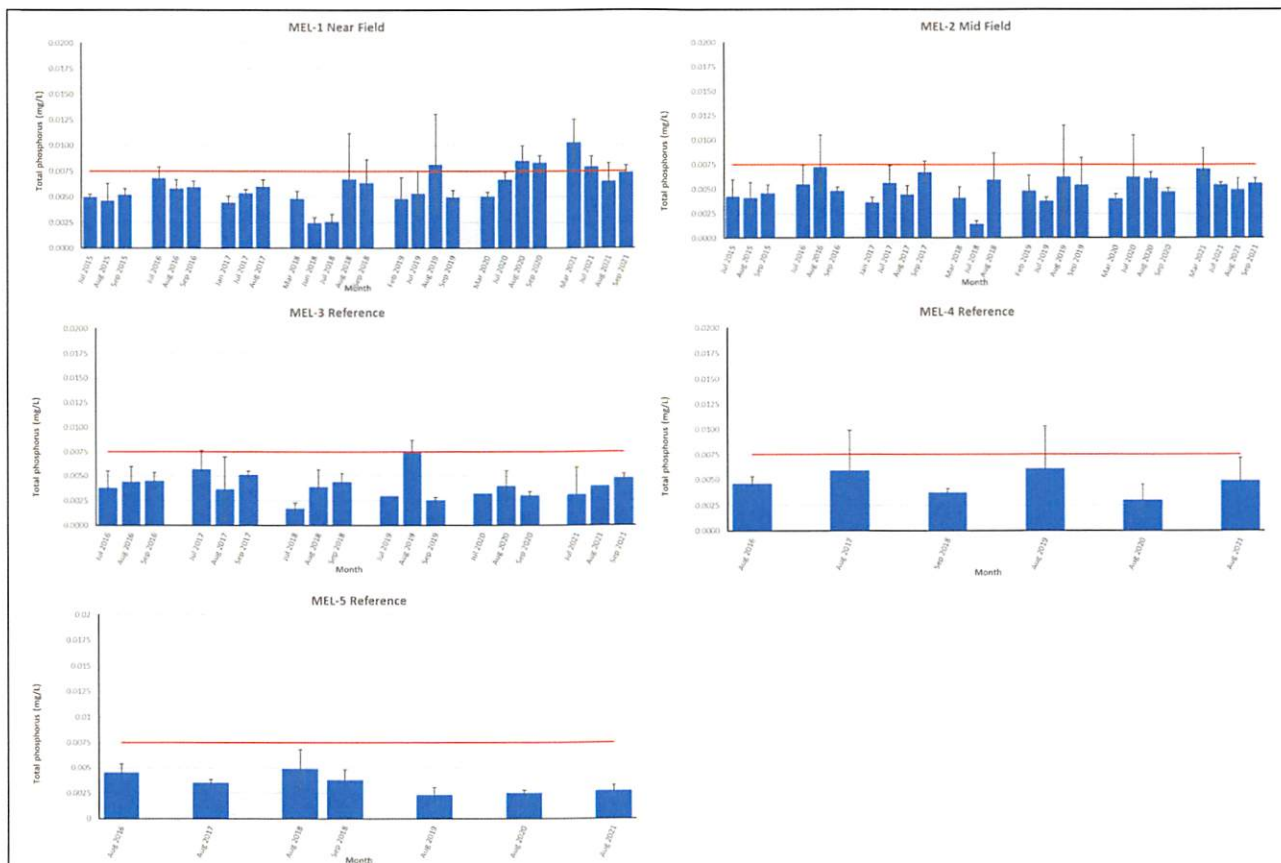


Figure 1. Total Phosphorus Levels at Meliadine Lake. Phosphorus Levels at site MEL-1 have routinely exceeded the AEMP Action Levels of 0.0075 mg/L in 2020 and 2021, while no such increase has been observed at Reference sites MEL-3, MEL-4, and MEL-5. Data from 2017, 2018, 2019, 2020, and 2021 AEMP Reports.

Recommendation: We recommend that Agnico Eagle amend the statement in S 7.1.4 to acknowledge that phosphorus concentrations have increased over time in the East Basin of Meliadine Lake. Agnico Eagle should explore strategies to mitigate the impact of nutrient enrichment in the East Basin, including but not limited to increasing the volume of contact water diverted to Itivia Harbour.

Comment No. 2 Threespine Stickleback Chemistry

Reference: S 7.1.6; Appendix 18 S 10.

Comment: Calcium, arsenic, manganese, strontium, and uranium were detected at higher concentrations in Threespine Stickleback from MEL-01 in 2021 compared to the reference areas in Meliadine Lake and compared to the baseline period. The increased concentrations of these metals





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Recommendation: Continue to monitor the threespine stickleback tissue chemistry as set out in the AEMP.

Regards,

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