July 3, 2026

Robert Hunter, Licensing Administrator
Nunavut Water Board
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William Bowden, Environmental Manager
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RE: Qikiqtani Inuit Association Review of Baffinland's 2025 Qikiqtani Inuit Association and Nunavut Water Board Annual Report for Operations

Mr. Hunter,

The Qikiqtani Inuit Association (QIA) has completed its review of Baffinland's *2025 Qikiqtani Inuit Association and Nunavut Water Board Annual Report for Operations* for the Mary River Project ('The Annual Report') submitted to the Nunavut Water Board (NWB) and dated March 31, 2026. This submission primarily focuses on Baffinland's obligations related to the Type "A" Water Licence 2AM-MRY2540. A list of technical comments and requested actions is provided 'Appendix A', appended to this letter. The review included the main body of the Annual Report as well as the figures, tables, and all appendices.

Summary of Comments

QIA has developed 73 comments that fall into four categories. These Categories are as follows.

General & Geotechnical Comments (GGC) (9 comments)

Terrestrial Environment (TE) (3 comments)

Aquatic Environment (AE) (48 comments)

Fish and Fish Habitat (F&FH) (13 comments)

Conclusion

We very much appreciate this opportunity to provide our comments on The Annual Report. We trust the concerns we have raised and requests for information will be address in a timely manner.

Please do not hesitate to contact the undersigned should you require any further information.

Nakurmiik,

Conor Goddard
Manager of Project Compliance and Monitoring
Qikiqtani Inuit Association

Appendix A: QIA Comments on Baffinland 2025 QIA-NWB Annual Report for Operations

Geotechnical and General Comments

Comment #	QIA 2025 NWB GGC#01
References	**Document Name:** Appendix C.2 – Mary River Project Geotechnical Inspection Report **Section:** 2025 Geotechnical Inspection Recommendations and Implementation Plan **Pages: 2-8**
QIA Comment	There are several recommendations made within the Appendix. While BIM has addressed each of the recommendations, very little detail has been included in terms of dates of previous or planned repairs and maintenance.
QIA Request	Please provide available documentation, photographs of proposed and applicable repairs discussed within Appendix C.2, as well as estimated timing of referenced routine maintenance.

Comment #	QIA 2025 NWB GGC#02
References	**Document Name:** Mary River WRF Geotechnical Inspection Report
QIA Comment	The annual WRF geotechnical inspection report is not included within the Annual report.
QIA Request	Please provide the 2025 WRF Geotechnical Inspection Report.

Comment #	QIA 2025 NWB GGC#03
References	**Document Name:** Appendix E.8.2 Baffinland Response to QIA 2025 Environmental Audit **Section:** Attachment 1, Table 1. **Pages: 1**
QIA Comment	The most recent slope stability modelling of the WRF indicates an internal friction angle of 40 degrees was assumed for the waste rock which is stated to be

	‘conservative’. It is unclear if this strength is based on literature review or on site specific lab testing.
QIA Request	Provide documentation of the lab testing data or literature which supports the material characteristics used in the stability assessment. To better understand risks associated with potential variations in materials, it is recommended sensitivity analyses be completed at lower strengths to verify that minimum recommended Factors of Safety are met.

Comment #	QIA 2025 NWB GGC#04
References	**Document Name:** Appendix C3 Tote Road Report **Section:** Table C.3.1 **Pages:** 1-2
QIA Comment	Several repairs to the Tote Road are planned for the 2025 season, however, repair plans and schedule are not provided.
QIA Request	Please provide an outline of the recommended repairs outlined in Appendix C.3 which are to be completed for each planned repair and a high-level schedule of when they will occur.

Comment #	QIA 2025 NWB GGC#05
References	**Document Name:** Appendix C.1.6 – Borrow Pit Reclamation Report **Section:** Table 2 and Table 3 **Pages:** 4 and 5
QIA Comment	References are made in both tables to success criteria for borrow reclamation regarding “stable side slopes”, however, no target maximum slope angle/grade is discussed throughout the document.
QIA Request	Provide maximum slope angle/grade targets for borrow reclamation and supporting evidence for its justification.

Comment #	QIA 2025 NWB GGC#06
References	**Document Name:** Appendix E.11 2025 Groundwater Monitoring Report **Section:** Background and Site Description **Pages:** 1
QIA Comment	Monitoring is occurring at both the landfill and hazardous waste area; however, no monitoring is occurring in the area surrounding the WRF where poor water quality has been observed in the past.
QIA Request	Provide justification for lack of monitoring in the WRF area and/or implement groundwater monitoring in the area.

Comment #	QIA 2025 NWB GGC#07
References	**Document Name:** Appendix E.13.1 – Responses to Intervenor Comments on the 2024 QIA-NWB Annual Report for Operations **Section:** Comment No. 8 GGC#8 and CIRNAC No. R-23 Rainfall/Climate Change **Page:** 12
QIA Comment	There was an unprecedented rainfall event on Sept. 20, 2024 which was classified as exceeding the 1:1000 year 24-hour rainfall event. In response, CIRNAC requested an overall review of the site climatic database, and re-evaluation of hydrology design criteria, surface water management infrastructure, and dykes, dams and related earthworks. Baffinland responded in part that "*notwithstanding localized damage to two portions of the Tote Road, the broader performance of ponds and related surface water management infrastructure…provides evidence that the existing design approach was generally robust and incorporated sufficient conservatism to perform well beyond the nominal design event at many locations*" (p. 12). It is not clear what level of storm event the water management infrastructure is engineered for on site (i.e., for what return period).
QIA Request	Baffinland should clarify the return period of storm event that water management infrastructure is engineered for on the project site.

Comment #	QIA 2025 NWB GGC#08
References	**Document Name:** Appendix E.13.2 Public Hearing Commitments Progress Summary Table,

	Section: WL Renewal Commitment #11, Recommendation # QIA-TR-10 **Page:** 2 of 11
QIA Comment	QIA previously expressed concern that identification of suitable spawning habitat will not be obtained well in advance of water withdrawal, potentially impacting spawning habitat and/or the identification of alternative withdrawal locations. QIA recommended that a spawning habitat assessment be conducted to identify suitable habitat as a baseline (e.g., mapped during the preceding summer and confirmed just prior to the commencement of water withdrawal). In response, Baffinland committed to providing “*aquatic habitat information collected at the proposed water intake sites*” and would submit these to the NWB “*at least sixty days prior to construction*” (p. 2 of 11). QIA is concerned that submission of this information 60 days prior to construction may not be sufficient time for the NWB and QIA to review and comment, and for Baffinland to find alternative sites if spawning habitat is identified.
QIA Request	Baffinland should conduct spawning habitat assessments during the preceding summer to any planned water withdrawals so that there is sufficient time for NWB/QIA to review and comment, and for potential re-location of sites if necessary.

Comment #	QIA 2025 NWB GGC#09
References	**Document Name:** Appendix E.13.2 Public Hearing Commitments Progress Summary Table **Section:** WL Renewal Commitment #35, Recommendation # QIA-TR-7 **Page:** 8 of 11
QIA Comment	Baffinland conducted a hydrology baseline analysis for the Mary River Project in 2012, using data from 16 hydrometric stations. Since then, Baffinland has continued monitoring only seven of the 16 original hydrometric stations. QIA previously recommended that the remaining nine original stations be reactivated to continue to provide recent baseline information given that construction is delayed. Baffinland responded that it reactivated four of the stations along the Steensby Railway corridor in summer 2025. It is not clear why the other five suspended stations have not been reactivated.
QIA Request	Baffinland should reactivate the five remaining stations to continue to provide baseline hydrological information or provide a rationale as to why they are choosing not to reactive them.

Terrestrial Environment (TE)

Comment #	QIA 2025 NWB TE#01
References	**Document Name:** 2025 Qikiqtani Inuit Association and Nunavut Water Board Annual Report for Operations; Appendix C.1.6 2025 Borrow Pit Reclamation Report **Section:** 3.3, 4.3, and 5.3 **Page:** 3, 5, and 7
QIA Comment	For borrow pits 14, 14A, 41, and 71 Baffinland notes that *"To verify reclamation success and compliance with closure objectives, the borrow pit will be inspected in 2026, and a drone survey will be conducted to assess whether any significant settlement has occurred."* (p. 3). Baffinland does not provide further details of the inspection or drone survey methods, and as a result QIA cannot assess whether these surveys will be sufficient to verify reclamation success and compliance with closure objectives.
QIA Request	QIA requests that Baffinland provide the following details for the inspection and drone surveys: ● Metrics that will be collected as part of the surveys ● Spatial extent of the surveys ● Date and time of the surveys ● Qualifications of staff undertaking the surveys

Comment #	QIA 2025 NWB TE#02
References	**Document Name:** 2025 Qikiqtani Inuit Association and Nunavut Water Board Annual Report for Operations **Section:** 9.7

	Page: 62
QIA Comment	In section 9.7, Baffinland has indicated that reclamation studies will be provided in the NIRB annual report. As QIA has not had a chance to review these reports at this time, we are unable to confirm whether there are any technical concerns present as they relate to the NWB process.
QIA Request	QIA may provide further comments on the reclamation research work completed by Baffinland pending review of the forthcoming 2025 Terrestrial Environment Annual Monitoring Report (TEAMR).

Comment #	QIA 2025 NWB TE#03
References	**Document Name:** Appendix E.8.2 QIA Inspection Reports and Responses; QIA 2025 Environmental Audit Report – Oct. 30, 2025; Baffinland Response – March 9, 2026 to 2025 QIA Environmental Inspections **Section:** Section 3.1 Waste Rock Facility, Section 3.3 KM106, Section 4 Tote Road, Attachment 1 – Baffinland Responses to QIA's June & September Environmental Inspection Reports **Page:** 4, 5, 9, 123
QIA Comment	It is noted throughout the QIA Inspection Reports that dust generation continues to be a problem in the project area. For example: "*dust was observed blowing from the mine haul road to the point where it was difficult to see the road in front of the light duty truck*" Section 3.1 Waste Rock Facility (p. 4) "*as with other project areas there was noticeable dust deposition on the tundra beside the spillway and the slope leading down towards Mary River*" Section 3.3 KM106 (p. 5). Inspectors observed that where calcium chloride is applied there is a reduction in dust, however, it does not appear to be consistently applied in all project areas. In particular, inspectors noted that calcium chloride was applied unevenly along the Tote Road, focused around the Sailiivik Camp and Milne Port, but not in the middle section where more dust was observed.

	Baffinland responded that dust suppression is a priority and as such it has increased the number of water trucks available and "*intends to continue applying calcium chloride as the primary dust suppression agent where appropriate*" Attachment 1 – Baffinland Responses (p. 123 of 127). It is not clear from Baffinland's response whether a strategy is in place to address the spatial gaps identified in calcium chloride application throughout the project area.
QIA Request	Baffinland should explain what steps will be taken to improve dust suppression throughout the project area. In particular, Baffinland should demonstrate how more thorough and consistent coverage of the entire Tote Road will be achieved for calcium chloride application so that areas identified as generating large amounts of dust are eliminated.

Aquatic Environment

Comment #	QIA 2025 NWB AE#01
References	**Document Name:** Baffinland Iron Mines 2025 Annual Report to QIA and NWB for Operations, Main Body [NWB Registry: 260331 - 2025 QIA-NWB Annual Report for Ops - As Sent.pdf], **Section:** 4.2 Quantities of freshwater used for dust suppression **Page:** 23 (pdf p. 43 of 94) **Document Name:** Baffinland Iron Mines 2025 Annual Report to QIA and NWB for Operations, Appendix E.8.2 QIA inspection reports and responses (June 2025 site inspection) [260331 - 2025 QIA-NWB Annual Report for Ops - Appendix E.8.2 QIA Inspection Reports-Responses.pdf] **Section:** Table: LGL Limited - Ecological Review of the Mary River Project, Item 8 **Page:** 19 (pdf p. 21 of 127) **Section:** Table 1 LGL Limited, Item 6 **Page:** 12 (pdf p. 86 of 127) **Document Name:** Baffinland Iron Mines 2024 NIRB Annual Report, Appendix G.5.1 Mary River Project Terrestrial Environment 2024 Annual Monitoring Report [NIRB Registry: 250530-08MN053-2024 Annual Rpt-App G.5.1 TEMP-Pt 1-IMRE.pdf], **Section:** 7.2 Dustfall suppression and mitigation **Page:** 47 (pdf p. 47 of 95)

	Document Name: Baffinland Iron Mines 2025 NIRB Annual Report, Appendix G.4.1 Mary River Project Terrestrial Environment 2025 Annual Monitoring Report [NIRB Registry: 260529-08MN053-2025 Annual Report App G.4.1 TE Annual Monitoring Rpt Pt1-IR2E.pdf], **Section:** 7.2 Dustfall suppression and mitigation **Page:** 48 (pdf p. 75 of 101)
QIA Comment	*"Baffinland has taken a conservative approach, applying calcium chloride combined with water to targeted areas along the road to reduce potential calcium chloride interactions with receiving environments." (2025 QIA NWB ARO, s.4.2, p. 23). Less water is required when calcium chloride is applied than when water alone is used for dust suppression (2025 QIA NWB ARO, App. G.4.1, s. 7.2, p. 48).* In 2025, the total amount of calcium chloride applied for dust suppression along Project roadways was reduced by 63%, from 609,000 kilograms (kg) in 2024 (2024 NIRB Annual Report, App. G.5.1, s.7.2, p. 47) to 224,000 kg (BIM 2025 NIRB Ann. Rep., App. G.4.1, s. 7.2, p. 48). The amount of applied per kilometer (km) of roadway was also reduced by 15%, from 1,000 kg to 850 kg. Based on an average road width of 13 meters (m), this equates to calcium chloride applications of 0.077 kg/m^2 in 2024 and 0.065 kg/m^2 in 2025, about 8.4% and 7.1%, respectively, of the recommended industry standard application rate of 0.917 kg/m^2 (= 1.69 lb/yd^2). Despite these substantial decreases in calcium chloride use for dust suppression, Baffinland reported: *"Visible and measurable dust (as reported by operators and measured discretely) was lower in 2025 than in previous years*." (2025 QIA NWB ARO, App. G.4.1, s. 7.2, p. 48). This is counterintuitive. In June and September 2025, QIA inspectors noted that "*In locations where calcium chloride was applied there [were] notable declines in dust. However, this was not applied regularly throughout the project area*." (2025 QIA-NWB ARO, App E.8.2, pdf p. 21 and 86 of 127). During those inspections recent rainfall suppressed dust mobilization, and dust mobilization remains a concern.
QIA Request	QIA requests Baffinland: 1) provide its rationales for decreasing the total amount of calcium chloride used for dust suppression and the amount it applies per square meter of road surface, 2) clarify what factors were considered in these decisions, and 3) explain how these changes and factors will be used to refine and improve its dust suppression efforts.

Comment #	QIA 2025 NWB AE#02

<table>
<tr><td>References</td><td>Document Name: 2025 QIA-NWB Annual Report for Ops
Section: 7 Monitoring
Page: 55 of 94</td></tr>
<tr><td>QIA Comment</td><td>The 2025 Annual Report describes the proposed addition of monitoring station MS-12 to Schedule I of the Type ‘A’ Water Licence to represent a Final Discharge Point (FDP) for clean snowmelt and stormwater from the Mine Pit, driven by anticipated elevated snowmelt volumes in 2026.

The rationale provided is explicitly linked to a temporary operational condition (i.e., unusually high snowfall and associated melt in 2026) and the need to manage increased hydraulic loading to existing infrastructure (e.g., MS-08). However, the application requests a permanent addition to the Surveillance Network Program (SNP) to support this discharge pathway.

While the Report notes that a permanent station would support ongoing monitoring and adaptive management, it does not clearly justify why a temporary or contingency-based monitoring approach would not be sufficient for a short-term operational scenario.

The proposed permanent addition of MS-12 to the SNP is not clearly aligned with the stated temporary operational need. Specifically:
the need for the FDP is described as year-specific (2026);
it is unclear whether similar conditions are expected to recur with sufficient frequency to warrant permanent infrastructure and monitoring; and
the long-term role of MS-12 within the water management system is not clearly defined.
This creates uncertainty regarding whether the modification represents a temporary adaptive measure or a long-term change to water management and discharge pathways. Without clear justification, there is limited transparency on how this modification aligns with the intent of the SNP and the broader water management framework.</td></tr>
<tr><td>QIA Request</td><td>Clearly distinguish between temporary operational measures and permanent modifications within SNP proposals, including the conditions under which each is warranted.</td></tr>
</table>

	• Provide justification for permanent SNP additions, including demonstration of recurring need, long-term operational integration, and alignment with the water management strategy. • Where infrastructure or monitoring is driven by short-term or contingency conditions (e.g., elevated snowmelt years), consider implementation of conditional or temporary SNP stations, with defined criteria for continuation or decommissioning. • Define the long-term role of MS-12 within the site water management system, including how it will be used outside of high snowmelt conditions and how it integrates with existing FDPs and treatment infrastructure.

Comment #	QIA 2025 NWB AE#03
References	**Document Name:** 2025 QIA-NWB Annual Report for Ops **Section:** 7.2 Stormwater from Containment Areas **Page:** 57 of 94
QIA Comment	The Annual Report states that stormwater from the Milne Port Landfarm Facility (MP-04) was discharged between August 14 and August 26, 2025, and that sampling and analysis were conducted in accordance with Schedule I of the Type 'A' Water Licence, with results demonstrating suitability for discharge. The report further indicates that supporting data are provided in the tables document. However, the corresponding table referenced for review (Table 7.2.4) is not included in the Tables document. Instead, Table 7.2.5 (Water Quality Results for monitoring location MP-06) appears to be duplicated. As a result, the water quality data required to evaluate compliance and support the conclusions regarding MP-04 stormwater discharge are not available for review. The omission of the referenced table and duplication of an unrelated table results in an incomplete record of monitoring data. This limits the ability to: • verify that discharge criteria were met; • assess compliance with Water Licence conditions; and • evaluate the quality and representativeness of stormwater discharge from MP-04.

	Incomplete or inconsistent reporting reduces transparency and confidence in the conclusions presented in the Annual Report, particularly where compliance determinations rely on datasets that are not provided.
QIA Request	Provide the missing Table 7.2.4 and ensure that all referenced tables and supporting datasets are included and correctly labeled in submitted reports.

Comment #	QIA 2025 NWB AE#04
References	**Document Name:** 2025 QIA-NWB Annual Report for Ops **Section:** 7.3.2 Mine Site Landfill Facility **Page:** 59 of 94
QIA Comment	The Annual Report indicates that verification monitoring was conducted at stations MS-MRY-13A and MS-MRY-13B downstream of the Landfill Facility in 2025 to support operational decision-making and adaptive management and concludes that no adaptive management responses were required. Sampling at MS-MRY-13A is also described as occurring throughout the open-water season, with flow monitoring data provided in an appendix. However, the Tables document does not include water quality results for MS-MRY-13A or MS-MRY-13B. While flow data for MS-MRY-13A are referenced, the absence of corresponding water quality data precludes verification of the conclusions presented in the report regarding downstream conditions and the determination that no adaptive management was required. The omission of water quality results for verification monitoring stations MS-MRY-13A and MS-MRY-13B limits the ability to: • confirm the conclusion that no adaptive management responses were warranted; • evaluate potential influences of the Landfill Facility on downstream drainage; and • assess compliance with Water Licence monitoring and reporting expectations. Verification monitoring locations are specifically intended to inform management and validate performance of mitigation measures; therefore, the absence of supporting data reduces transparency and confidence in the interpretation presented in the Annual Report.

QIA Request	• Provide complete water quality datasets for all verification monitoring stations (including MS-MRY-13A and MS-MRY-13B) within the Annual Report tables to support conclusions regarding downstream conditions and adaptive management. • Ensure that all monitoring locations described in the narrative text are consistently supported by corresponding tabulated results in submitted documentation.

Comment #	QIA 2025 NWB AE#05
References	**Document Name:** 2025 QIA-NWB Annual Report for Ops **Section:** 7.3.8 Tote Road Monitoring Program **Page:** 66 of 94
QIA Comment	The Annual Report indicates that 328 water quality samples were collected under the TRMP in 2025 and concludes that no Project-related impacts were identified. Supporting data are presented in Table 7.4 (Tables 7.4.1 to 7.4.40). Review of the Tables document indicates that upstream and downstream monitoring results for individual crossings are presented in separate tables rather than side-by-side. This structure reduces the ability to directly compare conditions upstream and downstream for the same monitoring event. The current presentation format limits the transparency and interpretability of the dataset. Specifically: • upstream and downstream comparisons require cross-referencing between multiple tables; • it is difficult to efficiently assess spatial changes across crossings; and • the ability to identify potential Project-related effects or exceedances is reduced. Given that the TRMP is intended to assess potential effects of road operations on receiving waters, clear and direct comparison between upstream (reference) and downstream (exposure) conditions is a fundamental component of effects assessment.
QIA Request	• Revise TRMP data presentation to align upstream and downstream results within a single table or directly adjacent columns for each station pair and sampling event.

	• Include paired comparisons (e.g., upstream vs downstream) by date, with calculated differences or ratios where appropriate, to support rapid identification of potential effects. • Ensure future reporting structures are designed to directly support the objectives of effects assessment and alignment with the AEMP/TARP framework.

Comment #	QIA 2025 NWB AE#06
References	**Document Name:** 2025 QIA-NWB Annual Report **Section:** Section 7.8 Quality Assurance and Quality Control (QA/QC) **Page:** 54
QIA Comment	Baffinland reports that five duplicate samples had RPD > 20% and greater than 10 times the LDL. Four of these exceedances occurred at the same monitoring station (MP-01), one in January and the rest on the same date in November. Potential reasons for these exceedances are not discussed.
QIA Request	Baffinland should discuss reasons for the exceedances between parent sample pairs and field duplicates documented in 2025, and how this affects water quality results and interpretation.

Comment #	QIA 2025 NWB AE#07
References	**Document Name:** 2025 QIA-NWB Annual Report **Section:** Section 7.8 Quality Assurance and Quality Control (QA/QC) **Page:** 55
QIA Comment	Baffinland states that for trip and field blanks "*concentrations should be non-detectable, with a DQO of within five (5) times the respective laboratory lowest reportable detection limit for that parameter. If sample results are less than or equal to five (5) times the respective external laboratory's lowest detection limit (LDL) for that parameter, it is considered that such small differences account for generic noise around the limit. If sample results are five (5) times greater than the respective external laboratory's LDL for that parameter, the detected concentration is considered significant and any atmospheric and/or sample handling influences should be investigated*". We note that CCME guidance[1] is that $\leq$ 5% of blanks with values > LDL is considered acceptable.

[1] *CCME. 2011. Protocols Manual for Water Quality Sampling in Canada. 186 pp.*

	Baffinland recorded 2 out of 33 total trip blank analyte results above the trip blank DQO of < LDL (6% of blanks) and 3 out of 41 individual field blank results above the DQO of < LDL (7% of blanks). There is no discussion of potential causes of the observed contamination of trip and field blanks. One trip blank sample exceeded the 5 times > LDL for total ammonia (as N) at MP-01B in 2025. However, Baffinland concluded "*that there was negligible contamination, and that field precision and accuracy were considered acceptable*". It is not clear why this breach of the 5x LDL limit in an unsealed trip blank was not considered significant, warranting an immediate investigation into a potential systemic contamination issue. Any number of trip blanks exceeding both the DQO and the 5x LDL should be considered significant and should require immediate corrective action. When this QA/QC threshold is breached, analysis should be paused, associated samples should be flagged, an investigation into the root cause should be undertaken, and new samples should be collected if the data is determined to be compromised.
QIA Request	Baffinland should investigate and discuss possible causes of the trip blank and field blank exceedances of DQOs of < LDL. In the case of the exceedance of the 5x LDL for the trip blank sample at MP-01B, Baffinland should demonstrate how this contamination may have affected water quality results. In future, Baffinland should commit to immediately responding to any breach of the 5x LDL limit in trip or field blanks through corrective action to ensure that contamination does not represent a widespread systemic issue and that data is still valid.

Comment #	QIA 2025 NWB AE#08
References	**Document Name:** Appendix E.3 2025 Surveillance Network Program Hydrometric Monitoring Report **Section:** 2. Methods and Data Collection **Page:** 3 of 15
QIA Comment	BIM notes that "*the data logger at MQ-C-B began to produce erroneous data in early August and no data were usable after August 4*." The rationale for not repairing or replacing the pressure transducer during the monitoring period is unclear. This has resulted in a data gap for the remainder of the season.

QIA Request	Please explain why the pressure transducer was not repaired or replaced when issues were first identified, and confirm whether it will be repaired or replaced in advance of the 2026 field season to ensure continuous data collection.

Comment #	QIA 2025 NWB AE#09
References	**Document Name:** Appendix E.9.1 2025 Aquatic Effects Monitoring Program Hydrometric Monitoring Report **Section:** 5.6 SDLT-1 Catchments (H11) **Page:** page 14 of 34
QIA Comment	BIM notes that predicted effects within the SDLT-1 catchment include a net mean annual discharge reduction of 5%, with localized decreases (up to 26%) and increases (up to 31%) in flow associated with diversions and effluent discharge. However, monitoring results at station H11 indicate increasing trends in mean monthly flows for July and August (200% and 275% increases, respectively), which exceed the magnitude of predicted changes. While not all recent trends (2019–2025) are statistically significant, the magnitude and direction of change at H11, along with the acknowledged increase in catchment size due to the Mine Haul Road diversion, suggest that site-specific effects at H11 may not be fully captured by the original predictions. As such, the statement that changes are “largely driven by natural variability” and remain within predicted effects does not appear to fully apply to this station.
QIA Request	Clarify how the observed increases in flow at station H11, particularly those exceeding predicted magnitudes, align with the original impact predictions. In addition, outline any proposed monitoring, reassessment, or mitigation measures to address the apparent discrepancy between predicted and observed flow conditions at H11.

Comment #	QIA 2025 NWB AE#10
References	**Document Name:** Baffinland Iron Mines 2025 Annual Report to QIA and NWB on Operations, Appendix E.9.1- 2025 AEMP Hydrometric [NWB Registry: 260331 - 2025 QIA-NWB Annual Report for Ops - Appendix E.9.1 - 2025 AEMP Hydrometric Report.pdf] **Section:** 6 Summary and recommendations **Page:** 13 (pdf. 16 of 34).

	Document Name: Baffinland Iron Mines 2024 Annual Report to QIA and NWB on Operations, Appendix E.9.3 AEMP Hydrometric [NWB Registry: 250331 - 2024 QIA-NWB Annual Report for Ops - Appendix E.9.3 (AEMP Hydrometri.pdf], **Section:** 6 Summary and recommendations **Page:** 8 (pdf p. 8 of 9). **Document Name:** Baffinland Iron Mines 2024 Annual Report to QIA and NWB on Operations Intervenor Comments. [NWB Registry: 251002 2AM-MRY2540 2024 Annual Report for Operations - Intervenor Comments BIMC Response Letter Final-ILAE.pdf] **Section:** Attachment 1, Table A.1, Response 33 to QIA AE#17 **Page:** 16 of 77 **Section:** Attachment 5, QIA AE#17 **Page:** 53 of 77
QIA Comment	In its response to QIA's 2024 comments on the 2024 QIA-NWB Annual Report on Operations, Baffinland objected to QIA supporting "*recommendations for additional hydrometric site visits throughout future seasons to verify the operation of data loggers and perform flow measurements, and continued targeting of low flow and/or high flow periods--particularly extreme peak flow, to maintain and further validate the rating relationships.*" (BIM 2024 Response Attachment 5, QIA AE#17, p. 53 of 77) The recommendations supported were to Baffinland from its hydrometric advisor, North Water Consultants. They read: "*Additional site visits are recommended throughout future seasons to verify the operation of data loggers and perform flow measurements. It is recommended that future hydrometric monitoring continue to target low flow and/or high flow periods to maintain and further validate the rating relationships*." (2024 QIA-NWB ARO, Appendix E.9.3, s.6, p. 8). As Baffinland noted in its comments (Attachment 5, p. 53 of 77), QIA had already commented on the hydrometric monitoring in its reviews of the 2022 and 2023 annual reports to QIA-NWB. As QIA noted when supporting the North Water recommendations, monitoring of stream flow through the open water season is important for understanding Arctic char access to and from juvenile summering habitats upstream of the Tote Road crossings, and to inform the design of culvert stream crossings. In its 2025 report to Baffinland, North Water Consultants (2025) repeated the recommendations underlined above (2025 QIA-NWB ARO, Appendix E.9.1, s.6, p. 13). QIA continues to support those recommendations.
QIA Request	QIA supports the recommendations for additional hydrometric site visits throughout future seasons to verify the operation of data loggers and perform flow

	measurements, and continued targeting of low flow and/or high flow periods--particularly extreme peak flow, to maintain and further validate the rating relationships.

Comment #	QIA 2025 NWB AE#11
References	**Document Name:** Baffinland Iron Mines 2025 Annual Report to QIA and NWB for Operations, Appendix E.9.2 (CREMP) (260331 - 2025 QIA-NWB Annual Report for Ops - Appendix E.9.2 - 2025 CREMP Report.pdf) **Section:** Executive Summary. **Pages:** v to x (pdf p. 7 to 12 of 977) **Document Name:** Baffinland Iron Mines 2024 Annual Report to QIA and NWB on Operations Intervenor Comments. [NWB registry file: 251002 2AM-MRY2540 2024 Annual Report for Operations - Intervenor Comments BIMC Response Letter Final-ILAE.pdf] **Section:** Attachment 5, Table B.1: 2024 Annual Report QIA Comments no response, QIA NWB AE #12 **Page:** 4 (pdf p. 52 of 77) **Document Name:** Baffinland Iron Mines 2024 Annual Report to QIA and NWB for Operations, Appendix 8.2 (QIA Part 1 of 2) NWB Registry: 250331 - 2024 QIA-NWB Annual Report for Ops - Appendix E.8.2 (QIA) - 1 of 2 -.pdf] **Section:** June 2024 site visit Page: pdf p. 112 of 125. **Document Name:** Baffinland Iron Mines 2024 Annual Report to QIA and NWB for Operations, Appendix E.13 (2023 Responses) [NWB Registry: 250331 - 2024 QIA-NWB Annual Report for Ops - Appendix E.13 (2023 Responses)-pdf] **Section:** BIMC 32, QIA CREMP#25 **Page:** 22-23 (pdf p. 23-24 of 76)
QIA Comment	With growing evidence in the CREMP of mine-related influences on Project lakes (App. E.9.2, p. v to x) and the planned increase in ore production associated with the Steensby component, improving monitoring and the understanding of temporal changes in sediment deposition and quality is becoming increasingly important. Benthic sediment cores collected from Project-exposed and Reference lakes could be used to establish clearer temporal records of pre-Project sediment deposition quantity and quality and provide context for ongoing deposition of iron and other metals. In comments on Baffinland's 2023 QIA NWB Annual Report on Operations (App. E.13, p. 22-23), QIA recommended Baffinland assess whether there are sites in tributary streams and Sheardown Lake (Northwest and Southeast) with sediment

traps that could be core-sampled to extend the temporal records of sediment quality. In its response Baffinland described the difficulty of locating tributary stream habitats that trap fine sediments deep enough for coring, QIA accepts this response. However, it did not address core sampling in the Sheardown Lakes, and argued there is no need for a sediment deposition record that predates the 2005 baseline. It also did not discuss the comparative value of current sediment sampling, which uses a grab sampler and then scrapes off the surface layer for analysis, relative to a tubular core sample that can sectioned into discrete layers.

In its comments on the 2024 QIA NWB Annual Report on Operations (ARO), QIA followed up on Baffinland's 2023 response, providing additional information on the value of core sampling from LGL Limited's June 2024 Mary River site inspection report:

"*Sedimentation accumulation and sedimentation rates have been reported previously by Baffinland Iron Mines. Rough estimates suggest the 2cm sediment cores collected by Baffinland Iron Mines at lakes located close to Mary River Mine – Sailiivik Camp span a period of ~10 to 15 years. This period extends barely past the start of mining operations. We recommend the collection of full-length lake sediment cores (>50 cm) from lakes located close to the mining operations at Mary River Mine – Sailiivik Camp and reference lakes sites. This Routine analysis of metal concentrations can be reported downcore to provide context to metals concentrations observed in surficial sediment. For example, sediment metal concentrations at the top of the core may still be below sediment quality guidelines but have increased potentially 5-fold above sediment that predates industrial activities in the region. This will provide a more rigorous analysis to develop site-specific baselines for contaminants of concern. Combined with systematic water and surficial sediment sampling, these methods provide a powerful approach to tracking water quality changes at a range of temporal and spatial scales relevant to inform environmental stewardship decisions.*" (App. E.8.2, pdf p. 112)

QIA also recommended that "*Baffinland collect sediment cores during the winter or summer 2026 field seasons from Project exposed and Reference lakes to establish clearer temporal records of pre-Project deposition quantity and quality and provide context for ongoing deposition of iron and other metals. Sediment cores should be extruded at 0.5cm intervals and dated using radio isotopes of lead to establish a chronology and put changes in sediment chemistry into temporal context. Each discrete sediment layer should be examined for sediment chemistry of key variables.*" (App. E.8.2, pdf p. 112)

	Baffinland did not respond to this request, on the basis that QIA's comments "*about changing aspects of management plans belong within the review process for the respective management plan (AEMP in this instance), not within the Annual Report review process.*" (Attachment 5, p. 52 of 77) The QIA request was not addressed to a management plan. It is intended to fill a gap in the baseline data used to inform monitoring, prior to the planned increase in ore production associated with the Steensby Component. Delaying this sampling until after production has increased will weaken its value as baseline for future comparisons. QIA reiterates its recommendation, with the note that winter sampling may be preferable, as it enables immediate freezing to stabilize the core for sampling.
QIA Request	QIA recommends Baffinland collect sediment cores during the winter or summer 2026 field seasons from Project exposed and Reference lakes to establish clearer temporal records of pre-Project deposition quantity and quality and provide context for ongoing deposition of iron and other metals. Sediment cores should be extruded at 0.5cm intervals and dated using radio isotopes of lead to establish a chronology and put changes in sediment chemistry into temporal context. Each discrete sediment layer should be examined for sediment chemistry of key variables.

Comment #	QIA 2025 NWB AE#12
References	**Document Name:** Appendix E.9.2 Mary River Project 2025 Core Receiving Environmental Monitoring Program Report **Section:** 2.3.3.2 Special Investigations (page 51 – 53) **Page:** 51-53 and 206 of 977
QIA Comment	Concentrations of iron in the sediment of Sheadown Lake Northwest trigger an action response in 2023, 2024 and 2025 (Table 2.7). In 2025, observations included concentrations exceeding the AEMP benchmark. Further, similar to the trend analyses conducted for Sheardown Lake NW in 2024, the trend analyses completed for 2025 identified significant increasing trends in mean iron concentrations in sediments since baseline (2007 to 2025) and over the mine operation period (2015 to 2025). Repeated exceedances of the AEMP benchmarks or above concentration(s) observed during baseline AND at an applicable reference area during two or more years at a single mine-exposed area meet the Trigger Action Response Plan (TARP) criteria for a Medium Action level.

	Notwithstanding this, the CREMP classifies the response for sediment iron as a Low Risk Response, with recommended actions generally limited to continued monitoring, trend analysis, and source investigation. The actions outlined in the CREMP are broadly consistent with components of a weight-of-evidence evaluation; however, they do not fully align with the prescribed Medium Action response requirements in the current TARP framework (Version 3, 2026). Specifically, the CREMP does not clearly commit to: • evaluation and implementation of predefined AEMP management actions; • development of a high-risk response threshold for sediment iron; and • implementation of measures to address mine-related inputs and sources within defined operational timeframes. The apparent discrepancy between the observed exceedance pattern and the assigned action level introduces uncertainty regarding the consistent application of the TARP framework. While the report attributes elevated iron concentrations largely to natural geologic background conditions and characterizes effects as localized, statistically significant increases and repeated exceedances suggest that potential mine contributions cannot be conclusively ruled out without application of the full Medium Action response. Failure to apply the appropriate action level response reduces confidence that the assessment framework is adequately bounding potential mine-related effects and may delay implementation of proactive mitigation or management measures.
QIA Request	**TARP Alignment:** Demonstrate alignment between observed conditions and the assigned action level by: • clearly documenting the rationale for classifying sediment iron exceedances as Low Risk where Medium Action criteria are met; or • revising the action level classification to be consistent with the TARP triggers. **Implementation of Medium Action Requirements:** Incorporate, at a program level, the full suite of Medium Action responses for parameters exhibiting repeated benchmark exceedances, including:

	• formal weight-of-evidence (WOE) / risk assessment focused on sediment iron; • evaluation and implementation of appropriate AEMP predefined management actions; • development of high-risk response thresholds for sediment parameters within annual reporting; and • development of a structured plan to identify and address mine-related sources (e.g., tributary inputs such as SDLT1, runoff, and dust deposition), with defined timelines for implementation during operational periods.

Comment #	QIA 2025 NWB AE#13
References	**Document Name:** Appendix E.9.2 Mary River Project 2025 Core Receiving Environmental Monitoring Program Report **Section:** 3 Camp Lake System; Sheardown Lake System; Mary River and Mary Lake System; **Page:** 74 – 300 of 977
QIA Comment	The application of Trigger Action Response Plan (TARP) classifications in the 2025 CREMP is not consistent with Version 3 of the TARP (Baffinland, 2026). The CREMP continues to use the term “Moderate Action Response” rather than the current terminology “Medium Action Response,” creating uncertainty regarding whether the latest approved framework has been applied. In addition, the assignment of Medium Action Responses does not appear to be based on a systematic evaluation of all applicable trigger criteria. The TARP defines a Medium Action Response to include conditions such as: • exceedance of AEMP benchmarks by two or more parameters within a mine-exposed area; or • mean concentrations of any two or more parameters exceeding both baseline and reference conditions at any one mine-exposed area; or • repeated exceedances of AEMP benchmarks by a single parameter across multiple years; or • mean concentration of any one parameter above concentration(s) observed during baseline and applicable reference area during two or more years at any of the mine exposed areas. Several examples identified in the CREMP (e.g., uranium in CLT1 Upper Main Stem; copper, nitrate, and uranium in SDLT1; and dissolved copper in Sheardown Lake

	NW) appear to meet one or more of these criteria. However, the report does not clearly demonstrate that all relevant triggers (e.g., multi-parameter or multi-year exceedances) were evaluated and documented when assigning action levels. The CREMP recommendations also do not consistently incorporate the full suite of required responses outlined in the TARP: • For Low Risk Responses, the required action to "implement precautionary mitigation to avoid potential threshold exceedance" is not included. • For Medium Action Responses, recommendations do not consistently include evaluation and implementation of predefined AEMP actions, development of high-risk response thresholds, or implementation of plans to address mine-related sources. The lack of consistent alignment with the current TARP framework reduces confidence that action levels are being correctly identified and that the corresponding management responses are being fully implemented. This may result in under-classification of action levels and delays in applying appropriate mitigation measures.
QIA Request	Update CREMP reporting to align fully with TARP Version 3, including consistent terminology and clear linkage between observed conditions and trigger criteria. Implement a standardized approach to identify and document all trigger conditions (including multi-parameter and multi-year exceedances) at each mine-exposed area. Ensure that all recommendations explicitly incorporate the complete set of required TARP responses for each action level, including precautionary mitigation for Low Risk and predefined management actions and source control for Medium Action responses. Strengthen transparency by including a summary table that links monitoring results, triggered action levels, and required versus implemented management actions.

Comment #	QIA 2025 NWB AE#14
References	**Document Name:** Appendix E.9.2 Mary River Project 2025 Core Receiving Environmental Monitoring Program Report **Section:** 3 Camp Lake System; Sheardown Lake System; Mary River and Mary Lake System; **Page:** 74 – 300 of 977
QIA Comment	In Section 3.1.4.1.1 (Effects Assessment), a Low Risk Response is identified for multiple parameters in CLT1 North Branch. The recommendations provided in Section 3.1.4.1.2 appropriately focus on monitoring, temporal trend analysis, source

investigation, and weight-of-evidence evaluation; however, they do not include the full set of required management responses defined under Version 3 of the Trigger Action Response Plan (TARP).

Specifically, the prescribed Low Risk Response includes implementation of precautionary mitigation to avoid potential threshold exceedance, in addition to investigation and monitoring. This component is not reflected in the CLT1 North Branch recommendations.

This omission is not isolated. Across multiple study areas where Low Risk Responses are triggered (e.g., CLT2, Camp Lake, Camp Lake Outlet, SDLT1, Sheardown Lake NW and SE, MRTF, and Mary Lake), recommendations consistently focus on monitoring and assessment, but do not identify or propose precautionary mitigation measures.

Similarly, where Medium Risk Responses (referred to as Moderate in the CREMP) are triggered (e.g., nitrate and uranium at SDLT1; total aluminum at Sheardown Lake SE), recommendations do not incorporate all required TARP actions. These include:

- evaluation and implementation of AEMP pre-defined management actions;
- development of High Risk response thresholds; and
- implementation of plans to address mine-related inputs and sources.

Table 5-1 of the TARP distinguishes between investigative requirements and response actions for each threshold.

Monitoring Plan	Performance Indicator	Activity being Monitored	Risk Response Threshold / Pre-Defined Action Level Responses		
			Low	Medium	
			erosion control measures and implementation of additional control measures. Review implementation of operational ESC measures in SDLT catchment effectiveness and utilise event based monitoring in addition to defined adaptive management Water Licence sites representative of the catchment to evaluate TSS trends.[3].		
CREMP	Water quality, including comparisons to AEMP benchmarks (refer to Table 31.: Water Quality Benchmarks for Mine Site lakes and Table 3.2: Water Quality Benchmarks for Mine Site Streams, Respectively)	Mine effluent discharges, dustfall, erosion, and sedimentation	**Threshold:** Mean concentration of any one of the parameters listed in Tables 3.1 and 3.2 exceeds the applicable AEMP benchmark at any one mine-exposed area and during any season. OR Mean concentration of any one of the parameters listed in Tables 3.1 and 3.2 at any one mine-exposed area is above concentration(s) observed during baseline AND at an applicable reference area. **Response:** Conduct temporal trend analysis; confirm site specific relevance of threshold; determine next steps as part of annual reporting. Implement precautionary mitigation to avoid potential threshold exceedance as per outcome of the above investigation	**Threshold:** Mean concentrations of any two or more of the parameters listed in Tables 3.1 and 3.2 exceed the applicable AEMP benchmarks at any one mine-exposed area and during any season. OR Mean concentrations of any two or more of the parameters listed in Tables 3.1 and 3.2, at any one mine-exposed area, are above concentration(s) observed during baseline AND at an applicable reference area. OR Mean concentration of any one of the parameters listed in Tables 3.1 and 3.2 exceeds the applicable AEMP benchmark during two or more years at any one mine-exposed area. OR Mean concentration of any one of the parameters listed in Tables 3.1 and 3.2 are above concentration(s) observed during baseline during two or more years of data at any mine exposed area AND at an applicable reference area during two or more years at any of the mine exposed areas. **Response:** WOE evaluation / risk assessment; evaluate need for and design of increased monitoring as required to further assess mine contribution; conduct temporal trend analysis to confirm concentrations are increasing (or are continuing to increase) over time; evaluate and implement most appropriate action(s) from the AEMP Action Pre-defined responses; develop high risk response threshold as part of annual reporting. Implement plan to address mine-related inputs and sources. (i.e., when it is safe and logistically practical to do so)[3].	**Threshold:** To be determined based on outcome of moderate pre-defined action level response. **Response:** Conduct further investigation to confirm cause is consistent with results of investigation conducted under the moderate action level response; evaluate and implement most appropriate action(s) from the AEMP Action Level Pre-defined responses. Implement plan to address potential mine-related inputs and sources during the next open water season (i.e., when it is safe and logistically practical to do so)[3].
CREMP	Sediment quality, including comparisons to AEMP benchmarks (refer to Table 3.3: Sediment Quality benchmarks)	Mine effluent discharges, dustfall, erosion, and sedimentation	**Threshold:** Mean concentration of any one of the parameters listed in Table 3.3 exceeds the applicable AEMP benchmark at any one mine-exposed area. OR Mean concentration of any one of the parameters listed in Table 3.3 is statistically significantly higher at any one mine-exposed area relative to concentration(s) observed during baseline AND at an applicable reference area.	**Threshold:** Mean concentrations of any two or more of the parameters listed in Table 3.3 exceed the applicable AEMP benchmarks at any one mine-exposed area. OR Mean concentrations of any two or more of the parameters listed in Table 3.3, at any one mine-exposed area, are statistically significantly higher relative to concentration(s) observed during baseline AND at applicable an applicable reference area.	**Threshold:** To be determined based on outcome of moderate pre-defined action level response. **Response:** Conduct further investigation to confirm cause is consistent with results of investigation conducted under the moderate action level response; evaluate and implement most appropriate action(s) from the AEMP Action Level Pre-defined responses. Implement plan to address potential mine-related inputs and sources during the next

	For Low Risk thresholds, this includes implementation of mitigation measures to prevent escalation. For Medium Risk thresholds, escalation to defined management actions and source control is required. These elements are not consistently reflected in the CREMP recommendations. The CREMP does not clearly demonstrate that all required response elements under the current TARP framework are being implemented. The absence of precautionary mitigation for Low Risk responses and incomplete implementation of required actions for Medium Risk responses reduces confidence that the AEMP Data Assessment and Response Framework is being applied as intended. This may limit the effectiveness of the program in proactively managing mine-related effects and preventing escalation.
QIA Request	Revise the CREMP reporting approach to ensure that all recommendations explicitly address the full set of required actions for each TARP response level, including investigation, mitigation, and management components. For **Low Risk Responses**, identify and document precautionary or adaptive mitigation measures implemented or proposed, informed by ongoing investigations, to prevent further exceedances and avoid escalation of conditions. For **Medium Risk Responses**, include evaluation and implementation of AEMP pre-defined responses, development of higher-tier (High Risk) response thresholds, and clear plans to address mine-related sources and pathways. Incorporate a standardized framework within the CREMP that explicitly links each triggered parameter and location to the corresponding TARP response level and all required actions. Include a standardized summary table demonstrating, for each triggered parameter and location, that all required TARP response components have been addressed, to improve completeness, transparency, and traceability of the response framework.

Comment #	QIA 2025 NWB AE#15
References	**Document Name:** Appendix E.9.2 Mary River Project 2025 Core Receiving Environmental Monitoring Program Report **Section:** 4.1.1.2 Water Quality **Page:**167 of 977
QIA Comment	The CREMP indicates that water quality downstream of the KM 105 Pond has consistently met Water Licence limits and applicable water quality guidelines, while also acknowledging that conditions in SDLT1 reflect mine-related influences based on the AEMP data assessment and response framework.

	However, the report does not clearly delineate the extent to which the KM 105 Pond (including seepage and treated effluent) contributes to the observed exceedances and mine-related signals at SDLT1. While potential sources such as runoff, dust deposition, and water management inputs are referenced, the relative contribution of the KM 105 Pond is not explicitly quantified or distinguished from other potential sources. The absence of a clear and transparent attribution of sources introduces uncertainty in the interpretation of mine-related effects at SDLT1. Without explicitly identifying whether the KM 105 Pond is a primary driver of observed exceedances, or one of several contributing sources, it is difficult to evaluate the effectiveness of current water management measures and to determine whether additional mitigation or controls are warranted. This limits the ability of the CREMP to support targeted, source-specific management responses and reduces confidence in conclusions regarding compliance and environmental performance.
QIA Request	Provide a clear assessment of the relative contribution of the KM 105 Pond to observed changes in water quality at SDLT1, including differentiation from other potential mine-related sources (e.g., runoff, dust deposition, and other water management infrastructure). Incorporate source apportionment or lines of evidence (e.g., spatial gradients, temporal trends, geochemical signatures, or mass loading estimates) to support attribution of observed exceedances. Strengthen linkage between identified sources and management actions by explicitly identifying which infrastructure or pathways are responsible for observed effects and how these will be addressed. Ensure future CREMP reporting clearly differentiates between compliance with discharge criteria and downstream environmental response, and identifies how mine-related influences persist despite compliance.

Comment #	QIA 2025 NWB AE#16
References	**Document Name:** Appendix E.9.2 Mary River Project 2025 Core Receiving Environmental Monitoring Program Report **Section**: 4.2.1.2 Water Chemistry; 4.2.1.1 *In Situ* Water Quality **Page:** 176 and 175 of 977
QIA Comment	The CREMP indicates that no water chemistry samples were collected from SDLT12 in 2025 due to low water levels during the spring, summer, and fall monitoring events. However, Section 4.2.1.1 indicates that *in situ* water quality measurements

	were collected in the spring, with insufficient water only identified for the summer and fall periods. The reporting of sampling conditions and data availability for SDLT12 is therefore not internally consistent. It is unclear whether the limitation applies to all water quality parameters (including *in situ* measurements and water chemistry) or is specific to certain sampling components or seasons. Inconsistent description of sampling conditions and data availability reduces transparency and limits confidence in the interpretation of results. Clear documentation of when and where data were collected (or not collected), and the reasons for any deviations, is critical to understanding monitoring coverage and interpreting temporal trends within the CREMP.
QIA Request	Ensure consistent and clearly reconciled descriptions of sampling conditions, data availability, and limitations across all sections of the CREMP. Clearly differentiate between *in situ* measurements and water chemistry sampling when describing data gaps. Provide a standardized summary of data completeness by station, parameter type, and season to improve transparency and support interpretation of results.

Comment #	QIA 2025 NWB AE#17
References	**Document Name:** Appendix E.9.2 Mary River Project 2025 Core Receiving Environmental Monitoring Program Report **Section:** 4.2.3.1 Effects Assessment **Page:** 181
QIA Comment	The CREMP indicates that low water levels at SDLT12 (Station LDFG-OUT/D12-1) precluded collection of water chemistry samples during the 2025 monitoring period, while also stating that *in situ* water quality data were collected in the spring and used to support the conclusion that no action level responses were triggered. Across sections of the report, the description of sampling conditions and data limitations for SDLT12 is not internally consistent. It is unclear why conditions were sufficient to collect *in situ* measurements (at least in spring), but insufficient to collect water chemistry samples. The report does not provide sufficient detail on hydrologic conditions (e.g., flow presence, water depth, or degree of stagnation) to support this distinction.

	The lack of clarity and consistency in describing data availability at SDLT12 introduces uncertainty in the interpretation of monitoring results and the conclusion that no action level responses were triggered. Without clear documentation of sampling constraints and field conditions, it is difficult to assess whether the dataset is representative and sufficient to support effects assessment. This reduces confidence in the completeness and transparency of the CREMP and limits the ability to evaluate temporal trends and potential mine-related influences at this location.
QIA Request	Provide a clear and consistent description of sampling conditions and data limitations across all sections of the CREMP, including reconciliation of any discrepancies between *in situ* measurements and water chemistry sampling. Clearly differentiate between sampling types (e.g., *in situ* versus water chemistry) and specify the conditions under which each can or cannot be collected. Document supporting field conditions (e.g., flow presence, water depth, pooling versus flowing conditions) where sampling is not completed, to substantiate data gaps. Include a standardized summary of data completeness by station, season, and parameter type to improve transparency and support interpretation of results.

Comment #	QIA 2025 NWB AE#18
References	**Document Name:** Appendix E.9.2 Mary River Project 2025 Core Receiving Environmental Monitoring Program Report Appendix E.9.3 Lake Sedimentation Monitoring Program Report **Section:** 4.4.2 Sediment Quality; 3.2.2 Temporal Comparisons for the 2024 to 2025 Ice Cover and Open Water Periods; 3.3.2 Sediment Trap Chemistry **Page:** 196 – 206 of 977; 41 of 231; 39 of 231
QIA Comment	The CREMP identifies changes in sediment characteristics in Sheardown Lake NW, including a shift toward finer-grained material (increased silt, decreased sand) and lower TOC relative to reference conditions, as well as statistically significant increases in sediment iron concentrations relative to both baseline and over the operational period. These observations indicate a change in sediment depositional regime relative to baseline; however, the potential causes of these changes are not fully evaluated in the report. In particular, the potential influence of mine-related dust deposition, which could reasonably contribute to finer sediment inputs and associated geochemical changes, is not discussed in this section.

	The report further concludes that iron concentrations in Sheardown Lake NW are consistent with natural conditions based, in part, on comparison to Reference Lake 3. However, reported mean concentrations in Sheardown Lake NW exceed baseline concentrations and AEMP benchmarks, and exhibit statistically significant increasing trends over time, which are not observed at the reference site. This suggests that the interpretation of iron as primarily geogenic is not sufficiently supported without additional analysis of potential mine-related contributions. BIM has not incorporated findings from the Lake Sedimentation Monitoring Program (LSMP) within a weight-of-evidence framework. The LSMP identifies increasing sedimentation rates and accumulation thickness over the operational period, with statistically significant positive trends, most pronounced during the open water season, and consistent increases across monitoring areas, indicating a system-wide shift in sediment deposition. While natural drivers (e.g., rainfall, runoff, and backflow events) are identified, the LSMP also acknowledges a potential mine influence associated with these long-term trends. In addition, LSMP results identify elevated metal concentrations (including iron) in sediment trap material and ongoing deposition of fine particulate material, consistent with continued particulate inputs. While BIM attributes elevated iron concentrations primarily to geogenic sources, this interpretation does not adequately account for increasing sedimentation trends coincident with mine operations, observed shifts toward finer sediment, and the potential for cumulative contributions from mine-related pathways, including dust deposition and site runoff. The combined evidence of increasing sedimentation rates, changes in particle size distribution, and elevated metals indicates that a mine-related contribution cannot be ruled out and is not sufficiently evaluated in the CREMP or LSMP interpretation. Overall, the CREMP and LSMP do not provide a robust or integrated assessment that reconciles sediment quality trends with sedimentation dynamics. Conclusions that conditions are primarily reflective of natural background are not clearly supported when considering the full monitoring dataset.
QIA Request	Expand source attribution analyses for sediment quality in Sheardown Lake NW using a weight-of-evidence approach that integrates CREMP and LSMP results, including sediment characteristics, sedimentation rates, accumulation trends, and sediment chemistry.

	Explicitly evaluate potential mine-related pathways (e.g., dust deposition, runoff, and watercourse inputs) in the context of observed long-term increases in sedimentation and changes in particle size distribution. Reconcile interpretations of natural background conditions with increasing temporal trends, benchmark exceedances, and differences from reference conditions, including consideration of cumulative and interacting drivers. Strengthen linkage between observed sediment changes and potential management responses within the AEMP/TARP framework, particularly where systematic increases in sedimentation are identified over the operational period.

Comment #	QIA 2025 NWB AE#19
References	**Document Name:** Appendix E.9.2 Mary River Project 2025 Core Receiving Environmental Monitoring Program Report **Section:** 4.5.1.2 Water Chemistry **Page:** 228-229 of 977
QIA Comment	The CREMP identifies statistically significant increasing trends in aqueous concentrations of nitrate, sulphate, molybdenum, and uranium in Sheardown Lake SE over both the baseline and operational periods, with generally stable conditions at reference locations. These patterns indicate potential mine-related influence; however, concentrations remain below applicable AEMP benchmarks and water quality guidelines in 2025. While the CREMP appropriately identifies and evaluates these trends, the implications of these results are not clearly linked to the TARP (Version 3, 2026). As outlined in Table 5-1, of the TARP framework is intended to support adaptive management through not only threshold exceedances, but also through investigation outcomes that inform mitigation and management actions. The TARP Low Risk response includes evaluation of trends and implementation of measures to mitigate potential threshold exceedance where warranted. Increasing trends, even where benchmarks are not exceeded, represent an early indication of changing conditions and should inform precautionary or adaptive management consistent with the intent of the framework. Although increasing trends and differences from reference conditions are identified, the CREMP does not clearly demonstrate how these findings are carried forward into the TARP response framework. There is no explicit evaluation of potential sources or pathways, nor identification of precautionary mitigation or management

	options in response to these trends. This limits the ability of the CREMP to function as an adaptive management tool and reduces confidence that emerging mine-related influences are being proactively managed prior to threshold exceedance.
QIA Request	Explicitly link the results of temporal trend analyses to the TARP response framework, consistent with Table 5-1, including identification of appropriate response actions where increasing trends are observed. Where trends indicate potential mine-related influence, include evaluation of potential sources and pathways and document lines of evidence supporting source attribution. Identify precautionary or adaptive management measures that could be implemented if trends persist, consistent with Low Risk response requirements to mitigate potential threshold exceedance. Establish clear criteria or decision points within the CREMP for escalation of management actions in advance of AEMP benchmark exceedance, in alignment with the intent of the TARP.

Comment #	QIA 2025 NWB AE#20
References	**Document Name:** Appendix E.9.2 Mary River Project 2025 Core Receiving Environmental Monitoring Program Report **Section:** 4.5.2 Sediment Quality **Page:**229 of 977
QIA Comment	The CREMP identifies a shift toward finer-grained sediment in Sheardown Lake SE, including increased silt and decreased sand relative to both baseline and Reference Lake 3, as well as lower TOC content in 2025. The report attributes this change primarily to deposition of naturally suspended fine material associated with Mary River backflow during high flow conditions. While this is a plausible contributing mechanism, the evaluation does not consider or discuss other potential mine-related pathways that could influence sediment composition. The observed shift toward finer sediments relative to both baseline and reference conditions represents a change in depositional regime that warrants a broader assessment of potential contributing factors. In particular, potential contributions from mine-related dust deposition or other operational inputs are not evaluated, despite similar patterns being observed in Sheardown Lake NW. The CREMP does not provide a sufficiently comprehensive evaluation of potential sources contributing to observed changes in sediment grain size and composition.

	Attribution of finer sediment deposition primarily to natural backflow processes is not clearly reconciled with: • consistent differences from reference conditions; and • shifts relative to baseline conditions during the operational period. The absence of consideration of alternative pathways, including mine-related inputs, limits confidence in the interpretation and may result in incomplete characterization of potential mine-related effects.
QIA Request	Expand source attribution for sediment quality in Sheardown Lake SE to evaluate both natural and mine-related pathways (e.g., backflow processes, dust deposition, and runoff). Apply a weight-of-evidence approach to distinguish between natural variability and potential mine-related influences, supported by spatial and temporal analyses. Ensure that interpretations of sediment changes are explicitly reconciled with baseline and reference comparisons. Link sediment trend observations to the TARP framework to determine whether additional investigation or management actions are warranted where sustained shifts are observed.

Comment #	QIA 2025 NWB AE#21
References	**Document Name:** Appendix E.9.2 Mary River Project 2025 Core Receiving Environmental Monitoring Program Report **Section:** 5.2.3.1 Effects Assessment **Page:** 264 of 977
QIA Comment	The CREMP concludes that effluent from the MS-08 Final Discharge Point (FDP) is a source of nitrate and sulphate to MRTF, and identifies increasing trends in these parameters over time relative to baseline, while noting that concentrations remain below AEMP benchmarks through 2025. While this finding appropriately identifies a mine-related source, the interpretation is not fully developed. It is unclear whether MS-08 FDP is considered the sole source of nitrate and sulphate to MRTF, or one of several contributing pathways. The report does not clearly evaluate other potential mine-related or natural sources, nor does it reconcile source attribution with the observed long-term increasing trends. In addition, although increasing trends have been identified and a source has been partially attributed, the CREMP does not clearly demonstrate how these findings are incorporated into the TARP (Version 3, 2026). As outlined in Table 5-1, the TARP

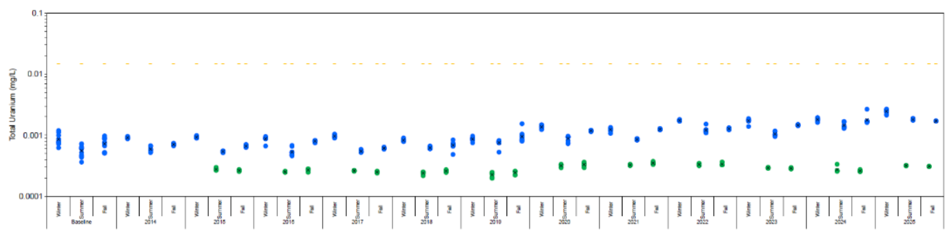
	framework requires that outcomes of investigations inform management responses, including evaluation of mitigation and implementation planning where mine-related influences are identified. The CREMP does not clearly demonstrate how identified mine-related sources and increasing trends in MRTF are translated into management actions under the TARP. The absence of: • clear confirmation of whether MS-08 FDP is the primary or sole source; • evaluation of other potential contributing pathways; and • identification of potential mitigation or management options limits confidence that the AEMP/TARP framework is being applied proactively. Reliance on the fact that concentrations remain below AEMP benchmarks, without consideration of increasing trends and identified sources, may delay implementation of appropriate management actions and does not align with the adaptive management intent of the TARP.
QIA Request	Clearly define and document the relative contribution of MS-08 FDP to nitrate and sulphate concentrations in MRTF, and evaluate other potential mine-related and natural sources. Explicitly link investigation findings (including source attribution and increasing trends) to the TARP framework (Table 5-1), including identification of appropriate response actions. Identify and evaluate potential mitigation or management options that could be implemented if trends continue or thresholds are approached, consistent with proactive management expectations. Establish clear decision points or contingency measures within the CREMP to enable timely implementation of management actions in advance of AEMP benchmark exceedance.

Comment #	QIA 2025 NWB AE#22
References	**Document Name:** Appendix E.9.2 Mary River Project 2025 Core Receiving Environmental Monitoring Program Report **Section:** Appendix B **Page:** 369-518 of 977
QIA Comment	Review of temporal comparison figures for multiple parameters (including nitrate-N, nitrate at Sheardown Lake SE, nitrite, total chromium, total iron, total thallium at Sheardown Lake SE, and dissolved zinc) indicates inconsistent and, in several cases,

	increasing analytical detection limits (LRLs) between baseline and recent monitoring periods. Detection limits for several parameters (e.g., nitrite beginning ~2023, nitrate-N, and nitrate at Sheardown Lake SE) appear to increase in recent years relative to baseline conditions. Similarly, total chromium detection limits are higher during operations compared to baseline, and comparable concerns are evident for total iron. For total thallium at Sheardown Lake SE, detection limits appear variable and elevated relative to earlier data, while dissolved zinc detection limits are not clearly comparable between baseline and recent datasets. Detection limits would typically be expected to remain consistent or decrease over time with improvements in analytical methods. The observed increase in detection limits reduces analytical sensitivity in recent years and limits the ability to evaluate trends. In particular, where detection limits are higher than baseline, it is not possible to reliably determine whether concentrations of parameters such as nitrate-N, nitrate (Sheardown Lake SE), total chromium, total iron, and total thallium have increased over time, as low-level changes may not be detectable. The variability and apparent increase in detection limits across monitoring periods reduces confidence in the comparability of datasets and the interpretation of long-term trends. Specifically: • comparisons to baseline are biased where baseline detection limits are lower than recent data; • increasing detection limits may mask subtle but meaningful changes in concentration over time; and • the ability to assess trends for several parameters (including nitrate-N, nitrate at Sheardown Lake SE, total chromium, total iron, and total thallium) is limited where detection limits exceed measured concentrations. The CREMP does not provide sufficient explanation for these changes in detection limits, nor does it evaluate the implications for trend analysis and effects assessment.
QIA Request	• Provide a clear explanation for changes in detection limits across monitoring periods, including any changes in analytical methods, laboratories, or reporting protocols.

	• Standardize detection limits across the dataset to the extent practicable, or apply consistent data treatment approaches to ensure comparability with baseline conditions. • Evaluate and document the implications of varying detection limits on temporal trend analyses and interpretation, particularly for parameters where trends cannot be reliably assessed due to analytical constraints. • Ensure future monitoring maintains detection limits that are consistent with or lower than baseline conditions to support defensible long-term comparisons. • Where detection limits constrain interpretation (e.g., nitrate-N, total chromium, total iron, total thallium), identify and implement analytical improvements or targeted methods to increase sensitivity and enable robust trend assessment.

Comment #	QIA 2025 NWB AE#23
References	**Document Name:** Appendix E.9.2 Mary River Project 2025 Core Receiving Environmental Monitoring Program Report **Section:** Appendix B **Page:** 535
QIA Comment	Visual inspection of total uranium concentrations in Sheardown Lake SE indicates an increasing trend over the monitoring period, with concentrations rising relative to baseline and reference conditions, although remaining below the applicable AEMP benchmark.

	While the CREMP identifies and discusses trends qualitatively, it does not extend this analysis to evaluate the rate of increase or the potential timeframe over which concentrations may approach applicable benchmarks. The TARP framework (Table 5-1) is intended to support adaptive management by using monitoring results and trend analyses to inform proactive responses, not solely reactive measures following threshold exceedance. The CREMP does not fully utilize trend information to inform forward-looking  management. The absence of quantitative trend evaluation (e.g., rate of change or projection toward benchmarks) limits the ability to: • assess the urgency of potential future exceedances; and • plan and implement mitigation measures in advance of threshold exceedance. Reliance on current compliance with AEMP benchmarks, without consideration of increasing trajectories, reduces confidence that the program is functioning proactively in accordance with the intent of the TARP.
QIA Request	Incorporate quantitative trend analyses for key parameters (e.g., total uranium) to estimate rates of change and project potential timelines to AEMP benchmark exceedance, where appropriate. Use trend projections to inform proactive management planning, including identification of mitigation options and triggers for early intervention under the TARP framework. Integrate trend-based evaluation into the CREMP reporting to support adaptive management decisions, consistent with the intent of Table 5-1.

Comment #	QIA 2025 NWB AE#24
References	**Document Name:** Appendix E.9.2 Mary River Project 2025 Core Receiving Environmental Monitoring Program Report **Section:** Examples 3.1.3.1 and 4.1.3 **Page:** 86 and 169 of 977

QIA Comment	Across multiple sites in the CREMP, the report alternates between identifying statistically significant and/or ecologically meaningful differences and concluding that effects are not present due to lack of consistent temporal trends or because of natural/habitat variability. The interpretation appears inconsistent throughout the CREMP. The focus on the absence of clear directional trends is used to discount observed differences (e.g., density declines, FFG shifts, community dissimilarity), regardless of evidence of: • persistent differences (e.g., density lower since ~2016), • multiple Low/Moderate Risk responses, and • ecologically meaningful endpoint deviations. This approach may overlook cumulative or non-linear ecosystem responses and miss early signals of change. Some examples of this include: 1. Section 3.1.3.1 North Branch (CLT1-US) – "In 2025, total invertebrate densities and the relative proportions of *Nematoda*, *Oligochaeta*, *Chironomidae*, shredders, and burrowers were significantly higher at the CLT1 Upper Main Stem (CLT1-L2) compared to the reference area. In contrast, Simpson's Evenness and the relative proportions of *Ostracoda*, *Simuliidae*, and sprawlers were significantly lower at the CLT1 Upper Main Stem relative to the Reference Creek. Of these endpoints, only density and the relative proportions of shredders, sprawlers, and burrowers were outside the CESBIC ±2 SDREF, indicating ecologically meaningful differences. Bray–Curtis similarity analysis also identified significant differences in community structure between CLT1-L2 and the reference area; the results of the dbRDA analysis in particular indicated strong environmental controls on community dissimilarity. These patterns likely reflect localized habitat differences between the Upper Main Stem and Reference Creek, rather than mine influence." 2. Section 4.1.3 SDLT1 – "In 2025, most BIC endpoints at SDLT1 were comparable to those observed at Reference Creek (Station REF-CRK), except the relative proportions of *Nematoda*, *Ostracoda*, *Oligochaeta*, *Simuliidae*, collector-gatherers, filterers, and burrowers. None of these differences were considered ecologically meaningful (i.e., all MODs were within the CESBIC of ±2 SDREF; Table 4.2; Appendix Figure E.7). However, despite the absence of ecologically meaningful endpoint-level differences, Bray–Curtis similarity analysis results were indicative of relatively large (i.e., R2 = 0.74 and adjusted R2 = 0.57 for the Mantel Test and dbRDA, respectively) difference in overall

	community structure between SDLT1 and the reference area. These subtle compositional differences are likely attributable to natural variation in habitat conditions between areas, particularly the presence of bryophytes and algae at SDLT1 but not REF-CRK.”
QIA Request	The existing weight-of-evidence framework places too much emphasis on threshold exceedances, giving limited consideration to consistent below-threshold information that is evident across many sites over several years. These patterns are repeatedly dismissed as not mine-related. Consistency in direction and magnitude across sites and biological communities represents meaningful evidence of effect and must be explicitly considered, even when individual metrics do not trigger project thresholds.

Comment #	QIA 2025 NWB AE#25
References	**Document Name:** Appendix E.9.2 Mary River Project 2025 Core Receiving Environmental Monitoring Program Report **Section:** 3.1.3.1 - North Branch (CLT1-US), 3.1.3.3 - Lower Main Stem (CLT1-DS), 4.1.3 - Benthic Invertebrate Community, 4.2.2 - Benthic Invertebrate Community and 4.3.3 - Benthic Invertebrate Community **Page:** 86 - 189 of 977
QIA Comment	Observed differences in biological endpoints (e.g., benthic community composition, functional feeding groups, and density) are frequently attributed to natural interannual variability or habitat-related factors (e.g., substrate conditions, organic matter availability, vegetation, bryophyte presence, flow) without quantitative evaluation of these drivers or comparison to alternative explanations. The repeated use of habitat variability as a default explanatory mechanism, without supporting analysis, reduces confidence in the interpretation of results. This is particularly relevant where: • statistically significant and/or ecologically meaningful differences are observed, • mine-related stressors (e.g., changes in water quality, sedimentation, or chemistry) are also present, and • similar patterns occur across multiple endpoints or years. Relying on assumed habitat differences in the absence of demonstrated relationships may influence the weight of evidence toward natural explanations and reduce the ability to identify mine-related or cumulative effects. For example, the report notes that bryophytes were present at CLT1-US but absent from the

	reference creek in 2025, and that bryophytes provide habitat complexity that can trap coarse and fine particulate matter, thereby increasing retention of food resources for benthic invertebrates. This is a plausible habitat-based explanation; however, it is unclear whether bryophyte presence was documented during baseline conditions at CLT1-US/DS or in the Sheardown Lake tributaries, or whether changes in bryophyte presence over time have been evaluated.
QIA Request	The proponent should clarify how habitat variability has been accounted for in the interpretation of biological responses to ensure that conclusions regarding potential mine-related effects are well supported. This should include confirming whether bryophytes were noted during baseline conditions at CLT1-US/DS and in Sheardown Lake tributaries, and whether temporal changes in bryophyte presence or abundance have been considered when interpreting benthic invertebrate responses.

Comment #	QIA 2025 NWB AE#26
References	**Document Name:** Appendix E.9.2 Mary River Project 2025 Core Receiving Environmental Monitoring Program Report **Section:** 3.1.3.2 CLT1 Upper Main Stem **Page:** 89-90 of 977
QIA Comment	Although most endpoints do not show consistent trends, organism density has been significantly lower than baseline since 2016, suggesting a persistent change that is not fully explained by interannual variability. Relying on the lack of clear trends and FFG-based explanations may downplay a persistent change in the benthic community. Additionally, increased nematodes and collector-gatherers with reduced filterers suggests a shift toward fine organic matter dominance and altered habitat function, which may reflect chronic influence.
QIA Request	It may be helpful to further consider the long-term decline in organism density and its relevance. Strengthening the connection between shifts in feeding groups and potential sediment or organic changes could also improve interpretation. Revisiting the overall weight of evidence may help clarify whether effects are ongoing or temporary.

Comment #	QIA 2025 NWB AE#27

References	**Document Name:** Appendix E.9.2 Mary River Project 2025 Core Receiving Environmental Monitoring Program Report **Section:** 3.3.4 Benthic Invertebrate Community (JLO) **Page:** 133-136 of 977
QIA Comment	Three consecutive years (2023–2025) of reduced benthic invertebrate density at Camp Lake (JL0), with MODs exceeding the CESBIC, suggest a persistent and potentially ecologically meaningful pattern rather than normal variability. Although richness and community composition remain stable, sustained declines in density may indicate reduced productivity or emerging stress that is not fully reflected in structural metrics. Attributing this pattern primarily to interannual variability or habitat fluctuations may minimize its significance, as the consistency and magnitude of the deviation exceed expected natural variation. Moreover, stable richness and composition do not preclude early stage impacts, as changes in density can precede detectable shifts in community structure. As such, the conclusion that structural integrity is maintained may overlook a developing effect that requires further consideration. "*Ecologically meaningful differences for density suggested a more recent and consistent decrease relative to baseline, with MODs outside the CESBIC of ±2 SDBASELINE for the last three consecutive years (2023 to 2025). Conversely, MODs outside the CESBIC for Simpson's Evenness were infrequent). The lower invertebrate densities in 2023 to 2025 relative to baseline may reflect variability in littoral productivity or water level fluctuations (e.g., habitats that are wetted one year may be dry the next, reducing the available habitat area for benthic invertebrates). Importantly, observed changes in organism densities relative to baseline were not accompanied by declines in taxonomic richness or major shifts in community composition, indicating that overall structural integrity of the BIC was maintained.*"
QIA Request	The repeated density exceedances should be viewed as a potential early signal of change and further evaluating their persistence and implications within the overall interpretation.

Comment #	QIA 2025 NWB AE#28
References	**Document Name:** Appendix E.9.2 Mary River Project 2025 Core Receiving Environmental Monitoring Program Report **Section:** 3.3.5 - Camp Lake, 4.4.5 - Sheardown Lake NW, 4.5.5 - Sheardown Lake SE, 5.4.5 - Mary Lake

	Page: 137-297 of 977
QIA Comment	Across mine-exposed lakes, repeated differences in fish endpoints, including length-frequency distributions (LFDs), size structure, and condition, have triggered Low or Moderate Risk Responses; however, these findings are generally interpreted as natural variability in the absence of a clearly integrated weight-of-evidence assessment. Fish results are not consistently evaluated alongside supporting exposure and response lines of evidence, such as water quality trends, productivity, and benthic invertebrate community (BIC) results, which limits confidence in conclusions that adverse mine-related effects are absent. The assessment also relies heavily on critical effect size (CES) thresholds to discount statistically significant changes, even though repeated or directional trends over multiple years may signal longer-term ecological change that warrants further investigation.
QIA Request	An integrated, lake-specific weight-of-evidence approach is not clearly articulated, with limited linkage between fish endpoints and supporting lines of evidence such as water quality, productivity, sediment, and benthic invertebrate community (BIC) trends, making it difficult to evaluate potential causal pathways. Clarification is requested on the rationale for not incorporating or reconciling multiple metrics that show consistent or repeated changes across years within the overall interpretation. Similarly, it is not clear how fish endpoints have been evaluated within a long-term context (e.g., relative to baseline or reference conditions) to determine whether observed differences are stable, directional, or increasing over time. Repeated exceedances of critical effect size (CES) thresholds and statistically significant changes continue to be interpreted largely on an annual basis, despite long-term data indicating potential patterns that warrant greater consideration of their cumulative and temporal significance.

Comment #	QIA 2025 NWB AE#29
References	**Document Name:** Appendix E.9.2 Mary River Project 2025 Core Receiving Environmental Monitoring Program Report **Section:** 3.3.5 Fish Population **Page:** 137-149 of 977
QIA Comment	Camp Lake shows persistent biological responses, including Moderate Risk Responses for LFDs, a Low Risk Response for condition, and a Moderate Risk Response for BIC density; however, the fish effects interpretation does not clearly

	integrate these related endpoints. Post-2020 gill-net CPUE remains elevated relative to earlier years, while productivity and BIC results do not provide a clear explanation for the increase. Nearshore fish were smaller, had a narrower size distribution, and had lower condition relative to baseline, which may indicate unresolved food-web or competition-related changes.
QIA Request	Integrate BIC density, nutrient and productivity patterns, and fish size and condition results to determine whether food limitation, competition, or other trophic mechanisms are contributing to the observed fish responses in Camp Lake. Assess whether elevated post-2020 CPUE reflects a sustained change in fish abundance, distribution, behaviour, habitat use, or sampling catchability. Use long-term trend and before and after analysis for Camp Lake BIC and fish endpoints to determine whether recent changes represent a persistent shift from baseline conditions.

Comment #	QIA 2025 NWB AE#30
References	**Document Name:** Appendix E.9.3 Lake Sedimentation Monitoring Program Report **Section:** 3.1.1 Spatial Comparisons for the 2024 to 2025 Ice Cover and Open Water Periods **Page:** 34 of 231
QIA Comment	The report concludes that sedimentation rates at Sheardown Lake NW fall within the range observed in other Arctic lakes; however, this comparison alone does not establish whether these conditions are influenced by mining or industrial activities, particularly in the absence of a local reference lake (e.g., Reference Lake 3 used elsewhere in the CREMP framework). While reported sedimentation rates fall within published Arctic ranges, this comparison may not fully reflect site-specific conditions. Lakes referenced in the literature may not be subject to the same combination of potential influences present at Sheardown Lake NW, including mine related disturbance and episodic turbidity events (e.g., rainfall driven backflow). The report presents multiple lines of evidence, including elevated sedimentation at sensitive spawning habitat (SHAL2), increasing long-term trends during the open water period, and early benthic community responses, that together suggest

	increasing sedimentation pressure. Reliance on comparisons to regional ranges minimize these site specific and temporal indicators of change. Similarity to Arctic lake ranges does not necessarily demonstrate absence of impact, particularly where sedimentation rates are increasing and affecting sensitive receptors.
QIA Request	The proponent should provide a clear, weight-of-evidence determination of whether the observed increases in sedimentation at SHAL-2 represent a project-related effect, including consideration of spatial patterns (e.g., contrast with SHAL-1), temporal trends (2014 vs. 2025), and observed plume behaviour. The current reliance on regional comparisons does not adequately address site-specific causation. Please also refer to comment 37 above. Given the reliance on regional comparisons, the proponent should clarify whether establishing sedimentation reference conditions at Reference Lake 3 was considered.

Comment #	QIA 2025 NWB AE#31
References	**Document Name:** Appendix E.11 – 2025 Groundwater Monitoring Report **Section:** 3.1 **–** New Standpipe Well Install **Page:** 8-9 of 922
QIA Comment	In April 2025, 5 new standpipes were installed, to replace wells that were damaged (due to frost jacking) or incorrectly installed (i.e., no bentonite seal) in the monitoring well network. Two wells were installed at the Landfill Facility (LF), and three at the Hazardous Waste Berm (HWB) Facility. However, of the five new wells, only two were able to be successfully monitored, as three wells were dry/frozen during the August sampling event. Both of the new wells installed at the LF were dry/frozen. WSP noted that this was likely due to one of the following: (1) the well screen being installed above the water table, (2) the screen being installed too deep in the permafrost, or (3) the wells being sampled too late in the season (i.e., after the shallow groundwater had already frozen). As ice was observed in the bottom of new standpipe well MS-LF-25-01, it was determined that groundwater would have likely been present in the well if sampling had occurred earlier in the season (P. 9). Given that both new LF wells were dry/frozen, and there is limited monitoring downgradient of the HWB Facility, the newly-installed wells provided limited value in successfully tracking downgradient

	migration of contaminants of potential concern (CoPC) exceedances in source areas, and replacing compromised wells in the monitoring network. Additionally, only one well is located downgradient of the HWB facility (MS-HWB-25-01), which was newly installed in 2025. It was unclear why no other wells were installed downgradient of the facility (i.e., between the HWB and Camp Lake), especially given that source area CoPC exceedances had been documented that had not been attributed to background conditions (nitrate, nitrite, naphthalene, fluoride, copper). There is also no monitoring downgradient of well HWB-KP22-04, where high nitrate concentrations were detected in 2025.

QIA Request	• Future Annual Reports should clearly identify how the subsequent year's monitoring program incorporates lessons learned from the previous monitoring year, including adjustments made to optimize data collection and program effectiveness. The integrity of the well monitoring network is an interannual concern that needs to be addressed.
	• Reevaluate the groundwater monitoring schedule to determine whether additional or earlier seasonal monitoring events are warranted, to improve sampling success at newly installed wells, particularly where wells were frozen or dry during the 2025 monitoring program.
	• Strengthen the groundwater monitoring network downgradient of the HWB facility to ensure effective detection and tracking of contaminants of potential concern (CoPCs). This should include:
	  ○ An assessment of whether the current well network provides sufficient downgradient spatial coverage between the HWB facility and Camp Lake, to reliably track downgradient migration;
	  ○ An evaluation of the need for additional downgradient wells between the facility and Camp Lake; and
	  ○ Implementing targeted monitoring to track plume migration from identified areas of elevated concentrations (e.g., vicinity of HWB-KP22-04, where high nitrate concentrations were observed).
	• Where additional downgradient monitoring wells are not installed/proposed, Baffinland should provide clear rationale. This justification should be supported by plume delineation, hydrogeological characterization, and monitoring objectives.

Comment #	QIA 2025 NWB AE#32

References	**Document Name:** Appendix E.10.1 Open Pit Water Balance and Water Quality Report – Operations and Early Closure **Section:** 3.2.1.1 Concentration-Based Source Terms **Page:** 27 of 355
QIA Comment	BIM notes that surface water quality data from monitoring station MS-MRY-09 collected between 2020 and 2024 (n = 71) were used to develop concentration-based source terms representing both upslope runoff from undisturbed areas and runoff derived from overburden within the Pit. However, no rationale is provided for restricting the dataset to this time period. It is unclear whether additional historical data are available for this station or why a longer-term dataset was not used to better capture baseline conditions and interannual variability.
QIA Request	Clarify the rationale for selecting only the 2020–2024 dataset to develop source terms. Indicate whether additional historical data are available for MS-MRY-09 and, if so, explain why they were not incorporated. If no additional data are available, please confirm this. For future reporting, provide justification for dataset selection and consider incorporating longer-term datasets, where available, to improve representativeness and robustness of source term development.

Comment #	QIA 2025 NWB AE#33
References	**Document Name:** Appendix E.10.1 Open Pit Water Balance and Water Quality Report – Operations and Early Closure **Section:** 3.2.1.1 Concentration-Based Source Terms **Page:** 28 of 355
QIA Comment	BIM notes that water quality data collected from collection ditches and runoff locations near the Project's WRF from 2022 through 2024 were used to develop concentration-based source terms representing runoff from non-AG waste rock and construction fill exposed within the Pit. However, no rationale is provided for restricting the dataset to the 2022–2024 period. It is unclear whether additional historical data are available or why a broader dataset was not used to better characterize baseline conditions and variability in runoff quality.
QIA Request	Clarify the rationale for selecting only the 2022–2024 dataset to develop source terms. Indicate whether additional historical data are available for these locations and, if so, explain why they were not incorporated. If no additional data are available, please confirm this. For future annual reporting, provide justification for dataset selection and consider incorporating longer-term datasets, where available, to improve the representativeness and robustness of source term development.

Comment #	QIA 2025 NWB AE#34
References	**Document Name:** Appendix E.10.1 Open Pit Water Balance and Water Quality Report – Operations and Early Closure **Section:** 3.2.1.2 Leaching Rate-Based Source Terms **Page:** 29 of 355
QIA Comment	BIM notes that dissolved metals concentrations were used to represent total metals concentrations, as total metals were not included in the analytical suite for the humidity cell tests. This approach may underestimate total metals concentrations and is not conservative, as total metals are typically expected to equal or exceed dissolved concentrations due to the presence of particulate-bound metals. No rationale is provided for this methodological choice.
QIA Request	Provide justification for using dissolved metals as a surrogate for total metals in the development of source terms, including an assessment of the potential for underestimation and associated implications for predictions. Clarify whether any correction factors or supporting datasets were considered to address this limitation. For future programs, include total metals in the analytical suite for humidity cell tests, or apply a scientifically justified method to estimate total concentrations, to ensure a more conservative and representative assessment.

Comment #	QIA 2025 NWB AE#35
References	**Document Name:** Appendix E.10.1 Open Pit Water Balance and Water Quality Report – Operations and Early Closure **Section:** 3.3 Water Quality Model Scenarios **Page:** 34 of 355
QIA Comment	Table 3.7 presents the water quality model scenarios, which combine climate conditions (average, dry, and climate change) with either expected or upper case source terms. However, none of the scenarios evaluate a combined worst-case condition (e.g., climate change conditions paired with upper case source terms). The current scenario set therefore does not appear to assess the full range of potential extremes, particularly where higher loading conditions could coincide with climate-driven changes in hydrology. This limits the ability to evaluate whether predicted water quality outcomes remain protective under plausible worst-case conditions.
QIA Request	Clarify how worst-case conditions have been evaluated in the absence of a scenario combining climate change conditions with upper case source terms. If such an assessment has not been completed, provide justification for its exclusion and discuss the implications for the robustness of model predictions. For future modelling and reporting, include a scenario (or sensitivity analysis) that evaluates combined worst-

	case conditions (e.g., climate change plus upper case source terms) to ensure that the full range of potential impacts is characterized and that predictions remain protective under extreme conditions.

Comment #	QIA 2025 NWB AE#36
References	**Document Name:** Appendix E.10.1 Open Pit Water Balance and Water Quality Report – Operations and Early Closure **Section:** 3.4 Water Quality Model pH Predictions **Page:** 35 of 355
QIA Comment	BIM notes that wall runoff quality was represented using water quality data collected from 2020 to 2025 at the 570 Sump. However, for the expected case scenario, pH and alkalinity appear to be based on a single minimum observed pH value (3.49), representing acidic conditions associated with PAG rock weathering. The reliance on a single extreme value for pH (and corresponding alkalinity assumptions) is not clearly justified and does not appear to reflect typical or central tendency conditions expected for an "expected case" scenario. This approach may bias the representation of wall runoff quality and does not clearly distinguish between expected and worst-case conditions.
QIA Request	Clarify the methodology used to derive pH and alkalinity for the expected case scenario, including the rationale for relying on a single minimum value rather than a summary statistic (e.g., median or mean) from the available 2020–2025 dataset. Discuss how this approach aligns with the intended definition of "expected case" conditions. For future reporting and modelling updates, provide clear justification for parameter selection and consider using statistically representative values (with separate evaluation of extreme conditions) to better distinguish between expected and worst-case scenarios and improve transparency and robustness of model inputs.

Comment #	QIA 2025 NWB AE#37
References	**Document Name:** Appendix E.10.1 Open Pit Water Balance and Water Quality Report – Operations and Early Closure **Section:** 3.5 Water Quality Model Results **Page:** 36 of 355
QIA Comment	BIM notes results are presented for the following scenarios: Average – Expected Case, Average – Upper Case, Dry – Upper Case, and Average – Sensitivity Expected Case for the water quality model. However, Table 3.7 identifies an additional **Climate Change – Expected Case** scenario, which is not included in the results discussion or figures/tables provided. As this is the only scenario explicitly intended to evaluate

	climate change conditions (including altered precipitation patterns and higher inflow volumes), its omission from the results limits the ability to assess potential effects under future climate conditions. No rationale is provided for excluding this scenario from the results presentation.
QIA Request	Clarify the rationale for not discussing the Climate Change – Expected Case scenario alongside the other scenarios presented in the results section. Provide a summary interpretation of how results under climate change conditions compare to the other modelled scenarios and whether they influence conclusions regarding predicted water quality and compliance with licence criteria. For future annual reporting, ensure consistent discussion of all modelled scenarios, including those assessing climate change, to support a comprehensive and transparent evaluation of model results.

Comment #	QIA 2025 NWB AE#38
References	**Document Name:** Appendix E.10.1 Open Pit Water Balance and Water Quality Report – Operations and Early Closure **Section:** 3.5 Water Quality Model Results **Page:** 39 of 355
QIA Comment	The proponent indicates that climate change conditions result in increased concentrations due to higher inflow volumes, increased mass loadings, and enhanced geochemical reaction rates. While increases in concentrations are observed under the Climate Change – Expected Case scenario relative to the Average – Expected Case scenario, these increases are described as minor compared to those observed under dry climate conditions. The assessment identifies the Dry – Upper Case scenario as representing worst-case conditions due to reduced dilution and elevated concentrations under low-flow conditions. However, the assessment does not include a scenario that combines climate change conditions with Upper Case geochemical source terms. Given that climate change projections indicate increased temperature, precipitation, and water-rock interaction, which are expected to increase mineral reaction rates and mass loadings, the absence of a combined high climate change and high geochemical loading scenario introduces uncertainty in whether the full range of potential future conditions has been adequately bounded.
QIA Request	Evaluate a combined scenario incorporating climate change conditions (e.g., a high emissions pathway) and Upper Case geochemical source terms to confirm that the current assessment bounds potential future water quality conditions. Alternatively,

	provide a clear, technically supported rationale demonstrating why such a combined scenario is not considered plausible or would not result in higher concentrations than those predicted under the Dry – Upper Case scenario.

Comment #	QIA 2025 NWB AE#39
References	**Document Name:** Appendix E.11 – 2025 Groundwater Monitoring Report **Section: 3.1 –** New Standpipe Well Install **Page:** 8-9
QIA Comment	It was unclear which damaged or compromised wells in the existing monitoring well network each of the 5 new wells installed in 2025 were intended to replace. Although the purpose of a new well was noted in the text of the report in some instances (e.g., MS-HWB-03 was noted to compare to well HWB-KP22-06, which did not have a bentonite seal), it would be useful if this information could be summarized in a table (or added to Table 2), for reviewer clarity. Additionally, Baffinland should specify whether any future work is planned to fill the gaps that the 3 dry/frozen wells were unable to address.
QIA Request	Baffinland should clarify which damaged or compromised well from the existing monitoring network each of the 5 new wells installed in 2025 was intended to replace, for reviewer clarity. Additionally, Baffinland should specify how/when additional work will be completed to fill the gaps that the 3 dry/frozen wells were unable to address. This information should also be incorporated into future annual reports to provide greater clarity as to how the groundwater monitoring network is evolving.

Comment #	QIA 2025 NWB AE#40
References	**Document Name:** Appendix E.11 – 2025 Groundwater Monitoring Report **Section:** Figure 1 **Page:** 31
QIA Comment	WSP provided a conceptual site model (CSM) in cross section, illustrating seasonal variation in groundwater migration and drainage to Sheardown Lake SE from the Landfill Facility, and active layer thickness and depth to permafrost (Figure 1 – P. 31). It was unclear why a similar figure illustrating a conceptual model of groundwater migration/drainage from the Hazardous Waste Berm (HWB) Facility to Camp Lake was not prepared/provided or discussed, particularly given that several CoPC exceedances were detected in source wells associated with the HWB. Further, it was unclear why drainage from the LF Facility to Sheardown Lake NW was not conceptually modelled/illustrated, given that Figure D (P. 50) estimated that groundwater from the LF Facility is primarily directed to the west to Sheardown Lake NW.

QIA Request	BIM should provide a conceptual site model (i.e., cross sections) illustrating groundwater migration/drainage and active layer thickness/depth to permafrost table from the Hazardous Waste Berm Facility to Camp Lake, similar to the CSM provided for the LF Facility to Sheardown Lake SE in Figure 1. Similarly, a CSM illustrating these characteristics should also be provided to illustrate the hydrogeological regime and groundwater migration from the LF Facility to Sheardown Lake NW.

Comment #	QIA 2025 NWB AE#41
References	**Document Name:** Appendix E.11 – 2025 Groundwater Monitoring Report **Section:** Appendix A **Page:** A-2 (P. 54 of 922)
QIA Comment	Photo A-4 (Appendix A) indicates that groundwater sampled from well LF-KP22-05 (reference station upgradient and adjacent to the LF) was yellow and slightly opaque, and that brown sediment with an apparent “oil slick” was noticed at the bottom of the Low-Density Polyethylene (LDPE) tubing used for well purging. However, this observation was not discussed in the groundwater monitoring report.
QIA Request	BIM should clarify why observations at LF-KP22-05 were not discussed in the report, and indicate whether further investigation will be undertaken to identify the source of the oily substance in this well.

Comment #	QIA 2025 NWB AE#42
References	**Document Name:** Appendix E.11 – 2025 Groundwater Monitoring Report **Section:** 6.1 – Site Characteristics **Page:** 28
QIA Comment	Potential evidence of open talik formation was noted beneath Murial Lake (along the Tote Road), which WSP states is of a similar size to Sheardown Lake. WSP noted that an open talik could connect the subpermafrost groundwater to suprapermafrost groundwater. It was unclear if or how BIM proposed to evaluate whether a talik had formed beneath Sheardown (or Camp) Lakes, and discussion of the potential effects of talik formation beneath these lakes on the hydrogeological characterization of the site was limited (e.g., discussion of changes in vertical hydraulic gradients, conceptual pathway from shallow groundwater regime to deeper groundwater).
QIA Request	BIM should clarify whether any additional investigations will be conducted to determine if a talik has formed beneath Sheardown Lake or Camp Lake, for example, whether any additional thermistor beads will be installed near these lakes to track active layer thaw.

Comment #	QIA 2025 NWB AE#43
References	**Document Name:** Appendix E.11 – 2025 Groundwater Monitoring Report **Section:** 4.3 – Single Well Response Testing Results **Page:** 19
QIA Comment	The 2025 Groundwater Monitoring Report provides hydraulic conductivity values (in m/s) for the aquifer at the LF and the HWB, with values corresponding to fine/coarse sand, indicating that the media has relatively high permeability. However, an estimation of how long it may take for impacted groundwater from the facility's source areas to migrate to Camp/Sheardown Lakes (NW and SE) was not evaluated or discussed. This would be helpful for understanding plume migration timelines, and the risks associated with these facilities, particularly given that there are CoPC exceedances in source areas of these facilities. Given that the hydraulic conductivity of groundwater at the HWB facility was estimated to be as high as 2×10^{-4} m/s, groundwater from the source area could conceptually reach Camp Lake (which is ~450 m from the source area) in as little as 26 days, under flowing (summer) conditions. This information should be discussed and provided in the annual groundwater monitoring report, for risk evaluation completeness.
QIA Request	BIM should discuss and evaluate timelines for groundwater to migrate from the source areas of LF and HWB facilities to Sheardown Lake (NW and SE) and Camp Lake, respectively, to evaluate the risk that source area CoPC exceedances pose to downgradient surface waters.

Comment #	QIA 2025 NWB AE#44
References	**Document Name:** Appendix E.11 – 2025 Groundwater Monitoring Report **Section:** Section 5.2; Figure 1 **Page:** 25, 31
QIA Comment	The conceptual model shown in Figure 1 (P. 31) indicates that seeps may occur downgradient of the LF, toward Sheardown Lake NW. Seep locations downgradient of the LF have historically exhibited elevated dissolved copper concentrations (below the FIGQ AW-F guideline), suggesting a potential pathway for contaminant migration. However, the report does not clearly describe what control or mitigation options BIM has available should concentrations increase, exceed guidelines, or if additional seepage develops.
QIA Request	BIM should describe the control and mitigation measures available to manage seepage downgradient of the LF and HWB facilities, including contingency actions if CoPC exceedances are identified or if new seepage pathways develop. This should

	include how seep monitoring results are linked to management decisions within the existing framework.

Comment #	QIA 2025 NWB AE#45
References	**Document Name:** Appendix E.11 – 2025 Groundwater Monitoring Report **Section:** Figure D and E **Page:** 50, 51
QIA Comment	Figure D and E provide site plans of the LF and HWB facilities, indicating groundwater elevations and inferred flow direction (P. 50, 51), however, the site plans did not indicate that upgradient reference well MS-HWB-GW-REF2 was dry in 2025. Further to this, based on the report text and attached figures, it was difficult to determine (and keep track of) which wells were in good condition and which were successfully sampled (i.e., without data quality concerns) in 2025, and what the period of record is for each well. Concentrations over time were not summarized in a table, and no CoPC trend analysis was provided (although a limited discussion of comparisons with historical results was provided in Sections 5.2 and 5.3). For clarity and ease of review, it would be useful if BIM prepared and presented a table summarizing the status of each well, including the year it was installed, whether it was sampled in 2025 (and any data quality issues/flags), and what wells could not be sampled (and for what reason). While Table 7 (P. 18) indicates which groundwater samples had CoPC exceedances, it does not give an indication of how many downgradient wells were actually able to be sampled. A clearer display of which wells were usable and in good repair in 2025 would help to more clearly evaluate whether the existing well network is temporally sufficient.
QIA Request	In future iterations of the annual groundwater report, BIM should provide a table summarizing the status of each well on site, including what the year each well was installed, whether it was sampled in 2025 (and any data quality issues/flags), and what wells could not be sampled (and for what reason). An indication of the period of record for each well should also be provided. BIM should also clarify why no trend analysis (or discussion of trends) for key CoPCs (particularly CoPCs exceeding guidelines in facility source areas in 2025) was conducted as part of their groundwater monitoring report. This should be included in future iterations of annual groundwater reporting.

Comment #	QIA 2025 NWB AE#46

References	**Document Name:** Appendix E.11 – Groundwater **Section:** Background **Page:** 12
QIA Comment	Appendix E.11 stated that "concerns have been previously raised about a potential liner leak in the northwest section of the HWB; as a result, this section is currently not being used to contain hazardous waste." (P. 12). It was unclear if BIM had a plan to repair this section of the HWB.
QIA Request	Baffinland should provide details on when and how the HWB liner leak will be repaired.

Comment #	QIA 2025 NWB AE#47
References	**Document Name:** Appendix E.11 – 2025 Groundwater Monitoring Report **Section:** Figure D **Page:** 50
QIA Comment	Figure D of Appendix E.11 presents the locations of groundwater monitoring wells at/around the Landfill Facility. The Mine Site Landfarm, located on the north side of the LF, is used for managing hydrocarbon-impacted soils. However, there do not appear to be any groundwater monitoring wells installed immediately downgradient (i.e., west) of the landfarm's footprint or its associated management pond, to track potential seepage migration towards Sheardown Lake NW. It was unclear why Baffinland had not installed any monitoring wells in this area. Further, Baffinland has indicated that the Milne Port Landfarm, which has been used to manage hydrocarbon-impacted soils, is currently at-capacity (as of 2019). It was unclear whether any groundwater monitoring has been conducted at this facility or in downgradient areas.
QIA Request	Baffinland should clarify why there are no groundwater monitoring wells located downgradient (west) of the Mine Site Landfarm, where hydrocarbon-impacted soils are managed/stored. Additionally, Baffinland should clarify why there are no groundwater monitoring wells at or downgradient of the Milne Port Landfarm, where hydrocarbon-impacted soils have been managed, to monitor subsurface migration from the facility. Pending BIM's response, we recommend the addition of groundwater monitoring wells downgradient of the Mine Site and Milne Port Landfarms.

Comment #	QIA 2025 NWB AE#48
References	**Document Name:** Appendix E. 13.1 – Responses to Intervenor Comments on the 2024 QIA – NWB Annual Report for Operations **Section:** Comment No. 30 AE#14 **Page:** 4
QIA Comment	Baffinland states that "*certain explosives-related outer packaging and associated solid residuals have historically been managed by controlled burning in remote northern operations*" No. 30 AE #14 (p. 4).
QIA Request	Baffinland should clarify how these materials are currently dealt with at the Mary River Project.

Fish and Fish Habitat

Comment #	QIA 2025 NWB F&FH#01
References	**Document Title:** Baffinland Iron Mines 2025 Annual Report to QIA and NWB for Operations, Appendix C.3 Tote Road Fish Habitat Monitoring Report 2025 [NWB Registry: 260331 - 2025 QIA-NWB Annual Report for Ops - Appendix C.3 - Tote Road Fish Habitat Monitoring 2025 Annual Report_FINAL_reduced.pdf], **Section** 2.2 Fish habitat assessment **Page** 7 (pdf p. 12 of 451) **Document Title:** Baffinland Iron Mines 2025 Annual Report to QIA and NWB for Operations, Main Body [NWB Registry: 260331 - 2025 QIA-NWB Annual Report for Ops - As Sent.pdf], **Section** 7.3.8 Tote Road monitoring program **Page** 45 (pdf p. 65 of 94) **Document Title:** North/South Consultants Inc. (NSC). 2026. Tote Road Culvert Crossing Remediation Monitoring Fish and Aquatic Habitat. A report prepared for Baffinland Iron Mines Corporation. March 2026.
QIA Comment	"*The primary objectives of the 2025 Tote Road monitoring program were to assess the presence of fish, habitat quality, and upstream accessibility through installed culverts at fish-bearing sites. Monitoring of the seven sites remediated in winter of 2024 was conducted under the Tote Road Culvert Crossing Remediation Monitoring (TRCCRM) program. The results of the 2025 TRCCRM program are presented in NSC (2026). Results from the remaining Tote Road sites surveyed in 2025 are presented herein.*" (Appendix C.3, s.2.2, p. 7). Why were monitoring results from the seven remediated crossings (CV-057, CV-059, BG-04, CV-001, CV-102, CV-106 and CV-216) not included

	in the Tote Road Fish Habitat Monitoring Report, or mentioned in the main report (Main Body, s.7.3.8, p. 45)? The North/South Consultants (2026) report was not found in the NWB review documents. It was provided by Baffinland on 26 June 2026, after several requests, but too late for review and incorporation into QIA's comment package. Absence of this information creates a gap in the 2025 Tote Road stream crossing monitoring information provided for review, and potentially in the long-term records.
QIA Request	QIA requests Baffinland include all relevant material in Annual Report submission packages.

Comment #	QIA 2025 NWB F&FH#02
References	**Document Name:** Appendix C.3 Tote Road Fish Habitat Monitoring 2025 Annual Report **Section:** 2.2 Fish Habitat Assessment **Page:** 7
QIA Comment	The report states that the sites confirmed as fish habitat have been monitored annually for the last 15 years whereas fishless sites have been monitored periodically, with the most recent monitoring having been conducted in 2019 and 2020, to confirm the continued presence of natural barriers to fish passage. The term "periodic monitoring" is not clearly defined, creating uncertainty in the frequency and consistency of inspections at fishless sites. Without a regular schedule, there is an increased risk that changes to natural barriers may go undetected; implementing a fixed monitoring interval would provide a more reliable and efficient approach to confirm continued fish exclusion.
QIA Request	Rather than monitor the fishless sites periodically to ensure the presence of natural barriers to fish passage, the proponent should set up monitoring at regular 5-year intervals. A regular monitoring program ensures that conditions at the sites are consistent and continue to prevent fish passage but also ensures that the sites are not overlooked and that extra resources are not being used for unnecessary monitoring.

Comment #	QIA 2025 NWB F&FH#03
References	**Document Name:** Appendix C.3 Tote Road Fish Habitat Monitoring 2025 Annual Report **Section:** 3.3 Fish Use Assessments **Page:** 15

QIA Comment	Catch totals of juvenile Arctic char were described as "similar to previous years at many crossings per previous annual reports." In the absence of supporting statistical analysis, this statement is subjective and does not allow for determination of whether year-over-year differences are statistically significant or within the range of expected variability. From a scientific and monitoring perspective, qualitative statements of similarity are insufficient to support robust interpretation of results. Without quantitative analysis, it is not possible to distinguish between natural variability, potential trends, or project-related effects. This limits the transparency and defensibility of conclusions presented in the report.
QIA Request	Statistical analyses should be conducted to evaluate temporal differences in fish catch data, and results should be presented in a manner that clearly demonstrates whether observed similarities or differences are statistically significant. This approach should be incorporated as a standard component of all future annual reporting for the Tote Road Fish Habitat Monitoring Program. The consistent application of statistical analysis will improve rigor, transparency, and comparability of results across years, and better support conclusions regarding potential Project-related effects.

Comment #	QIA 2025 NWB F&FH#04
References	**Document Name:** Appendix C.3 Tote Road Fish Habitat Monitoring 2025 Annual Report **Section**: Section 3.2 Water Quality Monitoring of Baseline Fisheries Culverts and Tables and Figures **Pages:** 14 and 31-114
QIA Comment	Section 3.2 states that water quality monitoring data are presented in Table 2. Table 2 presents nearly 100 pages of raw data. The data are difficult to review because of the amount and the presentation. Also, no statistical analysis has been completed therefore no differences can be identified. Graphing the data and using statistical analysis to identify differences between sites, over years would be useful. Also, numerous cells in the table are missing values with no explanation given. Reasons for missing data should be given.
QIA Request	Water quality data should be presented in graph format, supported by appropriate statistical analysis, to evaluate differences over time and across locations. This

	approach should be implemented as a standard component of all future annual reports to improve data interpretation and transparency. In addition, future reporting should consistently include clear explanations for any missing data (e.g., sampling errors, access limitations, or environmental conditions), to ensure completeness of the dataset and to support accurate assessment of monitoring results.

Comment #	QIA 2025 NWB F&FH#05
References	**Document Name:** Appendix E.9.2 Mary River Project 2025 Core Receiving Environmental Monitoring Program Report **Section:** 5.4.5 Fish Population and 5.4.6 Effects Assessment and Recommendations **Page:** 290-297 and 298-299 of 977
QIA Comment	Mary Lake triggered a Moderate Risk Responses for fish LFDs and condition; however, the conclusion that these differences reflect natural productivity is not supported by a clear assessment. In addition, the Moderate Risk Response for total aluminum in the south basin is not evaluated in relation to fish health endpoints.
QIA Request	It is recommended that productivity, habitat, and food availability be evaluated to determine whether these factors are sufficient to explain fish size and condition differences relative to reference conditions. Potential relationships between elevated aluminum in the south basin and fish health metrics should also be assessed using a weight-of-evidence approach.

Comment #	QIA 2025 NWB F&FH#06
References	**Document Name:** Appendix E.9.2 Mary River Project 2025 Core Receiving Environmental Monitoring Program Report **Section:** 3.3.6.1 Effects Assessment **Page:** 140-145 of 977
QIA Comment	Across the CREMP, benthic invertebrate communities and fish population endpoints (as well as water quality, sediment quality and chlorophyll a) are assessed largely as independent lines of evidence, with limited integration in the interpretation of results and Effects Assessment. While both components are evaluated in detail, the report does not consistently link changes in benthic invertebrate density, composition, or functional groups to observed patterns in fish condition, size structure, or productivity.

	Given that benthic invertebrates represent a primary food source for Arctic charr and play a fundamental role in aquatic food webs, changes in their abundance or composition are directly relevant to understanding fish health responses. For example, observations of lower benthic invertebrate densities or shifts in community structure may influence fish growth, condition, or size distributions through changes in food availability or trophic dynamics. However, these potential linkages are not evaluated within a weight-of-evidence framework. As a result, the current assessment may overlook important ecological connections and mechanistic pathways that are necessary to interpret whether observed fish responses (e.g., changes in condition, size structure, or CPUE) are related to alterations in lower trophic levels, rather than being attributed primarily to natural variability or habitat differences. Text from Section 3.3.6.1 is provided below as an example, however this is consistent throughout the CREMP. *"However, higher taxonomic richness at Camp Lake relative to reference in 2025 triggered a Low Risk Responses under the TARP (Baffinland 2024). Additionally, a Moderate Risk Response was triggered by lower invertebrate densities in Camp Lake over the period of 2023 to 2025, relative to baseline. The assessment of arctic charr health at Camp Lake focused on endpoints related to survival (all fish), energy use (non-YOY life stages), and energy storage (i.e., condition; non-YOY life stages). The consistent and persistent long-term patterns observed when comparing fish health endpoints for Camp Lake and Reference Lake 3 were suggestive of natural variability between to the two lakes, rather than adverse mine-related effects in Camp Lake. However, maximum differences in LFDs for non-YOY and combined YOY/non-YOY fish were outside CES (reference and baseline) in 2024 and 2025, and condition of non-YOY fish was lower in 2025 relative to baseline (but within the CES of ±10%)."*
QIA Request	It is recommended that the CREMP Effects Assessment adopt a more integrated, weight-of-evidence approach that explicitly links benthic invertebrate community metrics with fish population endpoints (as well as water quality, sediment quality and chlorophyll a). In particular, changes in benthic invertebrate density, composition, and functional groups should be evaluated alongside fish condition, size structure, and productivity to assess potential trophic and mechanistic connections. Given the importance of benthic invertebrates as a primary food source for Arctic charr, the assessment should examine whether observed variability in fish health metrics (e.g., condition, length–frequency distributions, and CPUE) may be

	influenced by changes in food availability or shifts in lower trophic levels, rather than being attributed primarily to natural variability or habitat differences.

Comment #	QIA 2025 NWB F&FH#07
References	**Document Name:** Appendix E.9.2 Mary River Project 2025 Core Receiving Environmental Monitoring Program Report **Section:** 4.4.5.2.1 Nearshore Arctic Charr (DL0-01) **Page:** 215-218 of 977
QIA Comment	Comparisons of fish size and condition at Sheardown Lake NW relative to both reference conditions and baseline present conflicting signals that are not fully resolved in the current assessment. Specifically, fish are consistently larger and heavier than those in the reference lake, suggesting a potentially positive effect; however, relative to baseline conditions, fish are smaller, lighter, and in poorer condition, indicating a negative response. On page 216 of 977, the report states, "*Longer-term comparisons between Sheardown Lake NW and Reference Lake 3 show that LFD and body size (fork length and body weight) for non-YOY arctic charr have been almost consistently significantly different throughout mine operations (2015 to 2025; Table 4.7).* ***<u>These differences have generally reflected larger and heavier fish in Sheardown Lake NW relative to reference</u>***." The following paragraph states, "*Relative to the baseline period, LFD for nearshore fish from Sheardown Lake NW have shown consistent significant differences across all operational years, and fish condition was significantly lower throughout the mine-operational period relative to baseline, except in 2023 (Table 4.7).*" While the report acknowledges both patterns, the interpretation emphasizes differences from the reference lake without adequately addressing the decline in condition and size relative to baseline, which represents the most direct pre-development benchmark. This creates uncertainty in the overall conclusion, as the observed patterns may reflect declining fish performance over time despite differences between lakes, rather than simply natural variability. The lack of integration between these two comparison frameworks limits the ability to determine whether observed changes are indicative of mine-related adverse effects, natural differences between systems, or a combination of both. As a result,

	the ecological significance of the observed trends in fish size, weight, and condition remains unclear.
QIA Request	It is recommended that comparisons to reference and baseline conditions be more explicitly integrated within a weight-of-evidence framework to reconcile conflicting signals in fish size and condition. In particular, the assessment should prioritize evaluation of temporal changes relative to baseline to determine whether declines in fish condition and body size have occurred over the mine-operational period. The analysis should examine whether the apparent positive differences relative to the reference lake may reflect inherent differences between systems (e.g., productivity or habitat), rather than improved fish performance, and should assess whether the consistent reductions in condition and size relative to baseline indicate a potential mine-related adverse effect.

Comment #	QIA 2025 NWB F&FH#08
References	**Document Name:** Appendix E.9.2 Mary River Project 2025 Core Receiving Environmental Monitoring Program Report **Section:** 4.4.5.2.1 Nearshore Arctic Charr (DL0-01) **Page:** 243-245 of 977
QIA Comment	The 2025 results for Sheardown Lake SE indicate a notably high proportion of YOY Arctic charr (44%), along with significantly larger YOY fish relative to the reference lake. This indicates strong recruitment, with the high number and relatively large size of YOY fish influencing the overall size structure and LFDs. While the report notes that inclusion of YOY did not change statistical significance, the substantial shift in magnitude of difference (MOD) indicates that recruitment dynamics are a key driver of observed patterns. However, the implications of increased YOY abundance and growth are not fully considered, especially for comparisons to reference conditions and long-term trends. In addition, the discussion of fish health is limited. While YOY and non-YOY condition factors were comparable to reference in 2025, longer-term results indicate variability in size, condition, and LFDs among years. These interannual differences should be more explicitly evaluated to determine whether they reflect natural variability or potential environmental influences affecting growth or energy allocation. Finally, the concluding linkage to benthic invertebrates is not well supported in the preceding discussion. If benthic invertebrate availability is being invoked as a mechanism influencing fish growth or recruitment, relevant observations (e.g.,

	trends in density, biomass, or community composition) should be clearly presented and integrated.
QIA Request	The proponent should consider how YOY recruitment may be affecting fish population results and interpretation of mine related effects. In particular, examining how the high proportion and larger size of YOY contribute to observed size structure patterns could help distinguish recruitment driven variability from changes affecting older fish (e.g., growth or condition). Accounting for these dynamics within the weight-of-evidence framework may improve the ability to determine whether observed patterns reflect natural variability or are potentially associated with mine-related influences.

Comment #	QIA 2025 NWB F&FH#09
References	**Document Name:** Appendix E.9.2 Mary River Project 2025 Core Receiving Environmental Monitoring Program Report **Section: 4.5.6.1 Effects Assessment (DL0-02)** **Page:** 247-249 of 977
QIA Comment	The monitoring report identifies multiple Low Risk Responses in Sheardown Lake SE for water quality parameters that were elevated relative to both reference and baseline normal ranges, including major ions, metals, nutrients, and dissolved aluminum. Increasing trends over the mine operations period were also noted for nitrate, sulphate, molybdenum, and uranium, although concentrations remained below applicable benchmarks in 2025. While the report attributes observed fish health differences primarily to natural variability (e.g., size structure and recruitment), the specific patterns warrant clearer integration with these water quality trends. In 2025, fish health results were characterized by (i) a high proportion of YOY Arctic charr that were larger than those in the reference lake, (ii) generally larger, heavier, and higher-condition fish relative to reference in gill net samples, and (iii) lower condition relative to baseline and a broader size distribution reflecting more small- and mid-sized fish. Longer-term results also show variable differences in size, weight, and condition relative to both reference and baseline, without a consistent directional trend.

	Despite these observations, the assessment does not clearly evaluate how this variability, particularly shifts in size structure and condition relative to baseline, relates to increases in multiple water quality parameters. In addition, although benthic invertebrates are identified as a potential driver of fish productivity, supporting evidence is limited. The report notes higher benthic invertebrate density in 2025 relative to reference, but also indicates no consistent temporal trends in benthic invertebrate endpoints that would explain interannual variability in fish metrics. This weakens the linkage between lower trophic levels and observed fish population patterns. Overall, the basis for excluding potential mine-related influence is not fully understood. Where multiple water quality parameters show increasing trends over the operational period, a more integrated weight-of-evidence discussion explicitly linking water quality, benthic invertebrate results, and fish health endpoints would strengthen the interpretation and improve confidence in the conclusion.
QIA Request	The proponent should integrate water quality trends and associated Low Risk Responses into the weight-of-evidence assessment for Sheardown Lake SE. In particular, the assessment should consider whether increasing trends in parameters such as nitrate, sulphate, molybdenum, uranium, and other elevated constituents have any plausible relationship to observed patterns in benthic invertebrate communities or fish health endpoints. Even where concentrations remain below applicable benchmarks, evaluating these temporal trends alongside biological responses would strengthen the rationale for determining whether observed differences reflect natural variability, habitat conditions, or potential mine-related influences.

Comment #	QIA 2025 NWB F&FH#10
References	**Document Name:** Baffinland Iron Mines 2025 Annual Report to QIA and NWB on Operations, Appendix E.9.2 Core Receiving Environment Monitoring Program Report (CREMP) [260331 - 2025 QIA-NWB Annual Report for Ops - Appendix E.9.2 - 2025 CREMP Report.pdf] **Section:** Appendix F. Fish, Figures F.1 to F.19 **Pages:** pdf 863 to 883 of 977
QIA Comment	Visual interpretation of the length frequency figures in CREMP Appendix F would benefit from the inclusion of information on the range of sampling dates (yyyymmdd). This applies to comparisons of data from lakes sampled in the same year (e.g., Figure. F.1, F.12, F13), and to comparisons of lakes sampled in the current year with their

	earlier baseline data (e.g., Figures F.4 and F.5). It would be particularly useful when comparing electrofishing data from YOY and other fast-growing early age classes where a modest difference in seasonal timing can skew the comparisons.
QIA Request	QIA recommends that captions for figures comparing fish length frequencies among or between years include the range of fish sampling dates for each lake, and for any baseline data presented, to facilitate seasonal and interannual comparisons.

Comment #	QIA 2025 NWB F&FH#11
References	**Document Name:** Appendix E.9.3 Lake Sedimentation Monitoring Program Report **Section:** 3.1.1 Spatial Comparisons for the 2024 to 2025 Ice Cover and Open Water Periods and 3.1.2 Temporal Comparisons for the 2024 to 2025 Ice Cover and Open Water Periods **Page:** 29 of 231, 34-36 of 321
QIA Comment	Sedimentation rates at SHAL-2 (which is identified as a potential Arctic charr spawning and egg incubation habitat) were significantly higher than SHAL-1 and comparable to the profundal depositional zone during the 2025 open water period. This indicates that a sensitive littoral spawning habitat is experiencing sedimentation conditions similar to the deep profundal area of the lake. The report attributes this to a backflow of turbid water during heavy rainfall events, with visible plumes concentrated near SHAL-2. Elevated sedimentation, combined with finer and more organic material, can fill interstitial spaces, impact oxygen supply to eggs, and smother spawning habitat, especially when deposition occurs repeatedly. Section 3.1.2 further states that average sedimentation rates at all littoral areas including SHAL-2 were significantly higher in 2025 relative to 2014. Although sediment accumulation thickness remains below established thresholds, the evidence presented indicates increasing sedimentation during the open water period and exposure of the most sensitive receptor in the study area. These factors are not fully captured by threshold based assessments and represent a potential emerging risk to arctic charr spawning habitat.
QIA Request	Provide a habitat specific, trend based assessment of sedimentation risk at SHAL-2 that includes:

	• A detailed assessment of the ecological implications of elevated sedimentation rates at SHAL-2, specifically for Arctic charr spawning and egg incubation. • Consideration of cumulative and repeated deposition events, rather than single-threshold exceedances. • Proposed site-specific mitigation measures to reduce sediment transport and deposition at SHAL-2. • Development of adaptive management triggers that go beyond sediment thickness thresholds and incorporate rate, frequency, and habitat sensitivity. • Recommendations for more robust monitoring approaches (e.g. targeted event-based sampling, or in-situ turbidity monitoring).

Comment #	QIA 2025 NWB F&FH#12
References	**Document Name:** Baffinland Iron Mines 2025 Annual Report to QIA and NWB for Operations, Appendix E.9.3 Lake Sedimentation Monitoring Program Report [NWB Registry: 260331 - 2025 QIA-NWB Annual Report for Ops - Appendix E.9.3 - Lake Sedimentation Monitoring.pdf]. **Section:** 4 Conclusions **Page:** 37 (pdf p. 46 of 231) **Document Name:** Baffinland Iron Mines 2024 Annual Report to QIA and NWB on Operations Intervenor Comments. [NWB registry file: 251002 2AM-MRY2540 2024 Annual Report for Operations - Intervenor Comments BIMC Response Letter Final-ILAE.pdf] **Section:** Attachment 1, Table A.1: Status of QIA Comments on Baffinland's 2024 QIA-NWB Annual Report for Operations, Response 46, QIA FFH#12 **Page:** 23 of 77
QIA Comment	In its response to QIA comments on the 2024 QIA-NWB Annual Report on Operations (ARO), Baffinland objected to QIA reiterating concerns about the validity of the annual sediment accumulation thresholds (Attachment 1, Table A1, p, 23). These thresholds are used in the AEMP to trigger mitigation and management responses related to

	Arctic char egg survival. In the 2025 QIA-NWB ARO, Baffinland refers to these thresholds frequently, including the following example: "*Annual sediment accumulation thickness estimates for Sheardown Lake NW, based on the combined ice cover and open water conditions during 2024/2025, were within the range reported for Arctic lakes of comparable size and/or depth and were below the FEIS prediction of 1 mm/year associated with negligible effects on direct mortality of arctic charr and arctic charr eggs*." (2025 QIA-NWB ARO, p. 37) This wording may imply that a sediment accumulation rate of 1 mm/year has been shown to have negligible effects on Arctic char egg survival. However, this High Action response threshold is not based on data from Arctic char eggs or project-generated sediment. Rather, it reflects professional judgment extrapolated from studies on other species and different sediment types (Morgan et al. 1983; Fudge and Bodaly 1984; Berry et al. 2011). The Low (0.15 mm/year), Moderate (0.54 mm/year), and High (1 mm/year) response thresholds have not been validated for Arctic char. Placing undue reliance on these thresholds risks either underestimating or overestimating the effects of changes in sediment deposition. Given this uncertainty, effects on Arctic char and their eggs should not be characterized as "*associated with negligible effects on direct mortality of Arctic char and Arctic char eggs*" unless the basis for that characterization is clearly qualified. Otherwise, readers, including regulators, may give the thresholds more weight than is warranted. This is important given the increasing trend in sediment deposition at Sheardown Lake NW and Baffinland's plans to increase ore production associated with the Steensby Component, which may increase dust and sediment mobilization sufficiently to test these thresholds. In its response to the 2024 response to QIA comments, Baffinland stated that it will provide an updated review of sedimentation effects on fish egg survival in the 2025/2026 report. It expects the proposed changes in activities and infrastructure to decrease dust and sediment mobilization, and has no plans to conduct targeted studies to assess the validity of these thresholds for Arctic char. <u>References:</u>

	Berry, W.J., N.I Rubinstein, E.K. Hinchey, G. Klein-MacPhee, and D.G. Clarke. 2011. Assessment of dredging-induced sedimentation effects on winter flounder (*Pseudopleuronectes americanus*) hatching success: results of laboratory investigations. Proceedings of the Western Dredging Association Technical Conference and Texas A&M Dredging Seminar, Nashville, Tennessee, June 5-8, 2011. pp. 47 – 57. Fudge, R.J.P., and R.A. Bodaly. 1984. Post-impoundment winter sedimentation and survival of lake whitefish (*Coregonus clupeaformis*) eggs in Southern Indian Lake, Manitoba. Canadian Journal of Fisheries and Aquatic Sciences 41: 118 – 125. Morgan, R.P, V.J. Rasin and L.A. Noe. 1983. Sediment effects on eggs and larvae of striped bass and white perch. Transactions of the American Fisheries Society 112: 220 – 224.
QIA Request	QIA recommends Baffinland take a precautionary approach to sediment deposition, ensure readers are aware that the sediment thresholds for Arctic char have not been validated, and complete studies to validate sediment thresholds for Arctic char egg survival prior to any planned production increase.

Comment #	QIA 2025 NWB F&FH#13
References	**Document Name:** Appendix E.9.3 Lake Sedimentation Monitoring Program Report **Section:** 3.4 Benthic Invertebrate Community Relationships with Sedimentation Rate and Thickness and the Potential Effects to Arctic Charr **Page:** 43-45 of 231
QIA Comment	The report identifies statistically significant relationships between benthic community composition and sedimentation, including a strong negative correlation between Chironomidae and sedimentation (rate and accumulation), and a positive correlation with Ostracoda. Despite these findings, the report concludes that there are no meaningful ecological effects based primarily on the absence of relationships with density, richness, or evenness metrics. Shifts in benthic community composition are early indicators of habitat stress and may precede detectable changes in aggregate diversity indices. The observed trend (decreasing Chironomidae and increasing Ostracoda with increasing sedimentation), combined with elevated sedimentation at SHAL-2 and increasing trends over time, suggests a potential early biological response to

	sedimentation rates and accumulation. Focusing solely on broad community metrics (e.g., richness, evenness) may hide important changes in habitat quality and food availability for Arctic charr. Overall, the system may currently meet compliance thresholds; however, multiple lines of evidence, including sedimentation trends, exposure of sensitive littoral habitat, and taxa-specific benthic responses, indicate a developing pressure that could become biologically significant if it persists.
QIA Request	To ensure impacts are adequately understood, the proponent should: • Re-evaluate the ecological interpretation of benthic results to explicitly consider taxa-specific responses (particularly Chironomidae and Ostracoda) as potential indicators of sedimentation-related habitat change, rather than relying primarily on community-level indices. • Identify thresholds, triggers, or early warning indicators based on benthic composition (e.g., declines in Chironomidae dominance), to support proactive management before effects are reflected in broad diversity metrics.