TECHNICAL MEMORANDUM

Date:	**May 28, 2026**
To:	**Joseph B. Fobister, Lead Negotiator (Grassy Narrows Land Protection Team), David Sone (ANA Advisor), Jackie Esmonde (Legal Counsel) and Sydney Lang (Legal Counsel) of the ANA Advisory Team**
From:	**Fraser Riddolls (B.Sc., B.I.T.) and Emily MacMillan (MLWS, B.I.T, AAg)**
Subject:	**Additional Technical Review Comments on Fisheries, Aquatics, Migratory Birds, and HHERA - Great Bear Project Impact Statement**

Introduction

Source Environmental Associates Inc. (Source) was retained by Asubpeeschoseewagong Netum Anishinabek (ANA) to review the Great Bear Project Impact Statement submitted in support of the proposed Great Bear Gold Project.

This memorandum provides additional technical review comments from Source on fisheries and aquatic resources, fish habitat offsetting and compensation, migratory bird-related issues associated with proposed offsetting measures and selected human health and ecological risk assessment (HHERA) topics relevant to aquatic resources, traditional foods, and downstream receptors.

The comments are intended to identify technical deficiencies, information gaps, uncertainties, and areas where additional assessment or clarification may be required before the potential effects of the Project can be adequately understood from ANA's review perspective. These comments supplement Source's broader technical review memorandum and focus on the following materials:

- Section 8 – Analysis of Changes to Fish and Fish Habitat;
- Section 9 – Analysis of Changes to Migratory Birds;
- Section 15 – Cumulative Effects Assessment;
- Appendix L-1 – Aquatic Resources Baseline Report;
- Appendix L-2 – Draft Fisheries Act Offset Plan and MDMER Schedule 2 Fish Habitat Compensation Plan
- Appendix N-1 – Human Health and Ecological Risk Assessment (HHERA);
- Appendix T – Methylmercury Bioaccumulation Study; and
- related water quality, water balance, and geochemistry materials where they inform potential effects to aquatic resources, fish habitat, traditional foods, and downstream receiving environments.

Technical Comments on HHERA and Mercury Bioaccumulation

1. No Cumulative Effects Assessment for Most Endpoints

Section 15 presents the Cumulative Effects Assessment (CEA) for the Great Bear Project. Groundwater, surface water flows and levels, water quality, and fish and fish habitat were identified as valued components, but a CEA was not completed for these endpoints. The rationale generally states that effects from other projects are either captured in baseline conditions, do not overlap spatially or temporally with the Project, or are fully addressed through mitigation or offsetting.

For groundwater, a CEA was not completed on the basis that the potential changes identified for existing or future projects (Great Bear AEX and local aggregate operations) will not overlap temporally or spatially with the Project or are already considered in the assessment of changes in groundwater from the Project. For surface water flows and levels, a CEA was also not completed on the basis that baseline hydrology measurements considered potential effects from other existing projects and were included in surface water modelling. Notably, other historical or current mining operations upstream of the project such as Red Lake Operations, Madsen Mine, and forestry operations were not considered in the assessment of potential cumulative effects to groundwater or surface water flows. These operations do however have the potential to impact groundwater and surface water flows through changes in the upstream hydrological regime and should therefore be assessed.

For water quality, a CEA was not completed on the basis that existing or future project effects would not overlap with the project temporally or spatially or potential cumulative effects are captured through the use of baseline water quality in Project modelling. For upstream mining projects, the assessment concludes that they must meet effluent quality requirements and that their impact to regional water quality is captured in the baseline water quality for the Chukini River that was used in the development of the Great Bear water quality model. There are nearly 20 other projects within the watershed upstream from Grassy Narrows including high-risk abandoned mines, operating mines, an operating pulp mill, and many planned mines in various stages of advancement. Figures illustrating the location of Grassy Narrows relative to the Great Bear Project and other mines in the area are included in Appendix A. Many of the current projects are not reflected in the Chukuni River baseline because they are located on other tributaries of the English River. However, their contaminant loads will combine with contaminants from Great Bear before reaching Grassy Narrows. The future emissions from these projects are generally not reflected in current baseline monitoring and are not considered in the CEA.

Finally, for fish and fish habitat a CEA was also not completed based on the conclusion that there are no residual effects from the project on fish and fish habitat since all residual effects on fish habitat predicted will be fully mitigated by the Fish Habitat and Offsetting Compensation Plan and proposed mitigation measures. The statement that there are no expected residual effects to fish

or will be fully mitigated is incorrect. The assessment of effects of fish and fish habitat presented in Appendix L-2 omits key sources of contamination and is incomplete, and the Fish Habitat and Offsetting Compensation Plan is poorly planned. Therefore, it is incorrect to state that a CEA is not needed based on the rationale presented.

The Project proposes treated effluent discharge to the Chukuni River, closure water-taking from the Chukuni River, seepage and passive discharge pathways to Dixie Creek and unnamed tributaries, and downstream hydrologic connection to Pakwash Lake. For these receptors, the cumulative effects screening should be based on hydrologic connectivity and shared downstream receptors, not only distance from the Project footprint or whether existing effects are reflected in baseline data. A CEA should also be completed for the English River at Grassy Narrows which receives water from the Chukuni River, Lac Seul, the Wabigoon River, and other smaller tributaries. **No CEA was completed on any valued components related to water quality, quantity, or fish and fish habitat, resulting in a large gap in the CEA for the Great Bear Project.**

The assessment should characterize the magnitude of each potential cumulative effect identified rather than broadly stating that it has already been accounted for within baseline modelling or offsetting measures. At minimum, the study should evaluate whether Great Bear-related effluent discharge, closure water-taking, seepage, passive discharge, groundwater drawdown, baseflow reductions, and fish habitat effects could combine with other watershed influences during construction, operations, closure, and post-closure. Baseline water quality and hydrology may reflect some historical or existing influences, but baseline conditions do not replace an assessment of how additional Great Bear loadings and flow changes could interact with other past, present, and reasonably foreseeable activities.

2. Cumulative Effects Scenario Not Assessed within the Human Health and Ecological Risk Assessment (HHERA)

Section 3.4 of the Human Health and Ecological Risk Assessment Report (Appendix N-1), states the following:

> "*In Section 15 of the Impact Statement (Cumulative Effects Assessment) the cumulative effects assessments for air quality and water quality indicated that, as the potential changes identified for other existing or reasonably foreseeable projects will not overlap spatially or temporally with the Project, or were already included in the assessment of changes to air quality and water quality from the Project, a cumulative effects assessment is not required. Therefore, the cumulative effects scenario was not assessed within the HHERA*."

Other comments within this memorandum (please refer to the following comments in *Review of the Great Bear Project Impact Statement – Technical Review Comments* document: 1 – *No Cumulative Effects Assessment for Most Endpoints*, 8 – *Surface Water Quality Modelling Does Not Capture all Project-related Effects*, 9 – *WAD Cyanide in Receiving Environment Not*

Addressed, and 10 –*Insufficient Monitoring Downgradient of Tailings Management Facility* for further details) have indicated that the absence of CEAs is a gap in the Impact Assessment and therefore the absence of a CEA for the HHERA is also a gap. The HHERA should be revised to account for cumulative effects. Cumulative effects can have pronounced impacts on downstream environments, both in terms of human and ecological health. Mine activities could contribute and amplify impacts that have already been established by past and current industries within the area, which could have ramifications for human and ecological health risks.

3. Inadequate Evaluation of Parameters of Potential Concern (POPCs) in Sediment for the HHERA

Section 3.7.3 of the HHREA Report (Appendix N-1) states that sediment concentrations are not predicted to change significantly given that predicted surface water quality concentrations are within baseline limits during construction and operations phases. This rationale was utilized as an explanation for the Project's decision to forgo predictive modelling, guideline screening (human health), and exposure evaluation for both human and ecological assessments as it relates to sediment. Given that certain monitoring stations and predictive nodes are located upstream of some mine components (e.g., node DIX-03 is located upstream of the Viggo Management Facility (VMF), therefore not entirely capturing all mine-related effects heading downstream), predicted surface water quality concentrations may not fully represent all mine-related impacts, which could be reflected in sediment quality predictions. Additionally, the deposition of fugitive dust from mining activities may also impact sediment concentrations. Overall, there is potential for Project activities to have direct and indirect effects on both surface water and sediment quality, which has ramifications for both human and ecological health.

4. Omission of Groundwater from the HHERA

In section 4.1.4 of the HHERA (Appendix N-1), groundwater is not considered a pathway for risk assessment based upon the assumption that Indigenous residents would only have access to groundwater via groundwater wells. Location data was only obtained from the Well Water Information System, which identified all groundwater wells being located outside of the LSA and RSA which could be potentially affected by the Project. This approach potentially underestimates groundwater impacts on human health. There is potential for non-registered drinking water users within the LSA and RSA. In addition, groundwater pathways into surface waterbodies could exist within the LSA and RSA. Neither of these possibilities appear to have been considered when omitting groundwater from the HHERA.

The HHERA should be revised to consider all potential pathways through which groundwater could interact with Indigenous users in the receiving environment. This should include a comprehensive evaluation of direct and indirect exposure routes, as well as culturally relevant land and water use practices that may influence exposure and risk.

5. Inadequate Sampling and Baseline Analysis for Parameters in Soil and Traditional Foods Sampling Program

As noted in both Attachment A and Sub-attachment A2 in the HHERA (Appendix N-1), sample sizes for various parameters the Soil and Traditional Foods Sampling Program were inadequate for establishing baseline studies. Specific deficiencies were noted for:

- Wild game (2 grouse species samples, with no duplicates)
- Vegetation (6 berry samples with 1 duplicate), and;
- Wild Rice (1 sample)

Even though it was noted that both wild game and berry sample sizes were insufficient to determine exposure point concentrations (EPCs) for baseline conditions (refer to pages 5 and 6 of Attachment A: Baseline Environmental Data and Bioaccumulation Factors in Appendix N-1 for additional details), only 15 samples were originally targeted for berries, which is a poor sample size to establish a baseline representation. A rationale was not provided for the berry sample target size. Additionally, several other wild game species could have been chosen for analysis based on a proposed target, including rabbit, beaver, waterfowl, and moose.

The single sample of Wild Rice was used for its baseline exposure point concentration determination, which does not constitute a baseline for Wild Rice. A single sample size can not be used as an accurate representation of the species, especially given its cultural and ecological significance in the area. Impacts to Wild Rice from the mine could occur due to increased sulphate loading in the receiving environment. It is recommended that additional baseline samples on Wild Rice be collected to better understand its exposure point concentration and bioaccumulation factor.

6. Concerns Regarding the Current State of Eutrophication in Existing Waterbodies/Watercourses and the Potential for Project Inputs (Effluent Discharge) to Increase Methylmercury Concentration

As stated in Section 1.5 of the *Great Bear Project Methylmercury Bioaccumulation Study* (Appendix T), natural aquatic environments contain mercury (typically in the inorganic form), some of which is attributed to industrial emission sources, particularly coal-fired power plants. As described in the study, inorganic mercury can be converted into methylmercury via transformation by sulphate-reducing bacteria (SRB) in anoxic environments. Eutrophic environments, such as those in the Project area (PA), are particularly prone to anoxic conditions. As methylmercury bioaccumulates within the environment (e.g. throughout the trophic levels/food chain), this leaves potential for methylmercury to become a risk for local Indigenous communities who rely on downstream environments for drinking water and traditional hunting and fishing.

Technical Comments on Fisheries and Aquatics

7. Aquatic Baseline Data Deficiencies

Appendix L-1, Fisheries Resources Baseline Report, provides the fish, surface water, sediment, primary productivity, and benthic invertebrate data used to characterize fisheries baseline conditions. Table 2-1 summarizes the sampling locations and sampling frequency for each of these endpoints. Based on the information provided, sediment and benthic invertebrate sampling appear insufficient to adequately characterize baseline conditions. For example, many sites were sampled only once, while very few locations (e.g., Chukuni Lake and Genesse Lake) were sampled more than twice.

The limited temporal coverage for sediment and benthic invertebrate sampling suggests that the baseline program may not have adequately captured the natural spatial and temporal variability within these communities. This introduces uncertainty regarding the representativeness of the baseline dataset and may limit the ability to detect or attribute future Project-related effects.

It is also noted that lower trophic data was not collected at the Primary receivers (Chukuni River and Dixie Creek).

In addition, no baseline data collected prior to the commencement of Project exploration activities in 2017 appears to have been provided. As a result, it is unclear whether the current dataset reflects true pre-development baseline conditions, or whether it may already incorporate influences associated with Project-related exploration activities.

8. Potential Effects from PAG Stockpiles on Fish and Fish Habitat Not Adequately Assessed

The draft *Fisheries Act Paragraph 35(2)(b) Authorization, Offset Plan, and MDMER Schedule 2 Fish Habitat Compensation Plan* (Appendix L-2) identifies several Project components that may affect fish and fish habitat, including mining activities, stockpiles, aggregate supply areas, water management infrastructure, roads and pipeline crossings, and the tailings management facility.

Section 5.2 of Appendix L-2 identifies stockpiles as including the overburden stockpiles, Mine Rock Stockpile (MRS), low-grade ore stockpile (LGO), and run-of-mine ore pad (ROM). However, Appendix L-2 does not distinguish between non-potentially acid generating (non-PAG) overburden stockpiles and stockpiles containing potentially acid generating (PAG) material, despite the Geochemistry Summary Report (Appendix J) indicating that much of the material stored within the MRS, LGO, and ROM is anticipated to be PAG.

This omission is significant because PAG rock has the potential to generate acid rock drainage and metal leaching, which can adversely affect surface water quality and aquatic ecosystems through the release of acidity, sulphate, and dissolved metals. These releases can contribute to both chronic and acute toxicity in aquatic organisms, including fish and benthic invertebrates, and may degrade fish habitat downstream of stockpile seepage collection and discharge points.

Despite these recognized risks, Appendix L-2 does not evaluate the potential indirect effects of PAG stockpiles on fish and fish habitat, nor does it assess how long-term seepage, contact water management failures, or water treatment performance could influence the magnitude and duration of fisheries effects over the life of the Project and post-closure period. Instead, PAG stockpiles appear to be assessed in the same manner as non-PAG overburden stockpiles, without justification.

As a result, the effects assessment underlying the proposed Fisheries Act Authorization and fish habitat offsetting plan is incomplete. Without a clear assessment of the potential indirect impacts associated with PAG material storage, it is not possible to determine whether the predicted residual effects to fish and fish habitat have been fully characterized or whether the proposed offsetting measures are sufficient to achieve no net loss of fish habitat function.

9. Potential Effects from PAG Tailings on Fish and Fish Habitat Not Adequately Assessed

This comment is a follow-up to the previous comment regarding omissions in Appendix L-2 related to potentially acid generating (PAG) materials and indirect effects to fish and fish habitat.

Section 5.6 of Appendix L-2 outlines the anticipated direct and indirect effects of the Tailings Management Facility (TMF) on fish and fish habitat. The section identifies direct habitat losses associated with the overprinting of the upper reaches of Unnamed Watercourse 1, including the entirety of Unnamed Waterbody 4. It also identifies runoff and seepage from the TMF as potential indirect effects to fish and fish habitat.

However, Section 5.6 does not appear to assess the Viggo Management Facility (VMF), despite the VMF being a distinct project component with different tailings characteristics and potentially different environmental risks. According to the Project description, the VMF will consist of a repurposed portion of the mined-out Viggo pit and will be used to store approximately 3.3 Mt of concentrate tailings, while the TMF will store desulphurized tailings. This distinction is important because the concentrate tailings proposed for storage within the VMF are anticipated to be potentially acid generating (PAG) and therefore may present a substantially greater risk of acid rock drainage and metal leaching than the non-PAG desulphurized tailings stored within the TMF.

Despite these risks, Appendix L-2 does not appear to include a dedicated assessment of the VMF's potential indirect effects on fish and fish habitat, including potential impacts associated with seepage, long-term water quality degradation, containment failure scenarios, closure conditions, or post-closure water management requirements. The omission of the VMF from the fisheries effects assessment is particularly concerning given the long-term environmental liabilities commonly associated with PAG tailings storage.

As a result, the effects assessment in Appendix L-2 appears to be incomplete. Without a clear assessment of the VMF and its associated PAG tailings, the magnitude, duration, and geographic extent of potential indirect effects to fish and fish habitat may have been underestimated, and the adequacy of the proposed offsetting measures cannot be fully evaluated.

10. Long-Term Suitability of East Pond as an Offsetting Measure

Figure 1-2 of Appendix L-2 shows the proposed location of East Pond relative to surrounding mine infrastructure. Based on the figure, East Pond appears to be located approximately 100–150 metres from the Mine Rock Stockpile (MRS) and other active mining areas. The MRS is proposed to store potentially acid generating (PAG) waste rock throughout operations and into the closure period. Although Section 8.1.2.1 states that seepage from the MRS is not anticipated to enter East Pond, Appendix L-2 provides limited supporting evidence for this conclusion. Even under normal operating conditions, PAG seepage can contribute metals and other contaminants to nearby surface waters through groundwater movement, runoff, atmospheric deposition, or snowmelt transport pathways. In the event of seepage management failure, liner degradation, extreme precipitation events, or closure-related performance issues, East Pond could be vulnerable to water quality degradation that may impair its long-term suitability as productive fish habitat.

In addition to potential seepage concerns, the close proximity of East Pond to active mining infrastructure raises concerns regarding other operational disturbances, including blasting vibrations, noise, dust generation, light disturbance, and ongoing vehicle activity. These factors may adversely affect fish habitat quality of the offsetting area during mine operations. Appendix L-2 does not appear to evaluate how these operational stressors could affect the ecological success of East Pond as a fish habitat offsetting measure.

As a result, there is insufficient information to conclude that East Pond will remain functionally isolated from mining-related impacts or provide self-sustaining fish habitat over the long term. Additional water quality modelling, and long-term habitat performance analysis should therefore be provided to demonstrate that the proposed offsetting habitat can remain effective throughout operations and post-closure conditions.

11. Absence of Fish Salvage Plan

Appendix L-2 does not clearly explain how fish salvage operations would be conducted if offsetting habitats are not yet available, biologically functional, or capable of supporting transferred fish populations at the time salvage becomes necessary. This is particularly important because the document indicates that offsetting habitats are intended to be populated sequentially, beginning with forage and bait fish species, followed later by predatory species as ecosystem function develops over time. However, the document does not explain how fish salvage would be managed if multiple trophic levels or species assemblages are encountered simultaneously during dewatering or construction activities. For example, it is unclear whether temporary holding facilities, alternative receiving habitats, phased salvage protocols, hatchery support, or contingency relocation sites have been identified if offsetting habitats are not yet ecologically suitable.

Collectively, these omissions indicate that a comprehensive fish salvage plan has not yet been developed or disclosed as part of the current Fisheries Act authorization and offsetting review materials. This represents a significant gap in the mitigation framework for the Project.

A detailed fish salvage and relocation plan should therefore be developed prior to construction and should include, at minimum:

- species-specific salvage protocols;
- contingency measures if offsetting habitats are unavailable or not yet functional;
- procedures for handling fish from multiple trophic levels;
- temporary holding and transport methods;
- criteria for determining habitat suitability prior to fish release;
- mortality monitoring and reporting requirements; and
- adaptive management measures in the event of salvage failure or elevated mortality.

Without this information, it is not possible to adequately assess whether fish mortality and disruption to fish populations during construction can be effectively minimized.

12. Flow Reductions in Dixie Creek

Section 5.4 of Appendix L-2 discusses the potential indirect effects of Project-related water management activities on fish and fish habitat. The section uses a 10% increase or reduction in stream flows as an indicator of potential Harmful Alteration, Disruption or Destruction of Fish Habitat (HADD). Table 5-1 indicates that portions of the Dixie Creek mainstem are anticipated to experience flow reductions exceeding 10% during both Operations and Closure. Despite exceeding the threshold identified by the Proponent, these reductions are not characterized as HADD within the assessment.

Appendix L-2 states that these flow reductions are not expected to constitute HADD because the resident fish population is considered "*resilient to changes in environmental conditions and accustomed to lower water quality."* This rationale does not provide an adequate basis for dismissing potential HADD. Natural environmental variability and existing baseline stressors within Dixie Creek are not equivalent to sustained, Project-induced hydrological alterations at the watershed scale. The fact that resident fish populations may currently tolerate naturally variable or degraded conditions does not demonstrate that additional flow reductions associated with the Project would avoid adverse effects.

Furthermore, Appendix L-2 does not appear to adequately evaluate how Project-related flow reductions may interact with other reasonably foreseeable stressors, including:

- climate change-related reductions in summer baseflow and increased drought frequency;
- cumulative effects from other regional development activities;
- future exploration or mine expansion activities; and

- long-term closure and post-closure hydrological uncertainty.

The use of a quantitative threshold for identifying potential HADD should be applied consistently within the assessment. Where predicted flow reductions exceed the Proponent's own significance indicator, the burden should be on the Proponent to provide robust, site-specific evidence demonstrating why fish habitat function would not be adversely affected. Appendix L-2 does not appear to provide sufficient supporting analysis to justify departing from the established threshold in the case of Dixie Creek.

The predicted flow reductions to Dixie Creek should be reconsidered as a potential HADD within Appendix L-2.

Technical Comments on Migratory Birds

13. Residual Effects Ranking Rationale – Underestimating the Significance of Attribute Impacts

Section 9.2.6 of Changes to Migratory Birds Report (Section 9) states that residual effects for migratory birds can be characterized by the following attributes: magnitude, geographic extent, duration, frequency, reversibility, and timing. They are then ranked from Level 1 to 3 depending on their level of impact significance/severity (Level 1 – low, Level 3 – high). The same is applied to the additional characterization variables: ecological and/or social context – where Level 1 states that a valued component (in this case migratory birds) can support predicted change with mitigation measures, Level 2 requires special measures to support predicted change, and Level 3 is unable to support predicted change even with special measures. Should either of the characterizations (attributes and/or ecological/social context) achieve a Level 1, the entire residual effect is deemed as insignificant. This could underestimate the residual effects of the Project as this approach results in the omission of impacts that are classified as Level 3 ('high').

There is no indication that the above-listed attributes are weighted by a factor of impact significance. It appears that all of the attributes are weighted equally, which is not reflective of their respective real-world ramifications. For example, a Level 3 frequency indicates that an effect will occur frequently or continuously, while a Level 3 magnitude indicates that a measurable effect can not be negated with mitigation and offsets and/or could affect the persistence of avian populations. A comparison of these Level 3 attribute impacts reveals distinct differences regarding their factored weight of significance. The measurement of frequency is solely temporal and finite in nature, while magnitude extends beyond both temporal and spatial measures. A Level 3 magnitude could alter avian population dynamics in the long-term, potentially hindering certain species succession indefinitely. In this case, a Level 3 magnitude effect should be treated with greater weight than a Level 3 frequency effect. This dissonance could further contribute to an underestimation of the assessed residual effects to migratory birds. It is recommended in this

case that a residual effect should be considered if either of the attributes or ecological/social characteristic factors is considered Level 3.

14. Induced Effects on Migratory Bird Habitat Abundance as a Result of Proposed Fish Offsetting and Compensation Measures

In Section 9.5 *Identification of Potential Effects* of the *Great Bear Project Analysis of Changes to Migratory Birds Report* (Section 9), it is stated that two Project-related induced effects (Dixie Creek pond complex (outside of the Project Area (PA)) and the East pond fish habitat (within the PA) offsetting and compensation areas) will increase available habitat for some birds and no residual effect on habitat abundance is expected, resulting in induced effects not being carried forward to determining significance. There is no evidence to suggest that offsetting designs considered migratory birds. For example, there is no definitive explanation regarding which bird species would benefit from a potential increase in habitat and which habitat type(s) would be increased as a result. Furthermore, there is no indicated method to determine the suitability or success of these proposed habitats for relevant species, therefore the expectation of no residual effects on habitat abundance and quality can not be adequately determined. While an increase in constructed habitats may provide compensation for those lost to Project activities, it may take considerable time for them to serve as functional habitats for migratory birds. This could potentially result in the net loss of migratory bird habitat due to the Project, which was not assessed in this report.

Table 9.7-2 of the *Great Bear Project Analysis of Changes to Migratory Birds Report* indicates that over 20% of total regional waterfowl nesting, stopover, and staging areas is located within the PA; the report does not indicate which percentage of this area would be affected by the Project or compensated through construction of offsetting measures. Given the importance of waterfowl species and their relative habitats (including Wild Rice stands) for local Indigenous communities in terms of cultural significance, livelihood, and traditional hunting activities, only evaluating residual effects based on habitat abundance without further details regarding habitat composition could be inadequate to determine no residual effects and forgo a determination of significance.

15. Future Mineral Exploration Reflected in Cumulative Effects Assessment but not Analysis of Changes to Migratory Birds Report

Section 15.8: *Migratory Birds* of the *Great Bear Project Cumulative Effects Assessment Report* states that “future mineral exploration may occur in the Local Study Area (LSA) and Regional Study Area (RSA) in the future and may occur concurrently with the Project”. Future exploration disturbances are not accounted for in the Project’s assessment of potential impacts and residual effects in the *Great Bear Project Analysis of Changes to Migratory Birds Report* (Section 9). Without the evaluation of these disturbances being included in the assessment of characterized residual effects (attributes and ecological/social context) detailed in the *Analysis of Changes to Migratory Birds Report* (Section 9), the total impact of effects (attributes) may be underestimated while the potential for species to support and/or accommodate change (ecological/social context) may be overestimated.

Closing Remarks

Thank you for the opportunity to provide this technical review of the Great Bear Project Impact Statement.

The comments and recommendations presented in this memorandum are intended to support ANA's review of the proposed project and assist in identifying areas where additional technical work, clarification, mitigation, or regulatory consideration may be required.

We remain available to discuss the findings presented herein and to provide additional clarification or technical support as required.

Yours truly,

Source Environmental Associates Inc.

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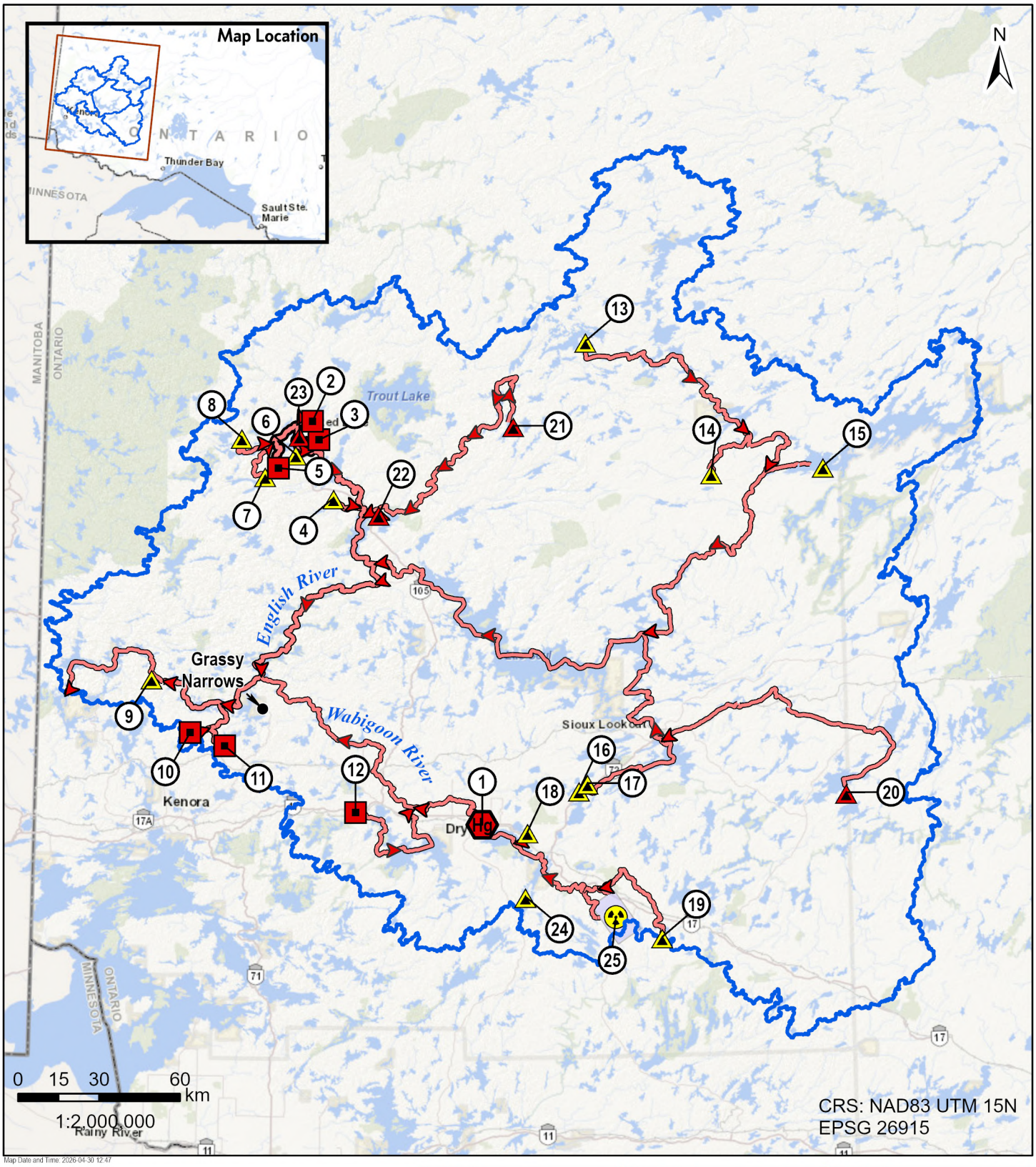
Appendix A : Potential Contaminant Sources and Flows in the English and Wabigoon River System

Potential Contaminant Sources and Flows in English & Wabigoon River System Watershed



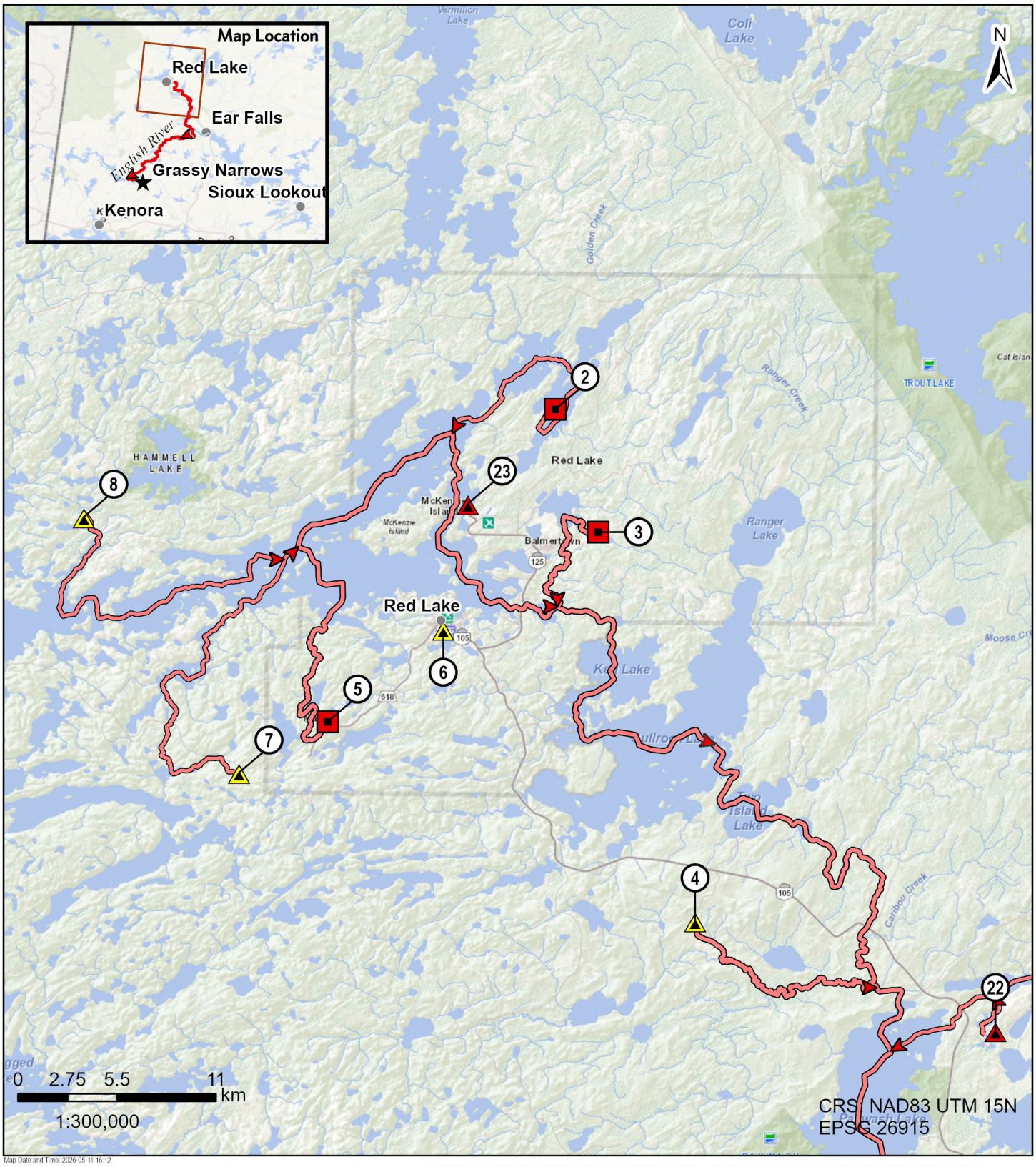
- Mercury Source
- Mine - Active & Restarting
- Mine - Advanced Exploration
- Mine - Abandoned, High Concern
- Nuclear Waste Disposal Site (proposed)
- Water Flow

# on Map	Project
1	Dryden Pulp Mill
2	Bateman Gold Project (Evolution)
3	Balmertown Gold Mine restart (Evolution)
4	Great Bear Gold Mine proposed (Kinross)
5	Madsen Gold Mine restart (WRLG)
6	Hasaga Gold (Equinox)
7	West Madsen Gold Mine (GoldOn)
8	Rowan Gold (West Red Lake Mines)
9	Separation Rapids Lithium (Avalon)

# on Map	Project
10	Forgotten Lake Quarry (Nelson Granite)
11	Nelson Granite Red Deer Lake Quarry
12	Nelson Granite Vermillion Bay Quarry
13	Springpole Gold (First Mining)
14	Root Lake Lithium (Green Tech Minerals)
15	Western Lk St Joseph Iron (Rockex)
16	Goldlund Gold (Nexgold)
17	Mavis Lake Lithium (Critical Resources)
18	Goliath Gold (Nexgold)

# on Map	Project
19	Raleigh Lake Lithum (Int'l Lithium)
20	Mattabi Copper Mine (abandoned)
21	South Bay Zinc Mine (abandoned)
22	Griffith Iron Mine (abandoned)
23	Cocheneur Gold Mine (Evolution)
24	Dryden Gold Project
25	NWMO Proposed Nuclear Waste Repository

Potential Contaminant Sources and Flows in Red Lake Area



- Mine - Active & Restarting
- Mine - Advanced Exploration
- Mine - Abandoned, High Concern
- Water Flow

# on Map	Project
2	Bateman Gold Project (Evolution)
3	Balmertown Gold Mine restart (Evolution)
4	Great Bear Gold Mine proposed (Kinross)
5	Madsen Gold Mine restart (WRLG)
6	Hasaga Gold (Equinox)

# on Map	Project
7	West Madsen Gold Mine (GoldOn)
8	Rowan Gold (West Red Lake Mines)
22	Griffith Iron Mine (abandoned)
23	Cocheneur Gold Mine (Evolution)