

Enclosure 1: Provincial Authority Advice Record – Great Bear Gold Project Impact Statement (Batch 1, 2 and 3)

Ministry or Organization Contact Information

Submission Date	
Ministry/Organization	Ministry of the Environment, Conservation and Parks
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1. Taking into account the Project Context and Targeted Questions for Batch 2 and 3 that IAAC has shared, the entire Impact Statement submission (Batch 1, 2 and 3) and provide views for IAAC's consideration in the analysis of the Project's effects and preparation of the Impact Assessment Report (Table 1) or identify potential outstanding information requirements in the Impact Statement (Table 2). You may also wish to provide IAAC with advice to the proponent to support regulatory efficiency (Table 3). Tables 1, 2 and 3 (attached) provide additional guidance to support your review.
2. As per the Cooperation Plan¹, consider all the mechanisms in place to manage potential federal effects. If your ministry is responsible for, or aware of, any relevant provincial regulatory, policy or other instruments and measures (i.e. complementary measures²) that may help manage the project's potential adverse federal effects, please specify and describe applicability to the project and any known limitations to managing effects.

**Name of Ministry / Organization
Responder**

Title of Responder

Date

¹ <https://iaac-aeic.gc.ca/050/evaluations/document/158179>

² Complementary measures are additional authorities of government officials or programs that may be used to mitigate effects that may be beyond the care and control of the proponent. They can be taken into account in decision-making.

Table 1. Views to Inform the Impact Assessment

Table 1 can be used to provide views for IAAC’s consideration in the analysis of the Project’s federal effects^{3,4,5} and preparation of the Impact Assessment Report, considering your ministry’s local knowledge and regulatory expertise. Reviewers should consider project context (see Enclosure 2 for more detail on the key issues and targeted questions) and are encouraged to provide solution-oriented advice even where potential gaps in information are observed.

Comment ID	Reference to Impact Statement	Views to Inform the Impact Assessment
<i>Please identify comments by ministry and number. e.g.: MNR-01</i>	<i>Identify the specific section of the Impact Statement to which your comment applies.</i>	<i>Provide views and information for IAAC’s consideration in the analysis of adverse federal effects, such as</i> <i>whether the information is technically appropriate to support the conclusions presented, and the proposed mitigation measures are suitable to manage effects, considering regional context;</i> <i>sources of uncertainty in the proponent’s analysis that may substantially weaken conclusions, if any;</i> <i>suggestions for provincial operational guidance or standards, including other mitigation and monitoring measures, that are well understood to be effective in the region;</i> <i>relevant provincial legislative frameworks such as licensing, permitting, policies or programs that may provide another means to address adverse effects (describe the environmental outcomes that are typically achieved by the frameworks, how they are achieved, and whether mitigation and monitoring may be required and enforced); and</i> <i>if your ministry has identified any permit or approval that it may not be able to issue to allow the Project to proceed as currently planned, and next steps for resolution of any issues.</i>
MECP-01-01	Water quality	Based on the mine water quality model, the sulphate concentrations in contact waters and process wastewater exceed 250 mg/L during operation phase. Only sulphate treatment for excessive water from TMF is proposed. Additional modelling and calculation should be conducted to predict the sulphate concentration at the discharge point during operation phase. Also, contingency treatment plan and treatment of contact waters/process wastewater for sulphate control should be considered.
MECP-01-02	Water quality	It is proposed that storage systems be installed for the membrane reject solution. It is likely that these storage systems (holding tanks) will require a sewage environmental compliance approval (ECA). These storage systems may also require spill containment. An industrial sewage ECA may be required for the quarry operation which is not identified in Section 19, Table 19.3-1.
MECP-01-03	Migratory birds	Link to detailed responses to targeted questions (follows Table 3): VC - Migratory Birds
MECP-01-04	Species at risk	Link to detailed responses to targeted questions (follows Table 3): VC – Species at Risk
MECP-01-05	Groundwater Hydrology and water quantity Surface water quality Mine water quality predictions Receiving water quality predictions Ecological risk assessments Human health risk assessment Mercury bioaccumulation and country foods Air quality	Link to MECP views on these topics: Table 1. Summary of MECP Comments on the Kinross Great Bear Project Impact Statement

Please insert additional rows as necessary.

³ “Federal effects” for this purpose means adverse effects within federal jurisdiction and adverse effects that are direct or incidental to the exercise of a federal power, duty or function (as defined in section 2 of the *Impact Assessment Act*).
⁴ IAAC also invites views on effects related to public interest factors (defined in section 63 of the *Impact Assessment Act*) that may inform decision-making, such as positive effects on local economic conditions that contribute to sustainability.
⁵ IAAC also invites views on potential effects to species at risk, and how they are typically managed in the region, to inform IAAC’s obligations under section 79 of the *Species at Risk Act*.

Table 2. Missing Information in Relation to the Tailored Impact Statement Guidelines

Table 2 should be used to identify missing or unclear information from the Impact Statement that is **both** 1) required by the Tailored Impact Statement Guidelines **and** 2) required to formulate ministry views to inform the impact assessment.

Outstanding Information Requirement ID	Reference to Impact Statement	Reference to Tailored Impact Statement Guidelines	Description of Outstanding Information Requirement (Context and Rationale)	Advice for Resolving Outstanding Information Requirement
<i>Please identify Outstanding Information Requirements by ministry and number. e.g.: MNR-02</i>	<i>Identify the specific section of the Impact Statement related to information requirement</i>	<i>Identify the specific section of the Tailored Impact Statement Guidelines related to information requirement</i>	<i>Provide a brief description of the outstanding information requirement, including a rationale for how the missing could inform the impact assessment Include, where relevant:</i> <i>how the outstanding information requirement relates to an adverse effect (please indicate if it is federal or provincial jurisdiction) or to a public interest factor including outlining the relevant pathway of effect (see Enclosure 2 for more detail on the key effects and targeted questions).</i>	<i>Provide a clear and precise description of the missing information that would resolve the issue. Optionally provide other commitments the proponent can make to respond, such as:</i> <i>offsetting or mitigation to compensate for uncertainty in baseline;</i> <i>follow-up to verify the accuracy of predictions and effectiveness of mitigation;</i> <i>applicable guides, standards and thresholds the proponent intends to meet; and</i> <i>measures the proponent intends to take to comply with other legislative frameworks that provide a means to address effects.</i>
MECP-02-01	Sections 4.13 and 5.14.7	Water quality	It is proposed that membrane filtration is used to reduce sulphate concentrations for selected site contact waters. The selection criteria are unknown. The daily and annual volumes of contact waters to be treated by membrane filtration are not identified. The required storage volume for the membrane reject solution is unknown. If the volume is larger than 10,000 L/day, the holding tanks will require sewage approval. In addition, spill containment may be required.	Establish criteria on how to select contact waters for sulphate treatment with membrane filtration. Predict the daily flow rates of contact waters requiring sulphate treatment as well as contact water flow rates without sulphate treatment. Calculate the final sulphate concentration at the discharge points. Predict the storage volume for membrane rejected solution and proposed storage equipment and requirement of approval. There is high potential of leakage or spill for the sulphate-concentrated solution. Spill containment may be required.
MECP-02-02	Appendix I2-Mine Site Water Balance	Water quality	The stormwater management works design is based on the worst case of a 100-year storm event. For a mining site, a 100-year stormwater event is often considered the minimum standard for designing major infrastructure. Mining operations require a risk-based approach that usually demands higher safety factors (such as the 200-year event, regional storms, or the Probable Maximum Flood) to prevent catastrophic environmental damage or failure of containment systems. Although the water balance modelling incorporates future climate projections up to the 2080s, all infrastructure is designed for a 100-year storm event.	The water management works may not be sufficient or effective if future storm events exceed the 100-year design storm.
MECP-02-03	Appendix K-2 – Mine Water Quality Model	Water quality	Sulphate concentrations in the TMF pond and seepage, WTP influent, and East VMF are all predicted to exceed 250 mg/L during the operational phase. If sulphate treatment is only for excess water from the TMF, it is unclear whether the effluent from the WTP can meet the sulphate limit.	A contingency plan that shows compliance with sulphate effluent limits will be needed.

Please insert additional rows as necessary.

Table 3. Advice to the Proponent to Support Regulatory Efficiency

Table 3 can be used to inform future or concurrent provincial regulatory processes for the Project, to support regulatory efficiency.

Advice ID	Refence to Impact Statement	Provincial Permit or Licence	Advice to the Proponent to Support Permitting Efficiency
<i>Please identify advice by ministry and number. e.g.: MNR-03</i>	<i>Identify the section of the Impact Statement to which your comment applies.</i>	<i>List the potential approval or relevant legislative framework</i>	• Describe information needed to determine if the provincial approval is required. • Identify if the Impact Statement could be sufficient to complete the permitting process. If not, briefly describe what is needed next. • Advise how the Proponent can coordinate regulatory requirements with the remainder of the impact assessment process to streamline approvals. • Describe environmental outcomes of the regulatory framework and how they are achieved such as regulations or enforceable conditions. • Identify any permit or approval that your ministry may not be able to issue to allow the Project to proceed as currently planned, and next steps to resolve issues.
MECP-03-01		environmental compliance approval (ECA) (industrial sewage)	Environmental Protection Act - section 53 of the OWRA requires an environmental compliance approval (ECA) for certain sewage works Information requirements and guidance about industrial sewage works for applications for an ECA can be found here: Environmental Compliance Approval ontario.ca Checklist for technical requirements for a complete Environmental Compliance Approval submission ontario.ca Stormwater Management Planning and Design Manual ontario.ca Design Guidelines For Sewage Works ontario.ca
MECP-03-02		ECA (domestic sewage)	Environmental Protection Act - section 53 of the OWRA requires an ECA for certain sewage works A sewage works ECA is required: • if the combined design capacity of the works for domestic sewage is more than 10,000 L/day, • if more than one sewage works is located on a lot or parcel of land and they have, in total, a design capacity in excess of 10,000 L/day; or, • if the sewage works are not located wholly within the boundaries of the lot or parcel of land on which is located the residence or other building or facility served by the works. If the design capacity of the works for domestic sewage generated at the site is 10,000 L/day or less, septic tanks would typically be regulated under the Ontario Building Code as a sewage system, with some exceptions. Information requirements and guidance about domestic sewage works for applications for an ECA can be found here: Environmental Compliance Approval ontario.ca Checklist for technical requirements for a complete Environmental Compliance Approval submission ontario.ca Stormwater Management Planning and Design Manual ontario.ca Design Guidelines For Sewage Works ontario.ca
MECP-03-03		ECA (air and noise)	Environmental Protection Act (EPA) - section 9 of the EPA requires an ECA for certain activities with emissions related to air, noise and/or vibrations. Ontario Regulation 419/05: Air Pollution, Local Air Quality, places limits on the concentration of contaminants in the natural environment that are caused by emissions from a facility. This regulation requires the development of an Emission Summary and Dispersion Modelling Report (ESDM) which is used to demonstrate compliance with O. Reg. 419/05. Facilities that emit noise need to assess it as part of their ECA application. MECP's Environmental Noise Guideline - Stationary and Transportation Sources - Approval and Planning (NPC-300) ontario.ca establishes sound level limits that are applied by the MECP to stationary sources. Compliance with the sound level limits is required for existing, planned, new, expanded, or modified stationary sources of sound through an ECA. Information requirements and guidance for air and noise ECAs can be found here: Environmental Compliance Approval ontario.ca Checklist for technical requirements for a complete Environmental Compliance Approval submission ontario.ca Guideline A-10: Procedure for Preparing an Emission Summary and Dispersion Modelling (ESDM) Report ontario.ca

Advice ID	Reference to Impact Statement	Provincial Permit or Licence	Advice to the Proponent to Support Permitting Efficiency
<i>Please identify advice by ministry and number. e.g.: MNR-03</i>	<i>Identify the section of the Impact Statement to which your comment applies.</i>	<i>List the potential approval or relevant legislative framework</i>	• Describe information needed to determine if the provincial approval is required. • Identify if the Impact Statement could be sufficient to complete the permitting process. If not, briefly describe what is needed next. • Advise how the Proponent can coordinate regulatory requirements with the remainder of the impact assessment process to streamline approvals. • Describe environmental outcomes of the regulatory framework and how they are achieved such as regulations or enforceable conditions. • Identify any permit or approval that your ministry may not be able to issue to allow the Project to proceed as currently planned, and next steps to resolve issues.
MECP-03-04		ECA (waste)	<i>Environmental Protection Act</i> (EPA) - section 27 of the EPA requires an ECA for the transportation, management and/or disposal of certain types of waste. The following regulations under the EPA deal specifically with waste: • Regulation 347 – General Waste Management, defines various types of waste and outlines some of the rules for the ‘management’ of waste such as waste generators, waste carriers, waste receivers/processors, waste disposal/landfilling. • Ontario Regulation 101/94 – Recycling and Composting of Municipal Waste, sets out requirements for establishing Municipal Waste Recycling Sites, Municipal Waste Recycling Depots and Leaf and Yard Waste Composting Sites • Ontario Regulation 232/98 – Landfill Site Regulation, sets out requirements and standards for new and expanded landfills • Ontario Regulation 406/19 – On-Site and Excess Soil Management, provides clarity on when excess soil is not a waste and sets out requirements for the reuse of excess soil. Information requirements and guidance for waste ECAs can be found here: Environmental Compliance Approval ontario.ca Checklist for technical requirements for a complete Environmental Compliance Approval submission ontario.ca
MECP-03-05		permit to take water (PTTW)	<i>Ontario Water Resources Act</i> (OWRA): regulatory authority for a permit to take water (PTTW) is set out in section 34 and Ontario Regulation 387/04 (Water Taking and Transfer). Water takings that exceed 50,000 L/day require a PTTW or EASR registration under certain conditions. Information about Ontario’s water taking permits and guidance on how to fill out a PTTW application can be found here: Permits to take water ontario.ca Guide to Permit to Take Water application ontario.ca Guidance to support area-based water quantity management ontario.ca
MECP-03-06		registration and/or permit under the <i>Species Conservation Act, 2025</i> (SCA)	<i>Species Conservation Act, 2025</i> (SCA): sets out requirements for proceeding with activities that may adversely impact protected species and their habitat. Depending on the activity and whether it may impact a species that is protected under the SCA or its habitat, a proponent may be required to register, obtain a permit under the SCA, or may be eligible to proceed under an applicable exception. The following regulations are in effect as of March 30, 2026: • Protected Species in Ontario List regulation (O. Reg. 60/26): sets out the species that receive protections under the SCA • Registrable Activities regulation (O. Reg. 75/26): sets out registration requirements and rules for conducting registrable activities • Permit Activities regulation (O. Reg. 74/26): prescribes activities that require a permit and cannot proceed under a registration • Excepted Activities – No Permit or Registration regulation (O. Reg. 61/26): prescribes activities impacting protected species or their habitat that can proceed without a registration or permit • Transitional Matters regulation (O. Reg. 62/26): sets out transition rules that apply to existing authorizations (i.e., permits and agreements) or activities registered to conditional exemptions under the ESA, or certain exemptions under the ESA MECP encourages proponents to review the SCA and its regulations and obtain independent professional and legal advice to understand how the requirements of the SCA may apply to their activity. To support the launch of the streamlined, registration-first approach, MECP has launched a new Species Conservation Registry that must be used to register activities online, in accordance with the SCA. For more information on the registry visit Species Conservation Registry ontario.ca Information and status of proposed guidance for the SCA can be found here: Proposed legislative and regulatory amendments to enable the Species Conservation Act, 2025 Environmental Registry of Ontario Developing guidance on section 16 activities under the Species Conservation Act, 2025. Environmental Registry of Ontario

Advice ID	Refence to Impact Statement	Provincial Permit or Licence	Advice to the Proponent to Support Permitting Efficiency
<i>Please identify advice by ministry and number. e.g.: MNR-03</i>	<i>Identify the section of the Impact Statement to which your comment applies.</i>	<i>List the potential approval or relevant legislative framework</i>	• <i>Describe information needed to determine if the provincial approval is required.</i> • <i>Identify if the Impact Statement could be sufficient to complete the permitting process. If not, briefly describe what is needed next.</i> • <i>Advise how the Proponent can coordinate regulatory requirements with the remainder of the impact assessment process to streamline approvals.</i> • <i>Describe environmental outcomes of the regulatory framework and how they are achieved such as regulations or enforceable conditions.</i> • <i>Identify any permit or approval that your ministry may not be able to issue to allow the Project to proceed as currently planned, and next steps to resolve issues.</i>
			Species at risk guides and resources ontario.ca

Please insert additional rows as necessary.

Migratory Birds and Species at Risk

Question	Response
VC - Migratory Birds	
In the IA Report, IAAC intends to: • Characterize the approximate loss and alteration of suitable habitat types (magnitude, duration, irreversibility etc.) for key migratory bird groups, including species at risk, and the relative abundance of these habitat types across the region, including uncertainty in predictions. Identify that generally overtime a new regional population equilibrium may be met with fewer birds overall, where it is likely true for groups of species. • Identify any rare habitat types or features where its loss could be exceptionally problematic for the regional population or species, such as where bird species are already at risk and habitat rarity in Ontario is a contributing factor. In identifying solutions, IAAC would acknowledge the regional approach to managing rare habitat types such as offsetting, and rare features such as standard mitigation measures. IAAC would also consider means to address effects, such as permitting under the amended Endangered Species Act (or the Species Conservation Act when it comes into force), and adaptations to regional forest management practices under the Crown Forest Sustainability Act. • Identify any permit requirements under the Species at Risk Act, • Characterize the potential for bird mortality and harm from various activities, and the common and well-understood mitigation measures to avoid these. IAAC is currently focusing on these storylines: • Displacement of migratory birds as a result of direct loss of habitat due to overprinting during construction • Disturbance to migratory birds as a result of indirect habitat loss and alteration during all project phases (e.g., increased sensory disturbance -light, dust and noise, and changes to wetland habitat) • Potential for contamination of bird species of Importance to Indigenous people and migratory birds that are used as country foods by Indigenous Peoples	
General Questions	
1. Does the description of context (bird displacement due to habitat loss, regional availability, mortality risk) align with your understanding?	The description of context aligns with MECP’s understanding provided the mitigations are implemented as presented in the Impact Assessment. Specific to the potential mortality risk for migratory birds, including SAR birds, Section 9 states that “<i>the risk of mortality cannot be eliminated, but planned mitigations will offset risk</i>”. Great Bear has proposed that “<i>Project development will avoid harm to migratory birds by <u>removing habitat during appropriate timing windows as practical</u></i>”. Further to this the IA finds that “<i>With the implementation of mitigation measures, the residual effect to the change in risk of mortality for migratory birds will be low</i>” and concludes that “<i>the adverse residual effect on the change in mortality risk for migratory birds is predicted to be not significant.</i>” MECP recommends seeking clarity on the proposed mitigations, specifically regarding when and where the limitations of “as practical” would be applied. As presented, the IS has determined the risk to mortality as not significant given that vegetation/tree removal will occur during the period of September 15 to April 14, however, MECP is aware that at present the project is planning some clearing to occur during the period of April 15 to August 31, 2027, which may increase the likelihood of mortality (eggs, hatchlings) and habitat destruction (nests). If the risk of impact materializes and appropriate mitigations are not implemented, it may result in a higher magnitude of impact above that described in the Impact Assessment. MECP recommends that IAAC seek clarity from Great Bear on the value of the proposed mitigation if the potential for vegetation/tree clearing during the nesting period is likely, specifically in situations when clearing outside of the sensitive period is determined to be not practical. If this mitigation is not to be applied as presented, MECP recommends that Great Bear be asked to revisit the IA to update the assessment of impacts on migratory birds to better reflect the intentions of the project.

Question	Response
	NOTE: The Impact Assessment proposes to avoid tree/vegetation clearing during the period of April 15 to October 15 to mitigate the risk of SAR bat mortality during the maternal roosting period. The timing for migratory birds overlaps that of SAR bats.
2. Are all key migratory bird groups, including species at risk, properly represented and assessed by the proxy species?	Acknowledging that this is a federal impact assessment, for awareness Lesser Yellowlegs, Short-eared Owl and Black Tern are the only migratory bird species relative to this project that are afforded considerations under the province’s Species Conservation Act, 2025. Black Tern were included in the <u>Protected Species in Ontario List regulation (O. Reg. 60/26)</u> in the province on March 30, 2026, and should also be considered when assessing project activities under s. 16 of the SCA. MECP notes that the IS had discussed impacts to SAR birds not listed under SARA (e.g. Lesser Yellowlegs) and as such recommends that both Black Tern and Short-eared Owl be assessed in their representative groupings.
3. Do IAAC’s focus areas seem appropriate? Are there other key issues to investigate?	IAAC’s focus areas appear appropriate, however, given the uncertainty around the adherence to proposed mitigations to reduce the risk of mortality, MECP suggests IAAC seek clarification on the proponent’s commitment to adherence to the proposed mitigations and if necessary, add mortality risk to the list of focus areas applied when assessing impacts.
Displacement of migratory birds due to loss of habitat	
1. Is the available information sufficient and technically appropriate to conclude: a. Whether, for any displaced migratory birds, there is reasonable habitat regionally? b. The extent to which the habitat types are rare or regionally abundant?	Information on the presence/density of Black tern and their habitat regionally is insufficient to conclude to what extent Black Tern nesting habitat is rare or regionally abundant.
2. If the migratory bird habitat information is not sufficient to characterize what is lost and its regional abundance: a. What additional information would be needed to better understand how much of each bird habitat type will be lost, relative to regional abundance? How would this improve our predictions about effects on migratory birds? b. Without additional information, how does the uncertainty with migratory bird habitat loss translate into uncertainty with effects on birds? What does the range of possible scenarios look like, for effects on birds?	Information on Black Tern presence, density and habitat within the migratory bird LSA would be needed to better understand relative habitat loss to reduce uncertainty in the prediction of effects on migratory birds. High level of uncertainty if Black Tern are present and whether any habitat used is significant.
3. For any migratory bird species at risk for which habitat is regionally rare, or special habitat features will be removed: a. Are there any additional non-standard mitigation measures, not currently identified by the proponent, that you would suggest are necessary to manage the effects of loss of rare habitat or special feature?	b. In consideration upland shorebirds MECP would recommend that dewatering of areas used by Black Tern avoid the nesting period of April 15th to August 31st. c. The Endangered Species Act, 2007 was repealed on March 30, 2026, when the Species Conservation Act, 2025 (SCA) came into force. Under the SCA it is the proponent’s responsibility, with the advice of a qualified professional, to determine if their planned activities are likely to result in a section 16 activity. Section 16 activities include those that would result in the: • killing, harming, capturing or taking of a member of a species that is listed on the Protected Species in Ontario List: and/or

Question	Response
	• damage to or destruction of the habitat of a species that is listed on the Protected Species in Ontario List If it is determined that Section 16 activities are likely to occur the proponent is then required to register their project which includes the development and submission of a Conservation Plan (including mitigations) for protected species impacted. If it has been determined that the impacts will have a lasting effect, there is an additional requirement that a Conservation Action plan for each species be developed and submitted at the time of registry.
4. Would a permit under the <i>Species at Risk Act</i> and/or <i>Migratory Birds Convention Act</i> be required, including residence protection for Bank swallow and Barn swallow? If not certain, what additional information is needed to provide certainty.	For awareness, only the species found in Protected Species in Ontario List (PSOL) regulation (O. Reg. 60/26) are afforded consideration under the province’s Species Conservation Act, 2025. Bird species on the PSOL for consideration in the assessment project impacts would include Lesser Yellowlegs, Short-eared Owl and Black Tern. Bank and Barn Swallow would receive protections under SARA and/or the MBCA.
Protection of nests and eggs	
5. Where information about species presence or density may be lacking or uncertain, do the application of standard mitigation measures (such as timing restrictions to avoid nesting periods) adequately manage any uncertainty in the predicted residual effect?	The presence of Black Tern has not been considered in this assessment. Information on presence/density is lacking in the assessment report, and it is uncertain whether the standard mitigations would adequately manage the uncertainty (e.g. timing of dewatering). For upland bird species the application of standard mitigations (e.g. timing restrictions to avoid the nesting period) would adequately manage uncertainty, however, it is uncertain as to whether the mitigations presented are to be considered commitments or best management practices to be applied where feasible as determined by the project schedule. MECP suggests seeking clarification on the proponent’s adherence to migratory bird sensitive timing windows. With the statement “Follow appropriate timing windows for vegetation removals (Mid-April to Late August)” it is unclear if this is a commitment or a best management practice and if “Vegetation” includes treed forest.
6. Are the changes to light levels sufficiently characterized to understand adverse residual effects on migratory birds, such as eastern whip-poor-will and common nighthawk?	These species are not included in the PSOL regulation (O. Reg. 60/26).
7. Are there any species at risk birds that may be removed from consideration for the remainder of the impact assessment based on absence in the proponent’s baseline studies and/or the unlikelihood of residual effects as a result of the project?	No.

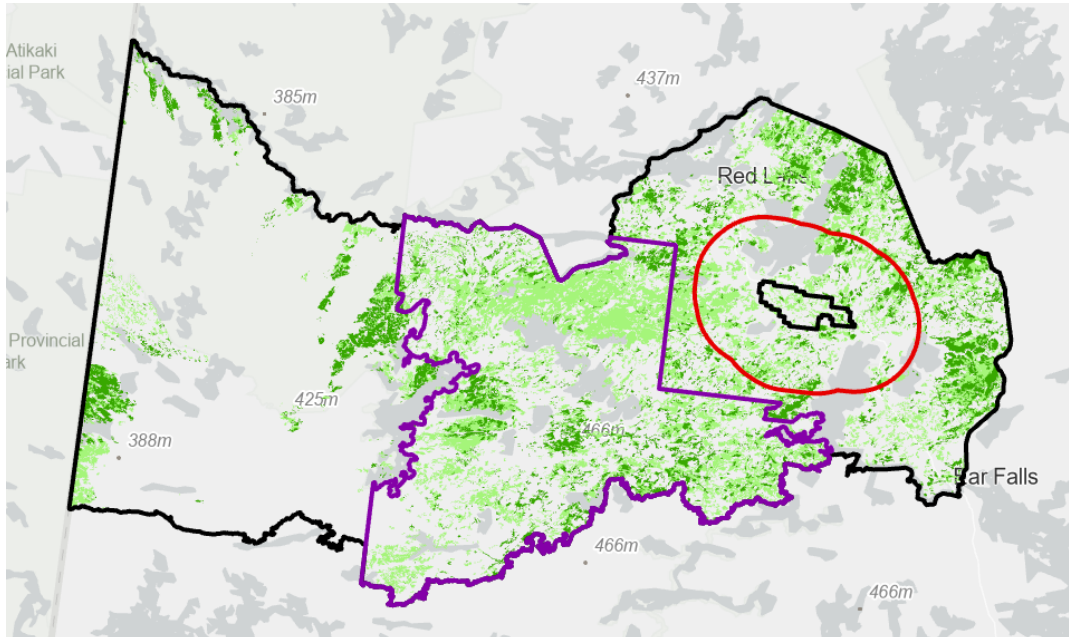
Question	Response											
VC – Species at Risk												
Subject to change as new approaches are adopted, including consideration of subsection 64(4) of the <i>Impact Assessment Act</i> , IAAC will approach SARA section 79 by:												
- Identifying the listed wildlife species (including non-migratory birds at risk) and their critical habitat that are likely to be affected. - Identifying the adverse effects of the project on listed wildlife species and their critical habitat. - Identify appropriate measures to avoid or lessen those effects and to monitor them, where warranted, and with consideration of typical effects management approaches in the region, including through provincial frameworks such as the amended <i>Endangered Species Act</i> (or the Species Conservation Act), the <i>Mining Act</i> and the <i>Crown Forest Sustainability Act</i>.												
IAAC is currently focusing on these storylines:												
Likelihood of the presence of caribou and changes to the potential for local caribou habitat recovery												
Question	Response											
General Questions												
1. Do IAAC’s focus areas seem appropriate? Are there other key issues to investigate?	MECP/SARB supports IAAC’s focus areas.											
2. For all species at risk that are likely to be affected by the project, has the proponent adequately characterized the adverse residual effects to the species and its critical habitat, and has the proponent shown that proposed mitigation measures align with federal recovery strategies, including offsetting where necessary?	It appears that the IS may not have appropriately assessed the impacts to migratory bat species as evidenced by all tables in Section 7. 12 in which resident bat and migratory bat habitat are referenced. Given that resident bat species have a narrower scope of preferred maternity roost habitat (ecosites and tree species) then that of migratory bats (selective of tree height e.g.. >= 5m) it would be expected that there would be a greater area of migratory bat habitat present in comparison to that of resident bat species. For example, information from Table 7.12-6 indicates resident and migratory bat maternity habitat effected is the same, however, without the benefit of the spatial files MECP is unable to confirm whether the data presented is accurate. Table 7.12-6: Indirect Effects, Noise ZOI on SAR Bat, Bird and Insect Habitat <table><tr><th rowspan="2">Species</th><th colspan="2">Construction Noise (40</th></tr><tr><th>Indirect Effect Area (ha) ⁽¹⁾</th><th>LSA % Change ^(2,3)</th></tr><tr><td>Maternity Habitat: Non-Migratory SAR Bats</td><td>2,143.41</td><td>-14.86</td></tr><tr><td>Maternity Habitat: Migratory SAR Bats</td><td>2,143.41</td><td>-14.86</td></tr></table> ➤ Mitigation of Mortality 1. Proposed timing windows for vegetation clearing The IS presents several timing windows to avoid for vegetation removals including: <i>Boreal Caribou Restriction Period: May 1 to September 15 (calving / nursery). Notes: No calving / nursery areas occur in the PA. Action: Activities in Boreal Caribou habitat may require permitting.</i> <i>SAR Bats Hibernacula Restriction Period: October 1 to April 30. Notes: No confirmed hibernacula and low suitability based on limited baseline data. Action: Implement a 500 m buffer of no vegetation removal if hibernacula identified, until discussed in the permitting process.</i>	Species	Construction Noise (40		Indirect Effect Area (ha) ⁽¹⁾	LSA % Change ^(2,3)	Maternity Habitat: Non-Migratory SAR Bats	2,143.41	-14.86	Maternity Habitat: Migratory SAR Bats	2,143.41	-14.86
Species	Construction Noise (40											
	Indirect Effect Area (ha) ⁽¹⁾	LSA % Change ^(2,3)										
Maternity Habitat: Non-Migratory SAR Bats	2,143.41	-14.86										
Maternity Habitat: Migratory SAR Bats	2,143.41	-14.86										

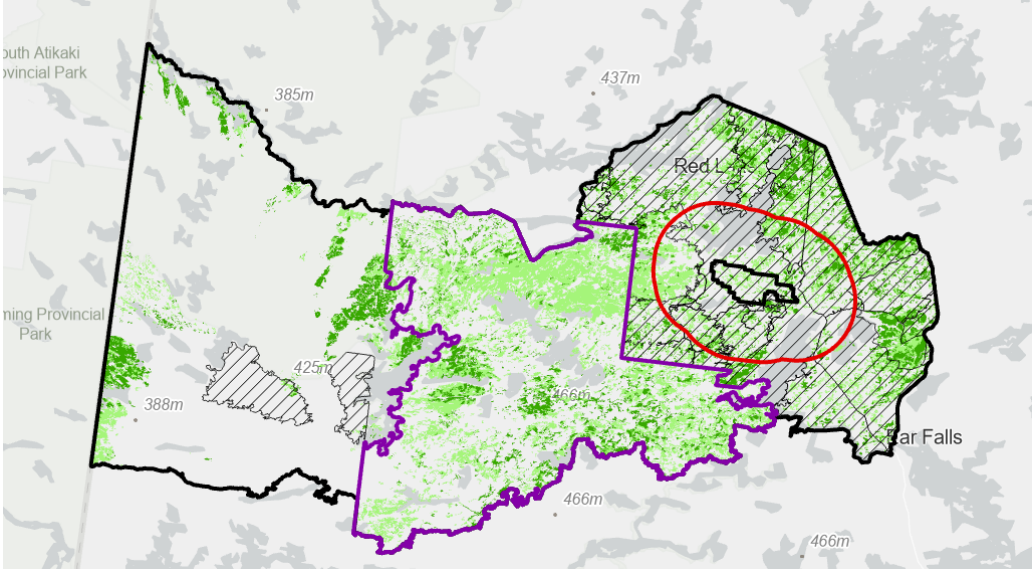
Question	Response
	• SAR Bats Roosting Habitat: April 15 to October 15. Notes: Remove trees mid-October to late March. Action: plan tree removal accordingly or discuss in the permitting process. • Wolverine denning: January 15 to May 31. Notes: No dens confirmed in PA; apply a buffer if a den is found. Action: Den removal requires a permit. Clearing, grubbing, and blasting will not be conducted within high frequency female habitat during the wolverine denning season (January 15th to May 31st). If a Wolverine den is encountered, a den management plan will be prepared by a qualified professional, which will inform the activities that may proceed and during which times, within a biologically appropriate buffer to the Wolverine den. MECP notes that each of the proposed timing windows to mitigate mortality risk have caveats suggesting that if there is a need to conduct activities within the restricted period “regulatory approval or permits will be sought”. Section 7.12.7.3.1 states that “Most SAR evaluated for the Impact Assessment are ambulatory species capable of moving away from disturbances, and no direct mortality resulting from construction and operations phase equipment is anticipated, especially if vegetation removal is avoided during sensitive timing windows.” MECP supports that SAR mortality risk will be low provided timing windows are adhered to. 2. Mitigation to Avoid Residual Habitat Loss Throughout the document the proponent commits to the development of vegetation plans to reclaim areas of habitat impacted by the project, however it is unclear which standards will be applied which poses a challenge when trying to assess where permanent treed habitat may be lost. Statements include; • “The revegetation plan will integrate reclaimed areas with the regional landscape using local, non-invasive plant species, including those important to Indigenous communities, to restore natural habitats, support ecological succession, and outline strategies and timelines for both progressive and final reclamation in accordance with the certified Closure Plan’ • “During the active closure period, rehabilitation of mine development areas will support the recovery of habitat by restoring disturbed lands to a stable, productive, and naturalized state. The plan includes the rehabilitation of disturbed lands (using commercially available native seed sources) and the establishment of self-sustaining vegetative cover. This closure phase will also include scarifying compacted surfaces to promote natural revegetation will promote natural revegetation, improving soil permeability and supporting the regeneration of habitat structure.“ • Section 7: Analysis of Changes to pVCs Page 7-396 -7.12.7.1.3 Closure Phase ○ A positive effect on habitat is anticipated during the closure phase, as revegetation and natural succession processes begin to restore ecological functions. Restoration efforts, including replanting and natural succession, are expected to gradually restore ecological functions and increase the availability of functional habitat for SAR, which will continue to improve after closure.

Question	Response
3. Are there any species at risk included in the Impact Statement where it is reasonable to remove from the impact assessment based on presence/absence and/or the unlikelihood of adverse residual effects to the species as a result of the project?	MECP/SARB does not recommend removing any species at risk and recommends the addition of Black Tern.
4. For MECP: Based on the information in the Impact Statement, would a permit under the amended <i>Endangered Species Act, 2007</i> likely be required for any of the species at risk? If yes, please describe how effects to species at risk will be managed under the amended <i>Endangered Species Act</i> and the Species Conservation Act (once proclaimed). Has the proponent adequately described the proposed actions to mitigate, such as additional actions or investments to counterbalance any lasting impacts of the project on species at risk, to inform the overall reasonableness of issuing a permit under the amended <i>Endangered Species Act, 2007</i> ?	Changes Ontario’s Regulatory Framework On March 30, 2026, the <i>Species Conservation Act, 2025</i> (SCA) and several implementing regulations came into force and the <i>Endangered Species Act, 2007</i> was repealed. Together the SCA and the new regulations modernize species protection and implement a registration-first approach while maintaining strong environmental safeguards. The registration-first approach, a process already in use for other environmental permissions, allows most projects to begin as soon as they are registered, while requiring persons undertaking those projects follow clear, enforceable rules aimed at protecting species and their habitats. It is important to note that in some limited circumstances, some activities will require a permit and cannot be registered. At the same time, the new legislation and regulations also set out many activities that are excepted and can proceed without a registration or permit as long as the conditions and requirements associated with that exception are met. Depending on the activity and whether it may impact a species that is protected under the SCA or its habitat, activities may require registry, or a permit under the SCA, or may be eligible to proceed under an applicable exception. The following regulations are in effect as of March 30th, 2026: • <u>Protected Species in Ontario List regulation (O. Reg. 60/26)</u>: sets out the species that receive protections under the SCA • <u>Registrable Activities regulation (O. Reg. 75/26)</u>: sets out registration requirements and rules for conducting registrable activities • <u>Permit Activities regulation (O. Reg. 74/26)</u>: prescribes activities that require a permit and cannot proceed under a registration • <u>Excepted Activities – No Permit or Registration regulation (O. Reg. 61/26)</u>: prescribes activities impacting protected species or their habitat that can proceed without a registration or permit • <u>Transitional Matters regulation (O. Reg. 62/26)</u>: sets out transition rules that apply to existing authorizations (i.e., permits and agreements) or activities registered to conditional exemptions under the ESA, or certain exemptions under the ESA To support the launch of the streamlined, registration-first approach, the ministry has launched a new Species Conservation Registry that must be used to register activities online, in accordance with the SCA. For more information on the registry visit Species Conservation Registry ontario.ca. Activities that are excepted under the Excepted Activities regulation do not need to be registered and do not require a permit. Some exceptions have requirements that must be fulfilled. For a small number of excepted activities, an Exception Information Form must be completed through the Species Conservation Registry. It is recommended that, in consultation with appropriate experts and professionals, individuals assess the potential impacts of a project in the context of the SCA and its regulations to determine whether the proposed activities must be registered, require obtaining a permit or are excepted under the SCA.

Question	Response
	With this in mind, under the SCA, the Great Bear Mine project will likely require registry which will include the submission of a Conservation Plan (with mitigative actions commitments) and if lasting impacts to a protected species and/or their habitat is expected (e.g. with respect to Caribou time to regenerate habitat following mine closure being ~90 years from commencement of project) there is an additional requirement that a Conservation Action plan be developed for each impacted species and submitted at the time of registry.
Caribou	
1. For boreal caribou, confirm that the habitat being lost is category 3 habitat as indicated by the proponent. Provide advice on the implications to the boreal caribou population with the loss of category 3 habitat. Describe the status of the boreal caribou population in the Sydney range. Describe how the population of boreal caribou might have changed in the Sydney range without the project due to other approved habitat changes (e.g. Red Lake Forest Management Plan).	➤ For boreal caribou, confirm that the habitat being lost is category 3 habitat as indicated by the proponent. Provide advice on the implications to the boreal caribou population with the loss of category 3 habitat. Under the previous General Habitat Description for Woodland Caribou the habitat at the proposed mine location was considered Category 3 habitat which is described as area within the range which supports caribou indirectly by maintaining the overall refuge function within the range. The Great Bear Mine area has the biophysical features and forest composition consistent with seasonal ranges, however, is currently young or disturbed (< 40 years old). This type of habitat is not currently occupied although caribou may travel through. The area of the LSA contains a mix of mature and early successional forests. Under the SCA new definition of habitat is now focused on the dwelling place (the area that Boreal Caribou rely upon for the purposes of breeding, rearing, and wintering), and the area immediately around a dwelling place that is essential for these purposes. At this time there are no areas within the LSA that are relied upon for breeding, rearing, or wintering. Although, development within existing disturbed areas may not directly impact habitat in the short term it may result in a delay in habitat suitability in future relative to the surrounding area and adversely affected the quality of regenerating suitable habitat within 10 km from the proposed mine over the 32 year mine life. ➤ <u>Describe the status of the boreal caribou population in the Sydney range.</u> The status of boreal caribou in the Sydney Range although considered uncertain appears to be declining. The 2024 aerial survey observed a total of 45 caribou comprised of 9 bulls, 30 cows and 6 calves. The proportion of calves per adults was determined to be 13.3% +/- 7.14%. 2023 disturbance estimates indicate the Syndey Range is 73.7% disturbed (impact statements states 62.5%). Since 2023, there were three fires in 2025 totaling 13,943 ha (~7568.66 ha of new disturbance) and approved forest harvest open within 170,242 ha’s of the range. Below are the estimates of Boreal Caribou population size (by class; minimum animal count), population trend (short-term demographic trend, finite population growth rate [λ]), cumulative disturbance, and Range Condition based on information collected in the Sydney range between 2009-2024.

Question	Response				
	Range	Estimated population size by class: < 100, 100–300 or > 300 individuals Minimum Animal Count (MAC) (year of estimate) ^{1,2}	Short-term demographic trend Finite population growth rate (λ)	Cumulative Disturbance	Range Condition ³
	Sydney	100 - 300 MAC =55 (2012) ¹	Short term decline ^{1,2} λ = 0.92 (geometric mean 2012 - 2015) ²	2011 – 61.3 2012 – 62.4 2013 – 65.2 2015 – 66.0 2017 – 70.1 2018 – 70.5 2019 – 59.4 2020 – 59.4 2021 – 73.8 2022 – 73.7 2023 – 73.7	Last assessed in 2014 as ‘Insufficient to sustain caribou’ ¹
	➤ <u>Describe how the population of boreal caribou might have changed in the Sydney range without the project due to other approved habitat changes (e.g. Red Lake Forest Management Plan).</u> As is mentioned in the IS the proposed mine is located within a Dynamic Caribou Habitat Schedule (DCHS) “Z” block in the approved 2020 – 2030 Red Lake Forest Management Plan (FMP) which is considered open to harvest at anytime, however, this does not equate to ongoing forest harvesting. The block descriptions presented in Appendix 1 of the analysis package in the approved FMP describes the “Z” block as an area that <i>“has a history of harvest, natural disturbance, and associated roads access, and it mostly considered permanently and severely disturbed”</i> and although it was not assigned a block timing in the 2020-2030 plan the text goes further to say <i>“future planning teams will evaluate these blocks and incorporate them into timing blocks.”</i> With the current open block timing and uncertainty around potentially timing being applied in the upcoming FMP, it is difficult to say how the population may have changed without the project, however, giving that the Z block is currently highly disturbed in the areas of the proposed mine it would be reasonable to conclude that regeneration on the harvested stands surrounding the proposed mine will be well underway by the time the mine operations end and habitat regeneration commences resulting in a delay in the return to suitable habitat that does not align with the surrounding forest.				
2. Has the proponent adequately characterized the changes to the boreal caribou population in the Sydney range due to the project? Has the proponent, with regard to cumulative effects to boreal caribou in the Sydney range, appropriately considered future predicted fire, forestry regimes, and reasonably foreseeable projects? If not, describe a worst-case scenario effect to boreal caribou populations in the Sydney range with the project.	The IS has provided an assessment based on the current forest management regime that presently includes 9 DCHS blocks in the Whiskey Jack Forest totalling a 230,157-ha area (31% of the Syndey Range) that is currently closed to forest harvesting, but the permanency of this closure is uncertain. The current range condition is 73.7% disturbed. The IS has based the assessment of impacts on Boreal Caribou based on refuge habitat arrived at using the Conventional Boreal Caribou Habitat Model. Refuge habitat can be comprised of a broader range of forest units (e.g. balsam fir) and forest of a much younger age then that of winter habitat (e.g. 41 years compared to 61 years). Winter habitat availability				

Question	Response																								
	influences species persistence in a range. At present the Sydney Range has 355,344 ha of refuge habitat with only 50% of that being suitable winter habitat (177, 126 ha). Available habitat by location is further broken down below: <table><tr><th>Habitat Type</th><th>Total available habitat in Range (ha)</th><th>Area within the Whiskey Jack Forest closed blocks (ha)</th><th>Proportion of total available habitat in the Whiskey Jack Forest</th></tr><tr><td>Refuge</td><td>355,344</td><td>122,336</td><td>34%</td></tr><tr><td>Winter</td><td>177,126</td><td>81,175</td><td>46%</td></tr></table> <table><tr><th>Winter Habitat Type</th><th>Total available habitat in Range (ha)</th><th>Area within the Whiskey Jack Forest closed blocks (ha)</th><th>Proportion of total available habitat in the Whiskey Jack Forest</th></tr><tr><td>Winter Useable</td><td>116,092</td><td>60,952</td><td>53%</td></tr><tr><td>Winter Preferred</td><td>61,034</td><td>20,223</td><td>33%</td></tr></table> The image below shows available winter habitat in the Sydney Range. Winter preferred is signified by the darker green, the boundary of the Whiskey Jack Forest is outlined in purple. The project area is also indicated with a 10 km buffer in red.  The image below is the same as the one above with black hatching added to indicate the Dynamic Caribou Habitat Schedule blocks that are currently open for forest harvest.	Habitat Type	Total available habitat in Range (ha)	Area within the Whiskey Jack Forest closed blocks (ha)	Proportion of total available habitat in the Whiskey Jack Forest	Refuge	355,344	122,336	34%	Winter	177,126	81,175	46%	Winter Habitat Type	Total available habitat in Range (ha)	Area within the Whiskey Jack Forest closed blocks (ha)	Proportion of total available habitat in the Whiskey Jack Forest	Winter Useable	116,092	60,952	53%	Winter Preferred	61,034	20,223	33%
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Question	Response
	 The image demonstrates the reliance on available habitat in the Whiskey Jack Forest to provide habitat. Recent collaring data has demonstrated that the Sydney Range is part of a larger geographic area supporting a population that also utilizes habitat in the Owl-Flintstone Management Unit in Manitoba. The spatial extent of the Sydney Range is likely too small to support an independent and sustainable population of caribou and therefore is ecologically inter-dependent on the Owl-Flintstone Management Unit in Manitoba.
3. Has the proponent adequately described habitat connectivity in the Sydney range and characterized the adverse residual effects to future connectivity from the project? If not, describe a worst-case scenario effect to future connectivity from the project.	Please see the response above.
4. For MECP: Would a permit under Ontario’s amended <i>Endangered Species Act</i> likely be required? If yes, describe how boreal caribou and their critical habitat would be managed through, including mitigation/offsetting, monitoring, and legally binding conditions. Has the proponent adequately described the proposed actions to mitigate, such as additional actions or investments to counterbalance any lasting impacts of the project on boreal caribou (Sydney range), to inform the overall reasonableness of issuing a permit under the amended <i>Endangered Species Act, 2007</i> ? Describe how effects to boreal caribou would be managed under the Species Conservation Act once it comes into force.	Please see previous response describing recent changes to Ontario’s regulatory framework. <u>Would a permit under Ontario’s amended <i>Endangered Species Act</i> likely be required? If yes, describe how boreal caribou and their critical habitat would be managed through, including mitigation/offsetting, monitoring, and legally binding conditions.</u> Under the SCA there is a registry first approach. Permits are only issued in situations where the intentional kill/harm of a protected species will occur. Under the SCA, the information products required to be submitted at the time of registry (conservation plan including mitigations, and if required, a conservation action plan) are considered legally binding.

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August 4, 2026

M E M O R A N D U M

TO: May Lyn Trudelle
Senior Program Support Coordinator, Environmental Assessment Branch

FROM: Dave Manol
Director, Northern Region

RE: MECP Comments - Kinross Great Bear Gold Project Impact Statement

PURPOSE

As requested, MECP reviewed the relevant appendices from Batches 1, 2, and 3 of the Kinross Great Bear Project Impact Statement and prepared the summary table below. The table identifies the principal technical considerations arising from MECP's review of the Impact Statement and supporting studies. These considerations represent areas where additional information, refinement, monitoring, verification, or uncertainty characterization could strengthen confidence in assessment conclusions and support Impact Assessment Agency of Canada's (IAAC's) review of the Project under the Impact Assessment Act.

The comments primarily relate to groundwater, hydrology, water quality, treatment performance, closure planning, and associated modelling assumptions. Many of the identified uncertainties occur in areas that are commonly refined as projects advance through detailed engineering, provincial permitting, operational planning, and closure planning. As such, many of these considerations fall within areas that are routinely evaluated and managed through Ontario's regulatory framework, including Environmental Compliance Approvals, Permits to Take Water, Closure Plan requirements, monitoring programs, adaptive management measures, and compliance oversight.

This summary is intended to assist IAAC in understanding the degree of confidence associated with current assessment predictions and to identify technical areas that may

warrant further consideration as the assessment process advances. In many cases, the objective is not necessarily additional impact assessment modelling, but rather sufficient confidence that key assumptions, mitigation measures, and performance expectations can be verified and managed through detailed design, monitoring, adaptive management, contingency planning, and regulatory oversight throughout the project lifecycle.

Ontario's permitting framework provides complementary mechanisms to verify assessment predictions, establish performance requirements, support adaptive management, and evaluate environmental performance over time. Accordingly, the considerations summarized below should be viewed both in the context of informing IAAC's assessment and recognizing the role of subsequent provincial approvals in refining project design, reducing uncertainty, and verifying environmental outcomes.

The relevance statements included in the table are intended to identify how the noted uncertainties may inform IAAC's assessment of project effects, prediction confidence, mitigation effectiveness, residual effects, Indigenous interests, and long-term sustainability. Additional characterization, monitoring, verification, and adaptive management may also occur through subsequent provincial approval processes, providing further opportunities to evaluate and manage uncertainty over the life of the Project.

Should IAAC or the proponent wish to discuss any of the comments or their technical basis, MECP would be pleased to participate in further technical discussions.

Table 1. Summary of MECP Comments on the Kinross Great Bear Project Impact Statement

	Summary of Comments	Relevance to IAAC IA	Provincial Regulatory Coverage
Groundwater	• Uncertainty remains regarding groundwater-surface water interactions and the extent to which predicted reductions in groundwater discharge and baseflow may affect streams, wetlands, aquatic habitat, and ecosystem function. • Groundwater-dependent ecosystems, including springs, seepage zones, groundwater-fed wetlands, and baseflow-supported reaches, have not been comprehensively identified, characterized, or incorporated into effects predictions. • Reliance on steady-state groundwater modelling reduces confidence in predictions under seasonal low-flow, drought, dewatering, closure-recovery, and long-term post-closure conditions. • The potential influence of preferential flow pathways associated with legacy exploration drillholes, faults, shear zones, and fractured bedrock remain uncertain and may affect drawdown extent, seepage rates, groundwater quality pathways, and contaminant transport. • Additional confidence will be required regarding seepage capture performance, groundwater recovery, pit-filling assumptions, pit lake evolution, and long-term closure performance during provincial permitting and approvals.	Additional characterization of groundwater-surface water interactions, groundwater-dependent ecosystems, preferential flow pathways, and long-term closure conditions could strengthen IAAC's understanding of potential effects on aquatic ecosystems, fish and fish habitat, Indigenous use of lands and resources, and post-closure environmental performance. Given the project's reliance on groundwater modelling to predict dewatering effects, seepage rates, pit lake evolution, and groundwater recovery, reducing these uncertainties could improve confidence in several key effects conclusions and closure predictions. Many of these considerations would typically be further evaluated, verified, and managed through hydrogeologic studies, monitoring programs, adaptive management measures, and closure planning requirements during provincial permitting.	Ontario Water Resources Act (OWRA) s.34 Permits to Take Water, Environmental Compliance Approvals issued under the Environmental Protection Act (EPA), Ontario Regulation 903 (Wells Regulation), and closure planning requirements under the Mining Act provide mechanisms to require additional hydrogeologic characterization, groundwater impact assessments, groundwater-user evaluations, dewatering assessments, monitoring networks, seepage management plans, contingency measures, adaptive management triggers, reporting requirements, and long-term performance verification throughout construction, operations, closure, and post-closure.

	Summary of Comments	Relevance to IAAC IA	Provincial Regulatory Coverage
Hydrology & Water Quantity	- Confidence in hydrologic predictions is constrained by the relatively short baseline monitoring record and uncertainty associated with several key model inputs and assumptions. - Uncertainty remains regarding low-flow characterization, winter flow estimation, rating curve development, watershed regionalization methods, runoff estimation approaches, and model calibration. - Water balance predictions are sensitive to assumptions regarding groundwater inflows, seepage rates, pumping capacity, treatment capacity, water storage infrastructure, operational performance, and closure conditions. - Climate change assessment focuses primarily on median projections and provides limited evaluation of drought, extreme precipitation, rain-on-snow events, prolonged wet periods, and future water management resilience. - Significant flow reductions are predicted for some watercourses, creating uncertainty regarding aquatic habitat function, ecological connectivity, dilution capacity, seasonal flow conditions, and downstream hydrologic response. - Hydrologic predictions, water management assumptions, and infrastructure performance would typically be further evaluated and verified through provincial permitting, detailed engineering, monitoring programs, and adaptive management measures.	Further refinement of hydrologic predictions could support IAAC's assessment of potential changes to flow regimes, aquatic habitat, ecological connectivity, dilution capacity, and downstream hydrologic response, particularly under climate change and closure conditions. The assessment predicts substantial flow reductions in some watercourses and relies on a relatively limited monitoring dataset, making confidence in low-flow, drought, winter-flow, and climate resilience predictions particularly important. Hydrologic predictions and associated management measures would typically be further verified and refined through detailed engineering, permitting, monitoring, and adaptive management processes as the Project advances.	OWRA s.34 Permits to Take Water, supporting hydrologic studies, ECAs and Mining Act Closure Plans require detailed evaluation of water takings, flow reductions, water management at closure, infrastructure performance, climate resilience, and downstream hydrologic effects. Approval conditions can establish monitoring requirements, flow-based operating restrictions, trigger-response frameworks, contingency measures, adaptive management provisions, and long-term verification of hydrologic performance.
Surface Water Quality	- Sulphate represents one of the most significant project-related changes from baseline conditions and remains a key uncertainty regarding long-term receiving-environment response. - The assessment relies primarily on comparisons to benchmarks and objectives, with limited discussion of ecological implications associated with substantial departures from baseline conditions. - Existing nutrient enrichment and elevated phosphorus concentrations indicate potential	Additional evaluation of receiving-environment response, sulphate-related pathways, Indigenous-use resources, and cumulative effects could strengthen IAAC's understanding of potential long-term effects on aquatic ecosystems, fish and fish habitat, country foods, and environmental sustainability. Given sulphate represents one of	ECAs, receiving-environment monitoring requirements, closure planning requirements, environmental monitoring programs, adaptive management frameworks, and compliance verification mechanisms provide tools to evaluate effluent quality, verify treatment performance, monitor receiving water, establish performance objectives, implement contingency measures, and

	Summary of Comments	Relevance to IAAC IA	Provincial Regulatory Coverage
	sensitivity to additional nutrient loading and cumulative watershed influences. • Uncertainty remains regarding sulphate-related influences on mercury cycling, methylmercury production pathways, and associated ecological and human health receptors. • Assessment of potential effects on Indigenous-use resources, including manoomin (wild rice), is limited relative to the magnitude and duration of predicted sulphate increases. • Consideration of cumulative effects from other regional developments is limited. • These considerations would typically be further evaluated through ECA review, receiving-environment monitoring, and adaptive management programs.	the largest projected departures from baseline conditions and is linked to several key ecological and human-health pathways, including mercury cycling and potential effects on manoomin, improved characterization could strengthen confidence in long-term receiving-environment conclusions. Provincial approvals and monitoring programs provide opportunities to verify treatment performance, evaluate receiving-water response, and support adaptive management where environmental outcomes differ from assessment predictions.	assess long-term downstream response throughout the life of the Project.
Mine Water Quality Predictions	• Confidence in long-term water quality predictions is limited by the absence of formal model validation. • Source terms rely substantially on laboratory testing and analogue mine information with limited demonstration of field-scale applicability. • Key assumptions related to acid generation, closure cover performance, treatment efficiency, and contaminant loading are represented largely as deterministic values. • Quantitative uncertainty analyses and probabilistic evaluation of outcomes are limited. • The influence of climate variability, extreme hydrologic conditions, and climate change on mine water quality predictions is not fully evaluated. • Provincial approvals provide mechanisms to verify treatment performance, contaminant loading assumptions, and long-term water quality management.	Further validation, uncertainty evaluation, and consideration of climate-related influences could strengthen confidence in predictions of contaminant generation, treatment performance, closure conditions, and long-term water quality management, supporting IAAC's assessment of mitigation effectiveness, residual effects, and sustainability outcomes. Current predictions rely heavily on laboratory test work, analogue information, and deterministic assumptions regarding treatment efficiency and contaminant loading. Given the importance of these assumptions to long-term closure performance, additional	Industrial Sewage ECAs and Mining Act Closure Plans require detailed treatment system design, contaminant source characterization, performance verification, monitoring programs, operational controls, contingency planning, compliance reporting, and closure performance assessments. Design-stage approvals allow refinement of predictions as engineering designs, test work, and monitoring data become available.

	Summary of Comments	Relevance to IAAC IA	Provincial Regulatory Coverage
		confidence could strengthen the assessment. These assumptions would typically be further refined and verified through detailed design, operational planning, treatment-system approvals, monitoring programs, and closure planning processes.	
Receiving Water Quality Predictions	- Confidence in model predictions is limited by the absence of validation against observed receiving-environment conditions. - Predicted concentrations are dependent on assumed treatment-system performance, particularly sulphate removal efficiency. - Assessment of transient hydrologic conditions, including freshet, drought, low-flow, and winter conditions, is limited. - Representation of Pakwash Lake may not fully capture stratification, residence time, sediment dynamics, oxygen depletion, and mercury-related processes. - Uncertainty characterization and propagation into downstream ecological and human health assessments remain limited. - Provincial approvals provide mechanisms to verify receiving-water predictions, treatment performance assumptions, and downstream environmental response through monitoring and adaptive management programs.	Additional characterization of receiving-water processes and model performance could strengthen IAAC's understanding of potential effects on aquatic ecosystems, fish habitat, Indigenous-use receptors, ecological risk pathways, and long-term water quality conditions. Confidence in the assessment is particularly influenced by assumptions regarding sulphate treatment performance and the representation of Pakwash Lake processes, both of which influence downstream ecological and human-health conclusions. Provincial monitoring and compliance programs provide mechanisms to verify predictions, evaluate treatment performance, and respond to observed receiving-environment conditions over time.	Through the ECA process, Ontario evaluates discharge quality, treatment performance, receiving-water response, monitoring requirements, environmental protection objectives, and compliance expectations. ECAs may require treatment verification, receiving-environment monitoring, adaptive management programs, performance reviews, and reassessment where actual performance differs from predicted conditions.

	Summary of Comments	Relevance to IAAC IA	Provincial Regulatory Coverage
Ecological Risk Assessment	• Risks associated with sulphate, methylmercury, sediment pathways, and aquatic food web responses may not be fully characterized. • Sulphate remains a key parameter of concern due to its potential role in enhancing mercury methylation. • Methylmercury is not fully integrated throughout the assessment despite its importance to aquatic receptors and country foods. • Sediment-related exposure pathways receive limited consideration despite their importance in contaminant cycling and benthic exposure. • Additional confidence is needed regarding effects on aquatic communities, food webs, downstream ecosystems, and species at risk. • Provincial monitoring and adaptive management programs provide mechanisms to verify ecological predictions, evaluate ecosystem response, and inform environmental management over the life of the Project.	Further consideration of sulphate, methylmercury, sediment pathways, and food-web response could strengthen IAAC's assessment of potential effects on aquatic communities, species at risk, ecosystem function, and culturally important resources. Several of these pathways are linked to key receiving-environment changes identified elsewhere in the assessment and may influence conclusions regarding long-term ecosystem response if assumptions prove inaccurate. Long-term environmental monitoring and adaptive management programs, such as those developed during provincial permitting, may provide opportunities to verify ecological predictions and evaluate environmental response throughout the project lifecycle.	Provincial environmental monitoring programs, environmental effects monitoring requirements, receiving-environment studies, adaptive management programs, and closure monitoring requirements may be used to verify ecological predictions, assess environmental performance, evaluate mitigation effectiveness, and support future management decisions throughout operations, closure, and post-closure.

	Summary of Comments	Relevance to IAAC IA	Provincial Regulatory Coverage
Human Health Risk Assessment	• Project-related sulphate increases may promote mercury methylation under certain environmental conditions, creating uncertainty in projected methylmercury concentrations in fish. Given that fish consumption is the primary exposure pathway for methylmercury, confidence in fish bioaccumulation predictions is critical to the overall human health risk assessment. Additional validation of bioaccumulation modelling and refinement of exposure estimates for sensitive populations (e.g., infants and toddlers) could strengthen confidence in the risk conclusions. • Elevated baseline arsenic concentrations are present in soil and surface water, and arsenic remains a significant contributor to predicted health risks across all project phases. Key exposure pathways include surface water, traditional foods, and fish. Risk characterization could be strengthened through incorporation of more recent toxicological science and improved treatment of arsenic exposure through fish consumption. • Predicted exceedances of the 1-hour nitrogen dioxide (NO₂) benchmark during construction and operations, together with uncertainties associated with diesel particulate matter risk characterization, create uncertainty regarding potential acute and chronic air quality-related health effects. Further refinement of the air quality health assessment could improve confidence in conclusions. • Improved confidence in the assessment of methylmercury, arsenic, and air pollutant exposure pathways could strengthen the overall characterization of project-related human health risks and support more informed decision-making. • Provincial regulatory processes provide opportunities to verify key environmental pathways that support human health conclusions and evaluate environmental performance over time.	Additional refinement of key exposure pathways and receptor-specific risk estimates could strengthen IAAC's assessment of potential human health effects, particularly for Indigenous communities and other populations that may rely on fish, traditional foods, and local environmental resources. Confidence in the assessment is influenced by assumptions regarding methylmercury bioaccumulation, arsenic exposure pathways, and air-quality predictions, all of which contribute meaningfully to the overall health risk characterization. Environmental monitoring programs established through provincial approvals may help verify key assumptions supporting the assessment and inform adaptive management where warranted.	Provincial approvals may establish monitoring requirements for water quality, fish tissue quality, effluent performance, and air emissions that support verification of key environmental assumptions used in exposure assessments. Monitoring results may support adaptive management, operational refinements, and closure planning where warranted.
Mercury Bioaccumulation & Country Foods	• Uncertainty remains regarding future fish tissue mercury concentrations and the magnitude of project-related change.	Additional evaluation of mercury cycling, bioaccumulation processes, and long-term fish	Provincial monitoring requirements may include long-term fish tissue monitoring, mercury trend assessment, receiving-

	Summary of Comments	Relevance to IAAC IA	Provincial Regulatory Coverage
	- The bioaccumulation model relies largely on steady-state assumptions and does not explicitly evaluate temporal response lags. - Fish size, age, trophic position, and spatial variability are not fully integrated into predictions. - Model calibration, validation, and uncertainty characterization remain limited. - The pathway linking sulphate loading, methylmercury production, bioaccumulation, and human/ecological receptors remains a significant source of uncertainty. - Provincial monitoring programs provide mechanisms to verify fish tissue mercury predictions, evaluate long-term trends, and support adaptive management where monitoring results differ from assessment expectations.	tissue concentrations could strengthen IAAC's assessment of aquatic ecosystem health, country food quality, Indigenous harvesting resources, and associated human health considerations. This pathway represents one of the more consequential remaining uncertainties because it links projected sulphate loading to fish consumption, Indigenous harvesting, human health, and ecological receptors. Provincial monitoring programs provide opportunities to verify fish tissue mercury predictions, track long-term trends, and support adaptive management should environmental response differs from expectations.	environment monitoring, closure monitoring, performance reviews, and adaptive management measures to verify predictions, improve understanding of environmental response over time, and support environmental stewardship during operations, closure, and post-closure.
Air Quality	- Some uncertainty remains regarding baseline monitoring datasets, QA/QC procedures, and interpretation of selected observations. - Additional transparency regarding source characterization, contaminant screening, and emissions assumptions could strengthen confidence in the assessment. - Assumptions regarding road dust suppression effectiveness remain an important input to predicted outcomes. - Future assessments would benefit from incorporation of finalized facility designs, equipment inventories, and operational parameters. - Provincial approvals provide mechanisms to verify emissions assumptions, evaluate air quality performance, and implement monitoring and operational controls throughout the life of the Project.	Additional transparency regarding emissions assumptions, source characterization, and operational conditions could strengthen IAAC's assessment of potential air quality effects on human health, ecological receptors, and the effectiveness of proposed mitigation measures. While several of the identified uncertainties are likely to be refined as facility design advances, improved confidence in nitrogen dioxide (NO ₂), diesel particulate matter, and dust-related predictions could strengthen the overall	Air ECAs under the EPA provide regulatory oversight of emission sources, emission limits, operating conditions, monitoring requirements, reporting obligations, and compliance verification. Future approval reviews would incorporate finalized facility design information, updated emissions inventories, dispersion modelling, operational controls, and monitoring programs to verify environmental performance.

	Summary of Comments	Relevance to IAAC IA	Provincial Regulatory Coverage
		assessment of construction and operational air quality effects. As project design advances, provincial approvals may provide opportunities to refine emissions estimates, verify environmental performance, and establish monitoring and operational controls where necessary.	

CLOSURE

If you have any questions regarding the above comments, do not hesitate to contact me. The purpose of the preceding review is to provide advice to the Ministry of the Environment, Conservation and Parks regarding the Kinross Great Bear Project Impact Statement. The conclusions, opinions and recommendations of the reviewers are based on information provided by others, except where otherwise specifically noted. The ministry cannot guarantee that the information that has been provided by others is accurate or complete. A lack of specific comment by the reviewer is not to be construed as endorsing the content or views expressed in the reviewed material.



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