

Ministry of the Environment,  
Conservation and Parks

Ministère de l'Environnement, de la Protection de  
la nature et des Parcs

Drinking Water and Environmental  
Compliance Division, Northern Region

Division de la conformité en matière d'eau potable  
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June 3, 2024

## MEMORANDUM

TO: Catherine Sutherland, Special Project Officer, Environmental Assessment and Permissions Division

FROM: Sabrina Penfold, Hydrogeologist, Technical Support, Northern Region

RE: Draft Tailored Impact Statement Guidelines, Kinross Gold Corporation, Great Bear Gold Project, Tuzyk's Road, Unorganized District of Kenora

I have reviewed the groundwater-related components of the following:

- *Tailored Impact Statement Guidelines (TISG) – Draft Version, Great Bear Gold Project* dated May 8, 2024, prepared by the Impact Assessment Agency of Canada.
- *Kinross Gold Corporation - Great Bear Gold Project – Detailed Project Description* dated January 2024, prepared by WSP E&I Canada Ltd.

Kinross Gold Corporation (the proponent) is proposing to develop, operate and eventually reclaim an underground and open pit gold mine, processing plant and associated facilities/infrastructure.

Based upon the information provided to me, comments related to groundwater and hydrogeology are provided in the disposition table below.

It is advised that permits and approvals from the Ministry of Environment, Conservation and Parks (MECP) including but not limited to:

- Permit to Take Water (PTTW) under the Ontario Water Resources Act for various water takings activities, and

- Environmental Compliance Approval (ECA) under the Environmental Protection Act and Ontario Water Resources Act for industrial sewage, domestic sewage, and waste disposal operations may be required.

It should be noted that additional assessment and investigations may be necessary to support such applications if such assessments are not undertaken as part of the Environmental Impact Assessment.

If you have any questions regarding the comments and recommendations included in this review, do not hesitate to contact me.

Statement of Limitations

The purpose of the preceding review is to provide advice to the Ministry of the Environment, Conservation and Parks regarding subsurface conditions based on a review of the information provided in the above referenced document. The conclusions, opinions and recommendations of the reviewer are based on information provided by others. 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.

**ORIGINAL SIGNED BY**

Sabrina Penfold, P.Geo.

- c: GW 05 05 DK RL (Great Bear Gold Project, Kinross Gold Corporation; Red Lake Township, District of Kenora)
- ec: Carroll Leith (Manager, Technical Support Section, Northern Region)  
Chris Mahon (Water Resources Supervisor, Northern Region)  
Shawn Kinney (Groundwater Group Lead, Northern Region)

Ministry – Comment ID (e.g., MNR-01)	Draft Guidelines Section	Context and Rationale (provide an explanation of your comments)	Recommendation: provide text to be inserted or deleted. Be specific on the location within the draft Guidelines where the text would be added/deleted.
MECP-GW1	7.2	Section outlines valued components (VCs) that will serve as the focal points for the impact assessment. However, groundwater	Groundwater quality and quantity including baseline characterization and assessment of potential impacts from project components (i.e. open pit,

Ministry – Comment ID (e.g., MNRF-01)	Draft Guidelines Section	Context and Rationale (provide an explanation of your comments)	Recommendation: provide text to be inserted or deleted. Be specific on the location within the draft Guidelines where the text would be added/deleted.
		quality and quantity were not identified.	underground workings, tailings facilities, waste rock storage, overburden storage, and fuel and chemical storage), mitigation measures including residual effects and proposed monitoring program.
MECP-GW2	7.6	Section outlines VCs with concerns for cumulative effects that were identified during the planning phase. However, groundwater quality and quantity were not considered. Cumulative effects to groundwater are possible, and as such, should be considered in Section 7.6.	Groundwater quality and quantity should be included in the cumulative effects assessment.
MECP-GW3	8.6.3	A description of groundwater trigger monitoring as related to groundwater-surface water interactions, including trigger levels, parameters and a contingency plan is not included. Groundwater triggers can provide an early warning system for potential impacts to surface water and should be included in groundwater monitoring programs.	The proponent should provide a description of the trigger monitoring program for groundwater including trigger levels, trigger parameters and contingency plan that may be implemented during operation, closure, and post closure phases of the project.
MECP-GW4	8.6.3	Section outlines mitigation and enhancement measures. Groundwater quality, and surface water quality and quantity are included. However, monitoring points for changes related to groundwater quantity are not considered. Groundwater quantity may be impacted by development of mine infrastructure. Changes to the availability of groundwater may impact the	Monitoring points for groundwater quantity as related to groundwater-surface water interactions and groundwater discharge to the natural environment should be included for operation, closure and post-closure phases for the project.

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		natural environment or surface water bodies.	

**Comment Form - Draft Tailored Impact Statement Guidelines and Draft Cooperation Plan – Provincial Review Team**

**Great Bear Gold Project**

**Deadline: June 5, 2024**

All comments should be submitted via the Submit a Comment feature available on the Project’s Canadian Impact Assessment Registry page (<https://iaac-aeic.gc.ca/050/evaluations/proj/85832?culture=en-CA>). Documents can be uploaded using this feature. If you have any difficulties submitting this way, please contact the Registry directly at [registry-registre@iaac-aeic.gc.ca](mailto:registry-registre@iaac-aeic.gc.ca). Please note that all comments submitted using this form will be posted on the Canadian Impact Assessment Registry website for the Project.

Please note that this is your opportunity to provide input to the Tailored Impact Statement Guidelines.

Ministry:	Environment Conservation and Parks (MECP)		
IA Contact:	Shereen Panesar, Senior Policy Advisor (MECP)	Telephone:	416-903-0435
		Email:	<a href="mailto:Shereen.panesar@ontario.ca">Shereen.panesar@ontario.ca</a>

**Section 1 – Draft Tailored Impact Statement Guidelines:**

1. Please review the draft Tailored Impact Statement Guidelines (the Guidelines) sections that are applicable to your ministry’s mandate.
2. Using the table below, given the context of the Project, please provide any comments and include your recommendation for how the final Guidelines should be adapted to address any comments.
  - Please indicate any corrections, additions or deletions that should be made to the text. Please provide a clear context and rationale for your recommendations.
  - Please consider that expert advice should be commensurate to the situational context of the Project and informed by risk-based prudence and evidence in the proponent’s Detailed Project Description<sup>1</sup> and Response to the Summary of Issues<sup>2</sup>, with a strong reliance on well-understood mitigation measures, existing guidance, and regulatory instruments that will manage effects..

Ministry – Comment ID (e.g., MNR-01)	Draft Guidelines Section	Context and Rationale (provide an explanation of your comments)	Recommendation: provide text to be inserted or deleted. Be specific on the location within the draft Guidelines where the text would be added/deleted.
MECP-01	3.3 Regulatory framework and the role of government	In addition to the application of Canada’s “Strategic Assessment of Climate Change” would recommend noting the following additional provincial reports/guidelines: <ul style="list-style-type: none"> <li>• <a href="#">Consideration of Climate Change</a></li> </ul>	Recommend updating the following text: government policies, resource management plans, planning or study initiatives relevant to the Project and/or the impact assessment and their

<sup>1</sup> <https://iaac-aeic.gc.ca/050/evaluations/document/155992>

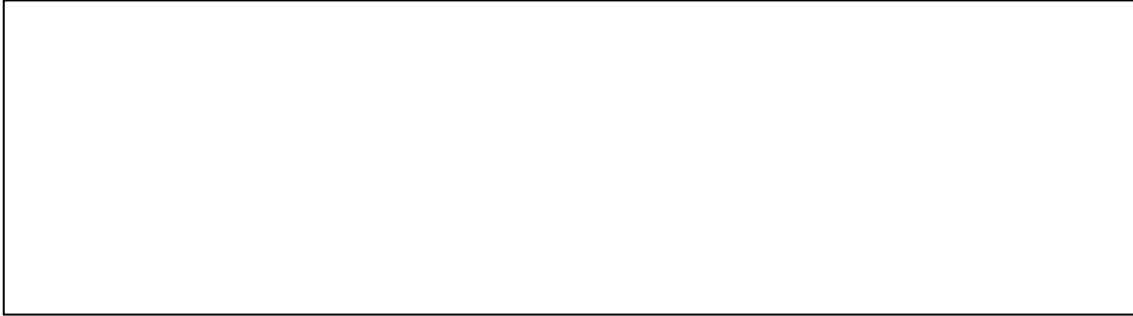
<sup>2</sup> <https://iaac-aeic.gc.ca/050/evaluations/document/153313>

Ministry – Comment ID (e.g., MNRF-01)	Draft Guidelines Section	Context and Rationale (provide an explanation of your comments)	Recommendation: provide text to be inserted or deleted. Be specific on the location within the draft Guidelines where the text would be added/deleted.
		<p><a href="#">in Environmental Assessment in Ontario</a></p> <ul style="list-style-type: none"> <li>• Ontario; Chapter 3 in Canada in a Changing Climate: Regional Perspectives Report, (ed.) F.J. Warren, N. Lulham, D.L. Dupuis and D.S. Lemmen; Government of Canada, Ottawa, Ontario <a href="#">Chapter 3 – Regional Perspectives Report (changingclimate.ca)</a></li> <li>• <a href="#">Ontario Provincial Climate Change Impact Assessment</a></li> </ul>	<p>implications including relevant regional studies, regional assessments and strategic assessments, including:</p> <ul style="list-style-type: none"> <li>- <a href="#">Guideline for the “consideration of climate change in environmental assessment in Ontario”</a></li> <li>- Ontario; Chapter 3 in Canada in a Changing Climate: Regional Perspectives Report</li> <li>- Ontario’s Provincial Climate Change Impact Assessment</li> </ul>
MECP-02	14 Effects of the Environment on the Project	<p>Would recommend that the Impact Assessment incorporate regional climate data, including <a href="#">Ontario’s Climate Data Portal</a> (along with other sources of climate data) available through the Climate Risk Institute’s website here: <a href="https://climateriskinstitute.ca/climate-data/">https://climateriskinstitute.ca/climate-data/</a></p>	<p>Recommend updating the following text in the section as follows:</p> <ul style="list-style-type: none"> <li>- describe the Project’s climate resilience and how the impacts of climate change have been integrated into the project design and planning throughout the life of the Project, and describe the climate data, projections, and related information used to assess risks over the life of the Project (using regional climate data available through Ontario’s Climate Data Portal and/or other data sources)</li> </ul>
MECP-03	14 Effects of the Environment on the Project	<p>Recommend updating this section with reference to the provincial guide to <a href="#">Consideration of Climate Change in Environmental Assessment in Ontario</a></p>	<p>Recommend revising the section as follows:</p> <p>Additional guidance related to conducting climate change</p>

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		<p><i>and <a href="#">Ontario Provincial Climate Change Impact Assessment</a>.</i></p>	<p>resilience assessments is included in the Strategic Assessment of Climate Change and the Draft Technical Guide Related to the Strategic Assessment of Climate Change: Assessing Climate Change Resilience, as well as, <a href="#">the provincial guide to Consideration of Climate Change in Environmental Assessment in Ontario</a></p>

**Section 2 – Draft Cooperation Plan:**

3. Please review the draft Cooperation Plan sections that are relevant to your ministry, including Appendix 1. Please indicate any recommended corrections to the text and confirm whether the preliminary list of relevant provincial regulatory mechanisms in Appendix 1 is accurate.





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## **MEMORANDUM**

June 7, 2024

TO: Catherine Sutherland  
Special Project Officer  
Environmental Assessment and Permissions Division

FROM: Jacinth Gilliam-Price  
Surface Water Specialist, Group Leader (A)  
Northern Region Technical Support

RE: Kinross Great Bear Project Draft Tailored Impact Statement  
Guidelines: Surface Water Review

## **INTRODUCTION**

As requested, the Surface Water Unit of Northern Region's Technical Support Section has reviewed the supporting documentation submitted regarding the proposed Great Bear Gold Project. The surface water related components of the following documents were considered as part of the review:

- Document titled "*Tailored Impact Statement Guidelines (TISG) – Draft Version, Great Bear Gold Project*" dated May 8, 2024, prepared by the Impact Assessment Agency of Canada.
- *Kinross Gold Corporation - Great Bear Gold Project – Detailed Project Description* dated January 2024, prepared by WSP E&I Canada Ltd.

**Purpose:** The purpose of this review is to provide advice to the Impact Assessment Agency of Canada (IAAC) on their draft Tailored Impact Statement Guidelines (TISG) to be presented to Kinross.

## **BACKGROUND**

Great Bear Resources Ltd. (GBR) is a wholly owned subsidiary of Kinross Gold Corp. The Great Bear Property is located approximately 25 km southeast of the Town of Red Lake. The property consists of an area of approximately 9140 hectares. GBR is currently focused on exploration of known mineralized zones on the property through an advanced exploration program but is presenting information and details in this process for a full gold mining operation.

This is an early stage of the federal impact assessment process, and these comments are meant to help inform the preparation of Tailored Impact Statement Guidelines which provide the proponent with directions and requirements for the preparation of an Impact Statement.

## DISCUSSION

Surface water-related comments and recommendations based on my review of the subject documents are in Table 1 below.

It is advised that permits and approvals from the Ministry of Environment, Conservation and Parks (MECP) will be required for this undertaking.

- Permit to Take Water (PTTW) under the *Ontario Water Resources Act* for various water takings activities.
- Environmental Compliance Approval (ECA) under the *Environmental Protection Act* and *Ontario Water Resources Act* for industrial sewage, domestic sewage, and waste disposal operations may be required.

Kinross should engage the MECP for any clarification on provincial regulatory requirements.

## CLOSURE AND STATEMENT OF LIMITATIONS

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 possible surface water impacts based on a review of the information provided in the above referenced documents. The conclusions, opinions and recommendations of the reviewer are based on information provided by others. 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.

<Signature removed>

Jacinth Gilliam-Price  
Surface Water Specialist, Group Leader (A)  
Northern Region Technical Support

Cc: Chris Mahon, Water Resources Supervisor  
Carroll Leith, Technical Support Section Manager  
Amy Godwin, Senior Science Advisor  
Sabrina Penfold, Hydrogeologist  
Shawn Kinney, Groundwater Group Leader/Hydrogeologist  
Matt Hoffmeister, Environmental Compliance Officer

**Table 1.** Surface water related comments upon the draft Tailored Impact Assessment Guidelines. **Bolded text in the recommendation column are suggested text additions to the guideline document.**

Ministry – Comment ID (e.g., MNRF-01)	Draft Guidelines Section	Context and Rationale (provide an explanation of your comments)	Recommendation: provide text to be inserted or deleted. Be specific on the location within the draft Guidelines where the text would be added/deleted.
MECP-SW1	2.2	With consideration that there is no designation for professional surface water science practitioners in the Province of Ontario, the person(s) preparing this report should demonstrate past experiences preparing similar works, and their educational qualifications.	<b>The person(s) preparing this report should demonstrate past experiences preparing similar works with regard to water quality, hydrology, biogeochemistry, and aquatic sciences as applicable, and their formal education qualifications should also reflect these areas of expertise.</b>
MECP-SW2	3.4	Should include consideration for reducing methylmercury production of flooded areas.	Project Activities: <ul style="list-style-type: none"> <li>• site grubbing, clearing and excavation, including tree and vegetation removal <b>with consideration of the impact flooded areas and available organic matter can increase the production of methylmercury under suitable biogeochemical conditions.</b></li> </ul>
MECP-SW3	8.3.1.	Sulphate production by exposure of sulphide-rich minerals can produce extensive runoff values in surface water quality.	In particular: <ul style="list-style-type: none"> <li>• <b>A sulphate management plan should be established and reviewed frequently to ensure beneficial and economic design, management and operation of waste rock stockpiles, particularly any potentially acid generating (PAG) rock storage locations.</b></li> </ul>
MECP-SW4	8.6.1.	Baseline conditions will need to be robustly assessed in preparation for a full mine operation after the advanced exploration (AEX) and will require expanded or altered monitoring and development.	The Impact Statement must: <ul style="list-style-type: none"> <li>• <b>Consider the prospectively broader impact area that the full mine operation will have in excess of the Advanced Exploration Project, and expand to the satisfaction of MECP technical staff when applying for provincial approvals and permissions.</b></li> </ul>

Ministry – Comment ID (e.g., MNRF-01)	Draft Guidelines Section	Context and Rationale (provide an explanation of your comments)	Recommendation: provide text to be inserted or deleted. Be specific on the location within the draft Guidelines where the text would be added/deleted.
MECP-SW5	8.6.2.	Water balance is critical for effective and economical management of mine sites. This is especially paramount with consideration of changes to climatic norms and the need for process water to operate the future full mine site.	<p>The Impact Statement must:</p> <ul style="list-style-type: none"> <li>• present an integrated site water balance model incorporating surface and groundwater fluxes to or from all major project components, for all project phases. Include estimates of surface water runoff rates for major project components;</li> <li>• <b>The water balance must be updated frequently, and consider the growing uncertainty presented in hydrological modelling by climatic changes.</b></li> </ul>
MECP-SW6	8.7.1.	Wild rice is sensitive to sulphate discharges. The prospective presence of wild rice, otherwise known as Manoomin ( <i>Zizania palustris L.</i> ) should be considered by the proponent as they consult with Indigenous communities in the area, in particular.	<p>The Impact Statement must:</p> <ul style="list-style-type: none"> <li>• provide a description of the biodiversity<sup>10</sup>, relative abundance and distribution of vegetation species and communities of ecological, economic, or human importance within the LSA and RSA of the project, including:</li> <li>• other vegetation species of importance to Indigenous Peoples, including wild rice</li> <li>• <b>An understanding of any prospective sulphate discharges or unplanned leaching to any surface waters containing Wild Rice (<i>Manoomin, Zizania palustris L.</i>) above background values, or 10 mg/L should be considered.</b></li> </ul>