



**FINAL WRITTEN
SUBMISSION OF THE
KIVALLIQ INUIT
ASSOCIATION ON
THE 2021
DRAFT NUNAVUT LAND
USE PLAN**

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Prepared for: Nunavut Planning Commission

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1. INTRODUCTION

Kivalliq Inuit Association ("KivIA") appreciates the opportunity to provide a final written submission on the 2021 Draft Nunavut Land Use Plan (2021 DNLUP). The Nunavut Planning Commission ("NPC") opened the public record on July 23, 2021 and requested submissions from the parties and interveners. KivIA provided a written submission to the NPC on April 15th, 2022.¹ KivIA participated in the regional hearing held in Rankin Inlet (September 19th to September 23rd, 2022) by providing a presentation and responding to questions from the NPC and community members ("Rankin Inlet Hearings").² KivIA also attended the regional hearing held in Thompson, Manitoba (September 26th to September 27th, 2022) as an observer and subsequently provided written responses to questions asked of them at the Thompson Hearings. KivIA also observed the online Regional Public Hearings that took place in Cambridge Bay (September 12-15, 2022), Pond Inlet (October 24-27, 2022) and Iqaluit (November 14-19, 2022). Subsequent to the Rankin Inlet Hearings KivIA submitted the following additional documents to the NPC public registry:

- KivIA DNLUP Engagement Tour Summary Report (September 22, 2022).³
- KivIA Responses to the Beverly Qamanirjuaq Caribou Management Board written questions (November 17, 2022).⁴
- KivIA additional explanation on Mobile Measures for NPC (January 12, 2023).⁵

Unless otherwise stated, the additional documents submitted to the NPC public registry, the Final Amended Technical Review of KivIA submitted to the NPC on April 15, 2022, the PowerPoint presentation (uploaded to the NPC registry on October 14, 2022), and the oral submissions made by KivIA at the Rankin Inlet Hearings continue to apply. Since the conclusion of the regional public hearings, KivIA has worked with Nunavut Tunngavik Incorporated ("NTI") and the other Regional Inuit Association's ("RIAs") on a final joint submission. KivIA has also

¹ NPC Registry Document 21-060E-2022-04-14

² NPC Registry Document 21-123E-2022-08-11

³ NPC Registry Document 21-138M-2022-09-22

⁴ NPC Registry Document 21-153E-2022-11-16

⁵ NPC Registry Document 21-161E-2023-01-09

participated in meetings with NTI, RIAs, Government of Canada ("Canada"), and the Government of Nunavut ("GN") to try to achieve consensus on important issues. In addition to relying on the NTI-RIA Final Joint Submission, KivIA provides this document as its own submission to highlight additional points of clarity regarding issues involving the Kivalliq region.

KivIA envisions a first generation land use plan that balances the interests of wildlife protection, conservation, and economic development and one that puts Inuit first. KivIA understands that the NPC has a difficult task in producing a final land use plan that best achieves a necessary balance. To comply with the *Nunavut Agreement*, the Land Use Plan must clearly take into account Inuit goals and objectives, including ensuring the land use plan reflects the priorities and values of Inuit. KivIA, as an RIA, has a mandate to ensure that the interests of Kivalliq Inuit are protected now and into the future, and its submissions to date have been made with that focus. Achieving a balanced Land Use Plan that has regional variation will ensure that Inuit achieve self-determination and self-sufficiency, as envisioned by the negotiators who fought for the settlement of the *Nunavut Agreement*. Without balance, KivIA will not have the flexibility to manage and make decisions on issues related to Inuit Owned Land ("IOL") in a way that best protects the interests of Kivalliq Inuit. KivIA looks forward to reviewing a revised final draft Land Use Plan that fully addresses Inuit concerns, and one that does so through a regional and territorial context.

KivIA appreciates the efforts of the community representatives, Hunters and Trappers Organizations, Regional Wildlife Organizations, and all other participants who provided fulsome submissions that ensured that their voices were heard. KivIA's Final Submission is informed by all the submissions made at the NPC Regional Public Hearings on the 2021 DNLUP as well as the entirety of the public record. The completion of the Land Use Plan is a priority for KivIA and will benefit Nunavut as a whole. KivIA remains hopeful that the final Land Use Plan put to NTI-Canada, and the GN for consensus approval will represent a more balanced approach and lead to a sustainable and prosperous future for Inuit.

2. **INUIT OWNED LANDS**

While KivIA acknowledges that the land use planning process applies to IOL, KivIA objects to the impact the 2021 DNLUP will have on the Inuit right of decision-making and management over IOLs pursuant to Article 17 and section 19.3.1 of the *Nunavut Agreement*. Currently, the Limited Use designations in the 2021 DNLUP will impact approximately 45% of all surface IOL and 56% of all subsurface IOL in the Kivalliq Region. Restricting RIA decision making and management rights for 45% of all surface IOL in the region was not what was intended by those individuals who fought hard to negotiate and secure land ownership rights for Inuit under the *Nunavut Agreement*. The right to manage IOL is of critical importance to KivIA and is fundamental to Inuit self-determination and economic self-sufficiency.

Unless specifically otherwise stated, KivIA generally supports Conditional Use designations on IOLs, as long as the designation does not interfere with its decision-making and authority to manage IOLs in accordance with its internal rules and procedures. KivIA believes that Conditional Use designations generally provide best for both the long-term health and well-being of wildlife and also support long term economic development opportunities.

Community participation in land use planning decisions is an essential element of KivIA's decision-making process and IOL management. This is done through the Community Lands and Resource Committee ("CLARC"). The CLARC is a committee made up of knowledgeable community members that include members from the HTO, Hamlet, Elders, Youth, and a KivIA Director. KivIA and the CLARC receive and review land use applications and inform community members about land use proposals and recommended land use decisions. The CLARC may also recommend any terms and conditions attached to the land use application. The makeup of the CLARC and the divergent points of view and knowledge encourage dialogue and debate and ensure that community voices are heard throughout KivIA's internal land use application review process. Ultimately, The Land Use Plan must ensure that KivIA retains decision-making authority when reviewing a land use application for surface IOL and it is the CLARC process that will ensure that Inuit decision making is retained. In addition to Appendix A of the NTI-RIA Final Joint

Submission, KivIA's current Community Lands and Resource Committee Manual is attached as **Appendix 1** to this submission for the NPC's information and additional clarity.

KivIA retained Geovector Management Inc. to conduct a mineral economic model analysis with respect to the known mineral potential in the Kivalliq Region. The purpose of this request was to ascertain the economic potential of the known precious and base metals potential in the Kivalliq Region and estimate negative economic effects that the 2021 DNLUP may have on the Kivalliq Region and Nunavut as a whole. These negative economic outcomes would in turn affect the ability for Inuit to achieve self-determination and economic self-sufficiency. The report considers the economic benefits of four potential projects in the Kivalliq Region, which are all located in areas with no currently operating mines. Based on the current geoscience information these new areas have high potential for developing precious and base metal deposits. The deposit analogues used to assess the economic potential for precious and base metals are Ferguson Lake, Heninga Lake and Hackett River type; and for gold, the Meliadine type gold deposit and are outlined and mapped in **Appendix 2**.

To summarize, the report concludes that:

- Mine and metal recovery plants would lead to increased Inuit employment and a greater need for more Inuit indirect service providers;
- The net profit royalty payments to NTI, RIAs, and Governments over the 12 to 24 year life of these Potential Projects, totals approximately \$3.7 billion.
- The refining capacity and expertise built to support these mines opens an entirely new field of opportunity for Nunavut within the "green mineral" industry; and
- The power grid and winter/ all season road infrastructure corridors would open up new areas of highly prospective geology for additional development opportunities.

The Report and Figure 1 are attached as **Appendix 2** to this Final Submission.

Recommendations

1. Unless otherwise stated, surface IOLs in the Kivalliq Region be generally designated as Conditional Use so long as said designation does not interfere with KivIA's authority to manage IOLs and all conditions related to this designation are approved by KivIA. Ultimately, KivIA wants to retain decision-making authority over what projects can proceed on surface IOL in the Kivalliq Region and maintain flexibility as to what land use designation be instituted.
2. The Land Use Plan specify as a Plan Requirement that all land use applications for surface IOL in the Kivalliq Region will be reviewed by KivIA through the CLARC process provided in **Appendix 1** of this Submission.
3. Prior to the NPC designating any IOL as Limited Use, and prior to KivIA consenting to a Limited Use designation an Inuit Impact and Benefit Agreement should be negotiated and a mineral potential assessment should be done and an analysis of the economic value of country food including caribou harvesting to determine the impact the designation will have on economic self-sufficiency. This exercise is important in light of the Crown's duty to consult, as Inuit need to be fully informed of the impact any designation might have on their treaty rights. Without knowing the value of what Inuit may be giving up for a Limited Use designation, free and informed consent is not possible.
4. Should the Government of Canada seek to designate an area involving surface IOL (including within any of the Community Areas of Interest show on Map A in the 2021 DNLUP) as Limited Use in order to meet its terrestrial and marine conservation goals, an Inuit Impact and Benefit Agreement would need to be negotiated between KivIA and the Government of Canada prior to the land use designation coming into effect.

3. CARIBOU PROTECTION

KivIA appreciates and supports NPC's recognition of how important caribou are to Inuit. Inuit frequently expressed concerns for caribou and their habitat during the 2022 NPC public hearings in Rankin Inlet and Thompson, in written submissions and during community meetings⁶. KivIA recognizes that while it is not easy, protecting caribou and their habitats has to be balanced with economic development options for Kivalliq Inuit.

KivIA is concerned about Limited Use applied to calving and post-calving in the 2021 DNLUP because the mapped areas appeared large and inconsistent with recent Inuit knowledge. Year-round closure of large areas would potentially restrict mining exploration and economic development and KivIA's authority to manage IOL. KivIA has consistently questioned the mapping and resulting dates for calving and post-calving. To illustrate their concerns, KivIA undertook an alternative approach to update mapping for the Qamanirjuaq herd's calving area based on Inuit knowledge of a shift in calving and caribou collar data (**Appendix 3**). The most recent 10- or 5-years area of concentrated calving (Figure 1) is 20% or 40% smaller, respectively, than NPC's mapped calving area (~23,000 km²).

The recent shift in the concentrated calving area to mostly outside NPC's 2021 Limited Use designation reinforces the need to update mapping at frequent intervals as calving may continue to shift, possibly in response to a warmer climate. Elsewhere, in Alaska, shifts in calving areas in response to industrial development have been described. If shifts in areas of concentrated calving for the Qamanirjuaq herd continue, the shifts may potentially expose cows and newborn calves to exploration and development from projects that have existing rights⁷.

⁶ 16-269E-2020-02-14 Summary of Community Meetings on 2016 DNLUP-Baker Lake_Eng Jan 2020. File downloaded from <https://lupit.nunavut.ca/portal/registry.php>

⁷ Section 6.1.8 2021 DNLUP

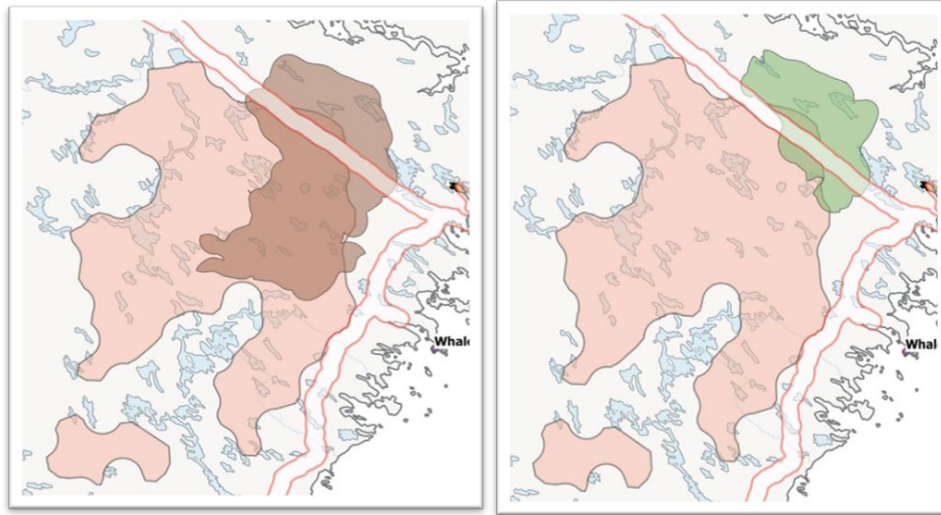


Figure 1. Concentrated calving for the most recent 10-year (brown 2012-2021) and 5-year (green 2017-2021) periods compared to NPC's calving area (pink) for 1993-2012. (Collar data courtesy GN).

Inuit are clear about protecting caribou and their habitat, especially during calving and at water-crossings. KivIA also recommends that protecting calving areas has to be balanced across other seasonal ranges to ensure that caribou are protected year-round. Outside concentrated calving, caribou distribution is less predictable as the caribou are constantly moving. Cows and their calves need protection from disturbance especially in post-calving and summer because a cow has to feed to replace the weight she lost during winter and produce milk for her calf. Interruptions to foraging in response to disturbance are typically brief. But if disturbances are frequent, a cow cannot feed her calf and gain weight herself. Consequently, since 2016 KivIA has been recommending to NPC for Mobile Caribou Conservation Measures (Mobile Measures) as an innovative approach that 'travels' with the caribou as a flexible tool to avoid or minimize potential impacts of disturbances to caribou.

Mobile Measures have three components: (i) monitoring, the results of which are compared to pre-assigned thresholds; (ii) thresholds which trigger decisions about the intensity of tiered mitigation; and (iii) mitigation (**Appendix 4**). Mitigation is implemented to avoid or minimize sensory disturbance to caribou. In turn, monitoring can be used to gauge the effectiveness of the

mitigation. Mobile Measures are already part of existing land use regulatory systems which have provisions to protect caribou habitat and enforcement to ensure compliance (**Appendix 4**).

During the 2021 DNLUP reviews and the public hearings, Mobile Measures were both supported and questioned, while the 2021 DNLUP did not recommend acceptance of Mobile Measures. The questioning may be from not knowing how KivIA's Mobile Measures have been working since 2016 (**Appendix 4**). KivIA recognizes that any wider application of Mobile Measures in other regions will need to be tailored using the development of skills through observation, mentoring, practice, and effort (Pilimmaksarniq), community knowledge and technical information for the different regions and their caribou herds.

KivIA's recommendations for caribou

KivIA has the following recommendations for caribou (Table 1). The recommendations are dependent on a collaborative approach to updating the mapping of seasonal ranges and season dates. The mapping for concentrated calving areas should be updated every 10 years to accommodate directional annual shifts in calving areas.

Table 1. KivIA recommended caribou range land use designations and terms or conditions, 2021 Draft Nunavut Land Use Plan.

Caribou seasonal range	Designation	Condition
1. Calving areas		
1.1 Concentrated calving area	CU	Seasonal closure for mineral exploration and development activities, tourism; Mobile Measures for other seasons

Caribou seasonal range	Designation	Condition
1.2 Historical calving	CU	Seasonal closure for mineral exploration and development activities, tourism; Mobile Measures for other seasons
2. Post-calving area	CU	Seasonal closure for mineral exploration and development activities, tourism; Mobile Measures for other seasons
3. Key access corridors		Covered under Historical Calving Area and Post-calving Area
4. Freshwater crossings	LU/CU	Year-round closure (LU) within 1-3km; and Seasonal restrictions and Mobile Measures for other seasons (CU) within 10km
5. Sea-ice crossings	CU	No icebreaking activities during the indicated seasons
6. Other seasonal ranges	VEC	Mobile Measures

1.1. Concentrated Calving Area: Conditional Use

KivIA defines concentrated calving as the area used in June when the cow's daily rate of movement is 5 km/day or less, mapped over the previous 10 years (concentrated calving season is typically 6–16 June for the Qamanirjuaq herd). However, annual variation indicates the overall dates for the concentrated calving season will be 1-20 June. This will protect cows and calves

until the calves are old enough to keep up with their cow. The concentrated calving area and season will be herd specific.

KivIA recommends that the concentrated calving area be designated Conditional Use with seasonal restrictions in June with Mobile Measures applied year-round outside the concentrated calving season. The concentrated calving areas should be seasonally closed to mineral exploration and development and tourism activities to ensure that concentrated calving areas during the season of their use are not exposed to the presence and movement of people, machinery and vehicles. The exception is wildlife monitoring and research. The restrictions would apply to wind turbines for electrical generation and related infrastructure which would be shut down during the restricted season.

KivIA suggests that protection for caribou and their habitat is not reduced by allowing industry more certainty through operating outside the calving season. Most mineral exploration does not lead to mine development and a mine would require public input during its environmental assessment. A mine with conditions such as not operating during calving and early post-calving and being designed as underground, not open pit, and no satellite developments serviced by roads could minimize habitat change, though impacts on caribou behavior are unknown. Cumulative effects thresholds could include a cap on the number of mines operating at any one time on a caribou seasonal range. A precedent for a seasonal mine shut-down exists as proposed mitigation for the Sabina mine in the Kitikmeot Region (currently under construction) includes a shut-down if caribou calve in the vicinity.

1.2. Historical Calving Area: Conditional Use

Historical calving is the traditional calving grounds (NPC's mapping 1993-2012) which are adjacent to the concentrated calving area. KivIA recommends Conditional Use because in a late calving year, delayed pre-calving migration may result in some cows calving before they reach the concentrated calving area. Additionally, juvenile caribou and non-breeding cows may use the historical calving areas as they typically migrate at a slower speed than the pregnant cows. Historical calving areas should be seasonally closed to mineral exploration and development and

tourism activities to ensure that caribou during the season of their use are not exposed to the presence and movement of people, machinery and vehicles except for wildlife research. The restrictions would apply to wind turbines for electrical generation and related infrastructure which would be shut down during the restricted season. The dates for the seasonal restrictions are 15 May–20 June to include annual variation in pre-calving migration. The dates may need to be amended when mapping is revised. Mobile Measures should be applied year-round outside the concentrated calving season.

2. Post-calving areas: Conditional Use

KivIA recommends that post-calving areas be designated Conditional Use. The restrictions would be seasonal closure (21 June to 15 July) for mineral exploration and development and tourism activities to ensure that caribou during the season of their use are not exposed to the presence and movement of people, machinery and vehicles except for wildlife research. The restrictions would apply to wind turbines for electrical generation and related infrastructure which would be shut down during the restricted season. Post-calving areas need updated mapping and reconsideration of dates given recent shifts in both the dates of calving and concentrated calving areas. Mobile Measures would be applied within post-calving areas outside of the post-calving period.

3. Key Access Corridors:

KivIA recommends Key Access Corridors be removed from the 2021 DNLUP as they are already covered under Historical Calving Area and Post-calving Area.

4. Freshwater caribou crossings: Limited and Conditional Use

KivIA continues to recommend that the immediate area around identified water crossings should be placed within year-round Limited Use status, with the size of the area perhaps 1–3 km radius and tailored to traditional caribou approach characteristics based on IQ. Around this Limited Use area of water crossings, KivIA recommends a 10 km radius Conditional Use zone

with seasonal restrictions. The period for seasonal restriction will require community consultation. Mobile Measures would be applied outside the seasonal restriction period.

5. Sea-ice crossings: Conditional Use

KivIA recommends that sea-ice crossings be designated Conditional Use with no icebreaking activities during the indicated seasons.

6. Summer, fall, rut and winter: Caribou Valued Ecosystem Component

KivIA recommends identifying caribou as a Valued Ecosystem Component (VEC) for summer, fall, rut and winter with seasonally explicit Mobile Measures to reduce exposure of caribou to exploration activities and minimize interruptions to their foraging time. KivIA understands from NPC staff that VECs are appropriate for applying Mobile Measures. Proponents are required for VEC's to identify anticipated impacts and report on actual impacts to NPC. KivIA recommends that Mobile Measures with their requirement for mitigation are an essential component of the requirements for applying VECs to caribou.

4. LINEAR INFRASTRUCTURE

KivIA continues to rely on its submissions from April 15, 2022 and its oral submissions with respect to the Kivalliq-Manitoba linear infrastructure corridor. The proposed Kivalliq-Manitoba linear infrastructure corridor, including all weather roads, will enhance economic opportunities for the Kivalliq region of Nunavut. There would be increased opportunities for resource development, employment benefits, business development, and a reduction in the costs of transportation of people, goods, and services. All of these opportunities combined will further allow Inuit to reach self-determination and economic self-sufficiency.

KivIA repeats its request for the Kivalliq-Manitoba linear infrastructure corridor to be designated Conditional Use. KivIA would institute terms and conditions based on the specific project and apply seasonal restrictions and Mobile Caribou Conservation Measures where the corridor crosses key migratory corridors, concentrated calving and post-calving seasonal ranges in this area. Designating the Kivalliq-Manitoba linear infrastructure corridor as Limited Use will interfere with KivIA's authority to manage IOLs, and limit the strive for economic self-sufficiency and self-determination as envisioned by the *Nunavut Agreement*.

KivIA is also requesting that the NPC implement a streamlined conformity and amendment process that would permit ancillary linear infrastructure expansion from the Kivalliq-Manitoba linear infrastructure corridor to existing and new projects within the Kivalliq region, understanding the need to follow existing regulatory requirements.

Recommendations

1. The Kivalliq-Manitoba linear infrastructure corridor be designated as Conditional Use with the applicable terms and conditions to be determined by KivIA, including seasonal restrictions and Mobile Caribou Conservation Measures which would be incorporated into the Land Use Plan as a Plan Requirement for the Kivalliq-Manitoba linear infrastructure corridor.

2. KivIA recommends that section 5.3.3-1 of the 2021 DNLUP be amended to state:

"The Kivalliq-Manitoba linear infrastructure corridor shown on Map A is a Conditional Use Area within which the following uses are permitted:

(a) permanent facilities and infrastructure, support facilities and any other related systems associated with the construction and use of the corridor,

(b) linear infrastructure, including fibre optics,

(c) all weather and seasonal roads, and

(d) quarries,

provided that:

(i) the Kivalliq Inuit Association approves of the land use in this area accordance with its CLARC process, and

(ii) the Kivalliq Inuit Association's Mobile Caribou Conservation Measures are followed."

3. The NPC implement a streamlined conformity and amendment process to permit ancillary linear infrastructure expansion from the Kivalliq-Manitoba linear infrastructure corridor to existing and new projects, understanding that necessary regulatory approvals and processes would still need to be followed. This will allow for current and future projects on IOL to not be "stranded" with no access to linear infrastructure and therefore no opportunity to be developed.
4. The NPC set out a streamlined conformity and amendment process and criteria, in a revised procedures document, specifically the "Internal Procedure- Amendments to Land Use Plans". This document should outline specific procedures to address linear infrastructure, including the footprint of the Kivalliq-Manitoba linear

infrastructure corridor. An example of a streamlined amendment process being necessary could be if the footprint of the Kivalliq-Manitoba linear infrastructure corridor changes between now and final construction.

5. COMMUNITY DRINKING WATER

At the Rankin Inlet Hearings, the NPC asked KivIA to expand on how a Conditional Use designation with setbacks would work for the community of Arviat's drinking water supply. Though local topography presents challenges in defining setbacks, KivIA maintains the position that a Conditional use designation will allow for KivIA to manage the surface IOL within the Arviat community drinking watershed, while maintaining the integrity of the drinking water supply.

Recommendations

1. KivIA recommends that section 4.5.2-1 of the 2021 DNLUP be amended to state:

"The community drinking water supply watershed of Arviat which is located outside of municipal boundaries is a Conditional Use Area within which the Kivalliq Inuit Association will receive and review any land use application in this area through its CLARC process and determine whether to grant access to the lands with terms and conditions."

6. COMMUNITY AREAS OF INTEREST

At the Rankin Inlet Hearings, the NPC asked KivIA to expand on what the associated Plan Requirements would be for a Conditional Use designation assigned to the Community Areas of Interest of Duke of York Bay, Diana River, and the Essential Char fishing rivers. KivIA has reviewed its position with respect to the above and confirms that the recommendation is a Conditional Use designation. Details on Plan Requirements can be found below.

A) Diana River

Recommendations

1. The Diana River Community Area of Interest be designated as a Conditional Use Area.
2. The Land Use Plan specify as a Plan Requirement that all land use applications in the Diana River Community Area of Interest will be reviewed by KivIA through the CLARC process and should access be granted, KivIA will implement terms and conditions for the land use.
3. KivIA recommends that section 4.1.1-12 of the 2021 DNLUP be amended to state:
" The Diana River and the adjacent area shown on Map A are Conditional Use areas within which the Kivalliq Inuit Association will receive and review any land use application in this area through its CLARC process and determine whether to grant access to the lands with terms and conditions."

B) Essential Char Fishing

Recommendations

1. The Essential Char Fishing Community Area of Interest be designated as a Conditional Use Area.

2. The Land Use Plan specify as a Plan Requirement that all land use applications in the Essential Char Fishing Community Area of Interest will be reviewed by KivIA through the CLARC process and should access be granted, KivIA will implement terms and conditions for the land use.
3. KivIA recommends that section 4.1.1-11 of the 2021 DNLUP be amended to state:
" The Essential Char Fishing Areas and adjacent area shown on Map A are Conditional Use areas within which the Kivalliq Inuit Association will receive and review any land use application in this area through its CLARC process and determine whether to grant access to the lands with terms and conditions.

C) Duke of York Bay

Recommendations

1. The Duke of York Bay Community Area of Interest be designated as a Conditional Use Area with seasonal restrictions. This Area is currently the subject of IIBA discussions due to its economic development potential, as well as it encompasses part of the Southampton Island Risk Assessment being completed by the Department of Fisheries and Oceans for a possible marine protected area. All of this underscoring the need for KivIA to maintain flexibility when it comes to decision-making for this area of interest. Prohibitions through Limited Use designations would limit KivIA's ability to assess each land use application and make a decision that best aligns with Inuit goals, whether it be conservation, economic development, or both. KivIA is aware of and also notes from its review of the NPC registry that the Aiviit Hunters and Trappers Organization passed a motion supporting the Duke of York Bay being designated as "public mixed use" ⁸KivIA believes that a Conditional Use designation can align with the Aiviit Hunters and Trappers Organization and will continue to engage with them subsequent to the close of the public record.

⁸ NPC Registry Document 21-166E 2023-01-26

2. KivIA may at some time consider the Duke of York Bay Community Areas of Interest as a potential conservation area that can be used towards Canada's international commitments to meet its biodiversity targets, subject to the following: (1) IIBAs must be negotiated between Canada or GN and KivIA, and (2) the IOLS within the Community Areas of Interest remain designated as Conditional Use until IIBAs are finalized.
3. The Land Use Plan specify as a Plan Requirement that all land use applications in the Duke of York Bay Community Area of Interest will be reviewed by KivIA through the CLARC process and should access be granted, KivIA will implement terms and conditions for the land use.
4. KivIA recommends that section 4.1.1-6 of the 2021 DNLUP be amended to state:

" The Duke of York Bay and the adjacent area shown on Map A are Conditional Use areas within which the Kivalliq Inuit Association will receive and review any land use application in this area through its CLARC process and determine whether to grant access to the land with terms and conditions.

7. THELON WILDLIFE SANCTUARY

Section 3.2.1-1 of the 2021 DNLUP assigns a Limited Use designation to the Thelon Wildlife Sanctuary. KivIA understands that this area is important for conservation and understands that Canada may seek to count this area towards its conservation targets. KivIA supports the Limited Use designation assigned to the Thelon Wildlife Sanctuary provided that prior to the coming in effect of the Land Use Plan, an IIBA is entered into between KivIA and Canada with respect to this area.

8. CONCLUSION

KivIA acknowledges the difficult task of managing conflicting interests over Nunavut's regions; progress has and will continue to be made as the Land Use Planning process is finalized. KivIA has appreciated all the opportunities to hear opinions and concerns from all stakeholders and has taken them into account to finalize KivIA's recommendations. KivIA's recommendations are to strengthen the need to respect Inuit values and ambitions for IOL, and to balance environmental sustainability and protection with economic development. KivIA looks forward to reviewing a revised draft land use plan, and expects that the revisions will clearly take into account the Inuit right to self-determination and self-sufficiency. Doing so will allow for a forward looking first generation land use plan that is shaped by Inuit and for Inuit.

APPENDIX 1- COMMUNITY LANDS AND RESOURCE COMMITTEE MANUAL

Community Lands and Resource Committee Manual

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1.0 CLARC Report to the Land Manager and Public

When the CLARC reports a decision on an application or on the effects of an operation on IOL, the CLARC should report their observations based on their knowledge of the land and for the purpose the specific parcel was chosen as IOL. This means that if the CLARC makes a recommendation based on its potential effects on wildlife, they should know that the proposed land use will likely affect the wildlife or the Inuit harvesting rights. If the CLARC decides that no economic benefit to the community is foreseen they should have the facts to back up that decision.

2.0 Purpose of Inuit Owned Lands Article 17

17.1.1 The primary purpose of Inuit Owned Lands shall be to provide Inuit with rights in land that promote economic self-sufficiency of Inuit through time, in a manner consistent with Inuit social and cultural needs and aspirations.

17.1.1 Inuit Owned Lands are expected to include areas with the following characteristics, not in order of priority.

- a) Areas of value principally for renewable resource reasons, including
 - i) principal or other wildlife harvesting areas,
 - ii) areas of significant biological productivity or of value for conservation purposes,
 - iii) areas of high potential for propagation, cultivation or husbandry,
 - iv) areas of current or potential occupation by outpost camps,
 - v) areas of value for sport camps or other tourist opportunities; and
- b) Areas of value principally for reasons related to the development of non-renewable resources, including
 - i) areas of known or potential mineral deposits
 - ii) areas of value for various operations and facilities associated with the development on non-renewable resources;
- c) Areas of commercial value; and
- d) Areas of archaeological, historical or cultural importance.

17.1.1 Inuit Owned Lands shall, to the extent possible, provide for a mix of the characteristics outlined above in order to secure balanced economic development. However, the relative weighting of the characteristics with respect to any particular community or region shall turn on the actual and potential economic opportunities at hand and the particular community or regional preferences.

- 17.1.1 The Parties agree that the provisions of this Article have been complied with in respect of Inuit Owned Lands vested on the date of ratification of the Agreement.
- 17.1.1 Neither Government nor Inuit shall have a claim or a cause of action based on non-compliance with this Article in respect of Inuit Owned Lands vested on the date of ratification of the Agreement.

3.0 Process Specific to the Kivalliq Regional Inuit Association

When an Application to Access Inuit Owned Land is received the Lands Administration of KIA reviews for completeness, scope of operation (what is involved?), duration, and area. KIA then acknowledges receipt by giving notice to the applicant and a receipt of payment. The community/communities involved are then notified and given copies to review for approval.

4.0 Terms of Reference for the Kivalliq Community Land and Resource Committee

Members: Members of CLARCs may be designated through different selection processes according to the community's preferences. A CLARC should have a representative from the HTO, Hamlet, Elders, Youth and the KIA Board of Directors of that community. Each member of the CLARC is to any other organization that the member may belong to or any elected office they may hold. The number of members may not exceed 5 (five).

Honoraria: \$150.00 flat rate and \$200.00 for when travel is involved.

Authority: Each CLARC is to advise the KIA Land Manager, in writing, (see attached form) on matters concerning the management of Inuit Owned Land within their own community area (i.e. advising as to whether a proposed land use operation should proceed and under what conditions. Advise whether to deny access to those IOL applied for and to specify why).

If there is no consensus between the CLARC and the Land Manager, or between CLARCs of different communities the issue will be resolved by the KIA Board of Directors by way of resolution.

5.0 Reviewing an Application for Access to Inuit Owned Lands (IOL)

First the Land Manager must determine if the applicant has a right under the Agreement to come onto IOL to do what they are applying for. The Land Manager will then forward the

application to the CLARC. This only applies to class 2 and 3 licenses. Class 1 licenses are approved or disapproved by the Land Manager's discretion due to the low activity of the proposed use of I.O.L.

If a person has a right of access to IOL, Inuit are obligated to give that person access (i.e. when a person is given Federal claim tags for Crown lands sub-surface beneath Inuit Owned Surface Lands). Inuit though can impose reasonable terms and conditions. If a person does not have a right of access, Inuit can decide whether they want the activity on the land or not. The main thing in this case is that Inuit must be sure to treat all people fairly.


In making a decision as to what terms and conditions should be imposed, the CLARC should consider the following:

- a) Determine first if Inuit are presently using the land area in question; has the area been recently used?
- b) Ask themselves, is the proposed land use activity requested in conflict with the Inuit land use? Can both the Inuit use the land and the proposed activity occurs at the same time?
- c) How long will this activity be on the land? Will it be on the land at a time when wildlife would be there?
- d) Will the proposed land use activity harm the land? Will it be harmful to the environment? Will it harm any people, wildlife or water bodies in the area?
- e) Will the activity be using any materials, substances, chemicals or equipment that are likely to harm the land, people, wildlife or water?
- f) What do the Inuit who use the area think about the proposed activity?
- g) Will the proposed activity benefit the Inuit of the community or communities economically? In what way is it beneficial to Inuit?
- h) Has the applicant been operating on IOL in the past or on any land in Nunavut in the past?
- i) How did the applicant care for or treat the land if they have operated in Nunavut in the past?

6.0 Recommendation on Approval or Disapproval of an Application

In answering the question listed above the CLARC should be in a position to list good reasons for recommending approval to use IOL. For example:

- a) if the applicant cannot prove that a piece of equipment will not significantly harm the land,

- 
- b) they are going to use a chemical that the land manager has information that may be harmful to people and the environment,

These might be reasons to not approve the application.

If the use will benefit the community and not significantly harm the land or people they then can recommend approving the application. If there is reason and information indicating possible harm and also benefit, the CLARC will have to think and discuss all of these facts and make a recommendation to approve or not. Community consultation in this decision is very important.

Land Use Application Recommendation Form



COMMUNITY LAND AND RESOURCE COMMITTEE

LAND USE APPLICATION APPROVAL

For Office Only

Community:

Date:

KIA Land Administration application Comment

Review process Request

Rush (Send back asap)

Send back between a reasonable Time

CLARC Meeting Date: _____

CLARC Members Present:

Land Use License #

Please Review:

Is the area currently in use by the Inuit?

Is the area preferred camping ground?

Does the proposed project involve wildlife habitat?

Has the applicant operated in the area in the past?

CLARC's Comments and Recommendations:

Comments Attached

7.0 The Stages of Mineral Development

7.1 Exploration

Mineral exploration is the process in which prospectors, geologists and others use science, intuition and sometimes luck to discover mineral deposit. A mineral deposit is a concentration of valuable metals or other commodities such as diamonds, which has been deposited within the earth through a combination of several unique geological processes. These processes act together to increase the concentration of minerals which are found in most ordinary rocks by a factor of 1,000 to 10,000 or more times their usual concentration.

An exploration program normally starts with a model or concept in which one area is compared with another area, which has similar rocks containing a mineral deposit. The reasoning is that since the same rocks are found in the area to be explored, perhaps a mineral deposit will also be found there. It is normally the job of the government geologists (mostly Geological Survey of Canada (GSC)) to carry out the basic mapping, which identifies the rocks, which are present in the area. This gives the prospector or exploration company an idea of where to start looking.

After the area is selected, usually in an office during the winter, field crews will fly into the area and set up a camp. Normally the first job will be to prospect the selected area. Crews of prospectors and geologists will cover the area, looking for any signs of valuable minerals, whether in an outcrop (solid rock which is part of the bedrock) or in loose rock which may have been moved a considerable distance from where the deposit occurs in an outcrop. These pieces of rock or soil may have been moved by rivers, by sliding down a hill, or more commonly were carried along by the sheets of ice. The prospectors and geologists try to trace these rocks back to the mineral deposit they came from - a method called boulder tracing.

Sometimes, soil samples or samples of water or of the mud's in the stream or lakes are collected to tell if there is a nearby deposit which is buried beneath the soil. These samples are analyzed in a lab, which can measure very small amounts of the metals in the sample. This work is called geochemistry, geochemical surveying or geochemical prospecting.

Another method used to find mineral deposit, which is buried, by soil or water is called geophysics or geophysical surveying. In this method, a geophysicist or geophysical technician uses instruments to measure the density of a rock by using a gravity meter - this works since most mineral deposit are made of minerals which are heavy. In the methods, instruments are usually carried along the lines of a survey grid consisting of

pickets stuck in the ground. Some of these methods can also be done from airplanes or helicopters, which may tow the instruments on long cables.

8.0 Types of Access to Inuit Owned Lands

8.1 Commercial

a) Prospecting/staking:

This activity is usually done when there is perceived potential of rich mineral resources.

If and when an individual or company has approached the Kivalliq Inuit Association to apply for Access to Inuit Owned Lands for the purposes of staking, the Land Manager of KIA must first check with either the Nunavut Tunngavik Incorporated or the Department of Aboriginal Affairs and Northern Development Canada (AANDC) to find whether or not that company or individual has staking tags from either agency.

If the area of interest is on IOL subsurface lands the applicant has to approach NTI for the claim tags and if the interest is on IOL surface only lands they then would need Crown claim tags; either way they would still need the approval from KIA for access to those IOL.

b) Code of Expedited Access:

Article 21.7.9 in the Nunavut Final Agreement states “that a person having a right to prospect for minerals and whose activities are of a nature that would not require a land use license under the Territorial Land Use Regulations if they were conducted on Crown lands, shall have right of access to Inuit Owned Lands, for the purpose of conducting those activities, with the consent of the DIO, and the DIO shall grant its consent if the activities are conducted in a manner consistent with the code for expedited prospecting access”.

c) Exploration:

Once the area has been staked, the applicant has to do an amount of specified work and spend a specified amount of money to maintain that claim. This is usually done in the form of exploration, drilling and/or fieldwork. If the claim holder confirms the potential of a rich mineral resource he/she/they then have the option to develop the area (build infrastructure, mining, etc.), which is a very

expensive undertaking, or to sell the claim to a company that can afford to develop the area.

If and when the applicant feels that there is enough minerals for mining operation when on IOL subsurface he/she/they would then enter into a **Mineral Concession Agreement** and most likely a **Commercial Lease**. If the mining operation is to be on IOL only then **IIBA** has to be negotiated (Article 26.1.14. (a).

8.2 Non-commercial

a) Research

When the applicant is proposing public research on IOL he/she is usually eligible for a **Certificate of Exemption** depending on the size of the project. Mostly, such projects are of minimal impact.

9.0 CLARC recommendations for Mineral Exploration and Development Activity on Inuit Owned Land

Once the KIA issue an approval for an exploration company to undertake certain exploration activity, can the company proceed to the next stage of exploration without the approval of the public and the Inuit?

In general, this question needs to be looked at in different ways depending on whether the land is Surface Only or Subsurface IOL.

9.1 Surface Only IOL

As mentioned earlier, Inuit cannot directly stop exploration work for minerals on Surface Only IOL because Government owns the minerals underneath this land. The operator has the same right to go into the next stage of exploration or production as it has on Crown lands, since the Canada Mining Regulation applies.

Nonetheless, it is the Inuit who must grant the land use license on Surface Only IOLs; Inuit can impose terms and conditions to access before granting a land use license for this activity. They can also ask the operator for compensation for the market value of the land, as well as for any special value of the land and for any damage that they believe the operator may cause. If the operator and Inuit cannot agree on the terms and conditions for the license, or on compensation, the operator may go to the **Surface Rights Tribunal**, which will decide the terms of access and compensation.

If the operator fails to abide by the terms and conditions the license can be withdrawn by the IOL manager. Inuit also can make an application to the Surface Rights Tribunal to review or rescind an entry order if the circumstances dictate.

If the exploration is not extensive, (i.e. using hand held equipment), the operator will have to comply with the **Code for Expedited Access**, which is mentioned. If the operator fails to comply with the Code, Inuit could revoke consent for the operator to be on IOLs.

It should be remembered that if any exploration and development activity proposed is a certain size of operation the **Nunavut Impact Review Board (NIRB)** will review this operation and Inuit, the KIA land manager, and other will be able to participate in this review. NIRB will have to give the Inuit serious and special consideration because it will be concerns raised by Inuit and because it is being proposed on IOLs.

9.2 Uranium.

The process is the same, KIA will send the application form to the CLARCs and CLARCs will have to consult the Uranium Policy from NTI, when a proponent apply for Exploration for Uranium and KIA will seek advice from CLARC in this Regard. As stated in the Implementation section of the NTI Uranium Policy "NTI will support uranium exploration and mining in Nunavut if these activities are carried out in accordance with the objectives and policy statements set out in this policy, NTI's other policies, and all regulatory requirements. NTI will take steps to ensure that uranium exploration and mining on IOL will provide benefits for Inuit and that these activities can be done in a safe and environmentally responsible way."

9.3 Subsurface IOL

During land claim negotiations, it was decided to select subsurface IOL mostly for its mineral potential because Inuit wanted to benefit from the sale of the minerals that may be found underneath the land. Nunavut Tunngavik Inc. and the regions decided then to manage these lands in such a way that mineral exploration companies would come onto these lands and see if minerals could be mined.

For Subsurface IOL (as mentioned above) - if the activity is not an existing interest and therefore; does not carry the right under the Agreement (Article 21.7.9) to continue, the Inuit can simply disapprove of the activity. After the Agreement was signed, it was recognized that exploration would only be allowed on the lands that the CLARC's agreed to open for mineral exploration. Once it was determined which lands were open, this information was given to mining companies in order that they might come on these lands and explore, and hopefully find minerals.

The existing subsurface land management rules and procedures developed by the regional Land Managers and NTI state that once the CLARC approves and gives permission to NTI to the applicants an **Inuit Owned Lands Prospecting License**, this license carries or gives the applicant the right to go onto the next step if they wish and negotiate a **Mineral Concession Agreement** with NTI. Also they can go onto the next step and obtain a **Mineral Production Lease** and increase the operation size. This lease carries the right to go into production for a mine.

This is because the Land Managers recognized that it was simply not fair to allow mining companies to spend significant time and money exploring for minerals on Subsurface IOL and then when they apply to go onto the next step of further research and perhaps have an interest going into a mine, tell them they cannot. If mining companies knew that this was possible they would never come onto Subsurface IOL to look for minerals again. Inuit owned minerals would not be explored or mined and therefore, Inuit would not be able to sell the minerals.

This is why it was and is so important that the Inuit understand that “carried right” under the IOL subsurface land management regime administered by NTI before deciding what Subsurface IOLs would be open for mineral exploration. Once the CLARC approves of the Prospecting License, the company has the right to carry this approval to the next step or stage.

Remember at the same time such a land use proposal would be reviewed by NIRB and an IIBA would have to be negotiated if it were a major development. If there were a land use plan, the proposal would also have to go through the Nunavut Planning Commission. Of course any such operation would have to obey all the terms and conditions of being on IOL.

10.0 Protection of Inuit Owned Lands

NTI initially requested that the CLARCs decide what Subsurface IOL they wanted to protect or close from mineral exploration activity. This is because Inuit own the minerals of these lands and can, therefore, decide if they want these lands explored for minerals or not. Provided there does not exist a protected pre-existing interest in these minerals as discussed above. This is not the case on Surface IOL. Remember, the Crown owns these minerals; that’s the difference. Owning the surface only to lands does not give the Inuit as much control over the land as compared to when they own the surface and subsurface Only IOLs if the applicant does not have a right to access under the Agreement.

11.0 Exclusive Possession

The Agreement states that where Inuit require more private use of IOL, some of the existing rights of the public to be on IOL may be removed for these IOL by an agreement for Exclusive Possession with Government. The CLARC and the regional Land Managers must document clearly why exclusive possession is desired or needed, and the matter can then to Government to seek it's agreement. When Exclusive Possession applies, the public right to travel by water through IOLs and to be on the first 100 feet of IOL from the shore, the right to harvest wildlife (this would include fish) and the right to travel across IOL for work or recreation would be removed. This would effectively eliminate people other than Inuit from fishing in these waters surrounded by IOL with Exclusive Possession status (i.e. Marble Island in Kivalliq).

12.0 Other Agencies in Nunavut that Relate to Inuit Owned Land

Out of the Nunavut Final Agreement, four institutes of public government (IPGs) were formed. The Nunavut Wildlife Management Board (NWMB), Nunavut Planning Commission (NPC), Nunavut Impact Review Board (NIRB) and the Nunavut Water Board (NWB). Other agencies are the Inuit Heritage Trust and the Surface Rights Tribunal.

The NWMB (Article 5) does not have direct authority in respect to Inuit Owned Land. However, they may take into the account the Inuit population growth and harvesting areas, in order to maintain a harvest of wildlife that meets the basic needs of the Inuit.

The NPC's (Article 11) main objective, among others, is devoted to protecting and promoting the existing and future well being of Inuit and Inuit Owned Lands. Some recent discussion as well had NPC with the role of being a 'trigger' for other possible agencies to become involved. It was understood that once the NPC has prepared Land Use Plans for all the regions that they will be a resource centre on Nunavut for the general public and to insure that all land use applications are in conformity with the regional land use plan.

The NIRB (Article 12) will screen all project proposals on Crown lands that may not have significant impacts on the land in Nunavut. It was discussed they do this as well for those project proposals on Inuit Owned Lands and further discussion is needed as to how that will be done.

The NWB (Article 13) specifically Article 20, recognize and emphasize that Inuit have exclusive rights to the use of water on, in, or flowing on Inuit Owned Lands. Article 20.2.4 states "the DIO shall have the right to have water flow through Inuit Owned Lands substantially unaffected in quality and flow".

13.0 What Rights Do Inuit Have on Inuit Owned Lands?

Inuit do not need to go through the application process for the quiet use and enjoyment of the lands and do not pay fees for the purposes of a lease for recreational and residential purposes. They do however have to pay a fee when it is a commercial operation. Inuit need a Prospecting License to prospect and stake claims on Inuit Owned Subsurface lands.

14.0 Class 1, 2 and 3 Land Use Licenses

The following activities require a person to obtain a **Class 3 Land Use License**:

- a) the use, in any 30-day period, of more than 50 kg (110 lbs.) of explosives;
- b) the use, except on a public road or trail subject to a Right-of-way Agreement, of any vehicle that exceeds 5 t (5.5 tons) net vehicle weight or the use of any vehicle of any weight that exerts pressure on the ground in excess of 35 k pa (5.08 psi);
- c) the use of any power driven machinery for earth drilling purposes whose operating weight, excluding the weight of drill rods or stems, bits, pumps, and other ancillary equipment, exceeds 500 kg (1,102 lbs.);
- d) the establishment of any campsite that is to be used for more than 100 person – days;
- e) the establishment of any petroleum fuel storage facility exceeding 4,000 L (880 gal) capacity or the use of a single container for the storage of petroleum fuel that has a capacity exceeding 2,000 L (440 gal);
- f) the leveling, grading, clearing, cutting or snow ploughing of any line, trail or right -of-way exceeding 1.5 m (5 ft.) in width but not exceeding 4 ha (10 acres) in area;
- g) the use of any self-propelled power driven machine for moving earth or clearing land of vegetation;
- h) the use of any stationary power driven machine for hydraulic prospecting, moving earth or clearing land, other than a power saw; or

The following activities require a person to obtain a **Class 2 Land Use License**:

- a) the use of any vehicle other than a snowmobile or four wheel recreational vehicle;
- b) the establishment of a campsite to be used for up to 100 person-days (i.e., 4 people for 25 days);
- c) the use of any explosives;
- d) the use of any power driven machinery for drilling, digging, grading, or removal of earth or clearing or cutting of brush;

- e) the placement or storage on the land of any fuel in connection with commercial activity;
- f) the establishment of scientific instruments or the carrying on of scientific investigations;
- g) the surveying of lands or the prospecting or exploration for or extraction of any specified substances;
- h) the construction of any dwelling or object;
- i) crossing of Inuit Owned Lands for commercial purposes to exercise rights of a casual nature, relating to investigative and preliminary work on non-Inuit Owned Lands; and
- j) any other commercial activity not related to recreational use.

The following activities require a person to obtain a **Class 1 Land use License**:

- a) the prospecting or preliminary exploration for minerals, including staking, with the special provision that the application need only specify the location(s) of the planned activities by listing which 1:50,000 National Topographical System quadrant(s) and Inuit Owned Land parcel identifier cover the area of interest;
- b) the carrying out of investigative or preliminary work for possible later development activities, including staking prior to entering into a Quarry Concession Agreement; and
- c) the commercial guiding of tourists, hunters, fishermen, or scientists.

15.0 Fees – Surface Rights

Type of Right	Description or Example	Initial Application, Extension, Renewal, Assignment of a Right	Annual Rents by Hectare used	Security Deposits
Non – Exclusive Rights				
Certificate of Exemption	Government, 2yr max	0	0	0
Class 3 LU License	+100 person days, heavy, 2yr max	\$500.00	\$50\hectare	35000
Class 2 LU License	-100 person days, light	\$250.00		15000
Class 1 LU License (Inuit)	Prospecting, guiding, ATV	0		0
Class 1 LU License (Non-Inuit)	Prospecting, guiding, ATV	\$100.00	0	0
Quarry License (Commercial and Non-Inuit)	Personal, 50m ³ & 1yr max	\$200.00	0	0
Land Reclamation Fee (\$/m ³)		\$0.50		
Special Admin. Fee (\$/m ³)		\$1.00		
Gravel Royalty (\$/m ³)		\$1.00		
Quarry Permit (Commercial and Non-Inuit)	Commercial, 2500m ³ & 1yr max	\$200.00	0	0
Land Reclamation Fee (\$/m ³)		\$0.50		
Special Admin. Fee (\$/m ³)		\$1.00		
Gravel Royalty (\$/m ³)		\$1.00		
Exclusive Rights				
Recreational Lease (Inuit)	Cabin, tent-frame, 5yr max	0	0	0
(Non-Inuit)		\$250.000	\$250.000	
Residential lease (Inuit)	House, outpost camp, 5-25yr max	0	0	0
(Non-Inuit)		\$250.000	\$250.000	
Commercial Lease	5yr min – 40 yr max			
Class 4 Commercial Lease	Mineral production	\$ + legal fee*	\$\hectare negotiated	Assessment
Class 3 Commercial Lease	Large operation, +100 persons	\$5000.00 + legal fee*		Assessment
Class 2 Commercial Lease	Small operation, -100 persons	\$2500.00		Assessment
Class 1 Commercial Lease	Harvesting, RR, tourism	\$500.00		Assessment
Quarry Concession	Commercial, 10yr max, 2500m ³ min	\$2000.00	Fees and Royalties negotiated	0
Land Reclamation Fee (\$/m ³)				
Special Admin. Fee (\$/m ³)				
Gravel Royalty (\$/m ³)				
Exclusive and Non-Exclusive				
Right of Way	Road, pipeline, cable license or lease required	\$500.00	Annual Rents negotiated	Assessment

APPENDIX 2- MINERAL ECONOMIC MODEL ANALYSIS



GEOVECTOR MANAGEMENT INC.

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

From: Joe Campbell, P. Geo., President
Alan Sexton, P.Geo., Vice-President

Date: February 7th, 2023

**RE: Mineral Economic Models for Gold and Base Metal Potential of the
Kivalliq Region, Nunavut, Canada.**

INTRODUCTION

A request was made to GeoVector Management Inc. (GeoVector) by Luis Manzo, Director of Lands for the Kivalliq Inuit Association (KivIA) to assess the economic potential of the known precious and base metal areas in the Kivalliq region of Nunavut. (Figure 1). GeoVector has long experience assessing economics for multiple deposit types within the Kivalliq region to determine mineral content; estimating geotechnical and mine engineering parameters; and providing quantitative and semi-quantitative economic models. The purpose of this memo is to give a high-level assessment of the economic benefit to the Kivalliq Region and Nunavut of four new potential projects. These projects are all located in areas with no currently operating mines, however, based on the current geoscience information there is high potential for developing precious and base metal deposits. The deposit analogues used to assess the economic potential for base and precious metals are Ferguson Lake, Heninga Lake and Hackett River; and for gold the Meliadine Gold Deposit was used.

For this study GeoVector relied on independent NI43-101 technical reports on Mineral Resource Estimates (MRE), Pre-Feasibility (PFS) and Feasibility (FS) Studies that are publicly available. It should be noted that the information and conclusions outlined in this memo are not related to the companies, or their consultants, whom currently own the projects and properties used for this economic analysis.

BACKGROUND ON ECONOMIC MODELLING

These projects are remote so the operating and capital costs in this study assumed substantial add on expenses associated with this remoteness. The study assumed grid power from the Kivalliq infrastructure corridor with conceptual routes for construction of spur lines to the four potential mine sites (Figure 1). Overall power draw is difficult to estimate but it is reasonable to assume that a gold mine would use 35 Mw and each base metal mine would use 60-70 Mw. So based on the one gold and three base metal projects outlined in this study the combined power draw is estimated at 215-245 Mw if all projects were operating at the same time.

The commercial metals are extractable based on metallurgical studies and reasonable estimates can be made for general administration, mining and milling (flotation), capital costs, operational costs, and market values for metal products. Despite the high-level nature of this valuation, the economic study provides a useful guide establishing the sufficient potential cashflow for the project, and the potential benefits that would come to NTI, RIA's and the Governments through a net profit royalty.

Initial overland access is assumed to be via winter road access but assumes an opportunity to construct power lines and all-weather road access, either partially or completely to these potential sites.

This exercise used the following parameters to develop cashflow and net present value (NPV) and internal rate of return (IRR). The models are:

- All costs and revenues in the economic model are in Canadian dollars (CAD).
- Product values and costs quoted from US sources use a \$1.30 CAD/USD exchange rate for the USD costs.
- Product values (per tonne or per Oz) were derived from the publicly available independent reports and reflect current industry prices.
- Operating Costs encompassed open pit and underground mining, milling, refining and general administration and reflected the remote site with winter road access for re-supply and product shipment to market.
- Capital Costs reflect the remote site, open pit and underground development, and in the case of Ferguson Lake, the complex vertically integrated recovery flowsheet to pure metals.

The annual sales, net cash flow, discount rate, NPV, IRR, payback period and NPR over each mine's potential life are summarized in Table 1.

POTENTIAL PROJECT BENEFITS TO NUNAVUT

There are multiple potential benefits that could accrue to Nunavut based on the development of the projects described in this memo:

- The mine and the metal recovery plants would employ hundreds of direct employees and indirect service providers.
- Following return on capital investment the royalty payments would over the life of the mines total approximately \$3.7B CAD (Table 1).
- The refining capacity and expertise built to support these mine opens an entirely new field of opportunity for Nunavut within the "green mineral" industry. *(Note: Ni, Co, Cu, Pb, Zn, Pd and Pt are all critical metals required for post-fossil fuel energy conversion and storage)*
- The power grid infrastructure and the winter road corridors to these mines would open up new areas of highly prospective geology for additional mine developments.

CONCLUSIONS

As described in the introduction, and in the body of this memo sufficient information exists to establish reasonable economics for these four potential projects. The metal values could match or exceed the value of current mining operations in Nunavut.

It is reasonable to assume from the results of this exercise that a measure of optimism can be taken from the potential high positive cash flows. Nunavut and the Kivalliq region in particular must be very aware of the potential of these great economic benefits and determine a way forward to preserve them.

RECOMMENDATIONS

Resource development in Nunavut, and in the Kivalliq region in particular, will be very negatively impacted based on the broad areas proposed for exclusion from mine development, either by limits placed directly on the mine development areas or indirectly through constraints on access and logistics to the mine development. Currently the Kivalliq Region is perceived by the mining industry to be at great risk due to exclusion proposals within the DNLUP. Perceived risk equates to no exploration expenditure, and by extension no mine development.

Nunavut, and the Kivalliq region in particular, must firmly and equitably establish and preserve the current mining jurisdiction. Once the threat of exclusion to development is greatly reduced or eliminated the potential economic benefits outlined in this memo will be realized.

The commodities being considered for production have growing demand on world markets. The remaining risks of technical and economic feasibility can be addressed by the currently established Nunavut permitting agencies (i.e., NIRB and NWB) which provide a known path forward for development. Doing so will result in Nunavut creating an opportunity for future generations of Nunavummiut to lead in the energy transitions that are currently driving the world's economies.

Joe Campbell, P. Geo.
President, GeoVector Management Inc.

Alan Sexton, P. Geo.
Vice-President, GeoVector Management Inc.

Table 1: Mine Life and Value of Potential Production Scenarios for the Potential Deposits

MINE LIFE AND VALUE OF POTENTIAL PRODUCTION SCENARIOS FOR THE POTENTIAL DEPOSITS					
Parameters	Deposit Type Units	Ferguson Lake Cu-Ni-Co-Pt-Pd	Hackett River Cu-Zn-Pb-Ag-Au	Heninga Lake Cu-Zn-Pb-Ag-Au	Meliadine Au
Mine Life	Years	23	23	12	24
Production Rate Estimate	Tonnes of Ore/Year	3,100,000	3,650,000	500,000	1,750,000
Recovered Metals					
Nickel metal	recovered tonnes	375,000			
Copper Metal	recovered tonnes	650,000	250,000	23,000	
Cobalt metal	recovered tonnes	30,000			
Zinc metal	recovered tonnes		2,260,000	429,286	
Lead metal	recovered tonnes		350,000	0	
Palladium metal	recovered ounces	2,560,000			
Platinum metal	recovered ounces	200,000			
Silver metal	recovered ounces		203,000,000	14,800,000	
Gold metal	recovered ounces		290,000	127,000	6,370,000
Total Capital Costs	Canadian \$	2,100,000,000	1,700,000,000	250,000,000	1,400,000,000
Total Operating Costs	Canadian \$	12,200,000,000	7,200,000,000	906,000,000	3,900,000,000
Payback Period	years	3	2	2	2
Total Net Cash Flow	Canadian \$	8,800,000,000	8,300,000,000	1,300,000,000	9,900,000,000
Post Tax NPV	Canadian \$	2,800,000,000	3,100,000,000	520,000,000	3,400,000,000
Post Tax IRR	%	29	40	41	43
NPR (average 13%)	Canadian \$	1,200,000,000	1,100,000,000	141,000,000	1,300,000,000

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KIVALLIQ

Legend

- Communities
- Operating Gold Mines
- Potential Mineral Deposit Types**
 - Base Metal (Ferguson Lake, Heninga Lake and Hackett River Type)
 - Gold (Melladine Type)
 - Oil Shale
- Ancillary Linear Infrastructure
- Proposed Linear Infrastructure
- Inuit Owned Lands**
 - Subsurface
 - Surface Only

Known Mineral Trends

Commodity

- Au
- Au, Cu, Zn
- Cu
- Ni, Cu, Au
- Cu, Ni, Co, PGE
- VMS: Cu - Zn
- Diamonds
- Kivalliq Region

1:2,250,000

0 25 50 100 Km

APPENDIX 3. METHODOLOGY FOR ESTIMATING QAMANIRJUAQ CARIBOU HERD CONCENTRATED CALVING

The objective was to delineate annual concentrated calving ground of the Qamanirjuaq caribou herd for years when adequate caribou collar locations were available. Upon review of the available data, a spatial analysis of the Qamanirjuaq caribou herd annual calving range was completed using the caribou locations for 2012 to 2021 provided by Government of Nunavut (GN). All data preparation and analyses were completed using QGIS (QGIS Development Team 2022), R (R Core Team 2022), and Exploratory (Exploratory Inc. 2022) including associated third-party R packages.

Data acquisition

Qamanirjuaq caribou locations were acquired by the GN and made available to KivIA for the spatial analysis. We completed an initial screening and preparation of the caribou location dataset.

Data preparation

We initially prepared the dataset to reduce the total number of caribou locations to increase processing efficiency. Data were filtered to include only caribou locations for May 1 to July 31 during all years. After filtering the dataset broadly around the calving period, we additionally screened the collar locations using a graphical review in GIS to visualize locations that might be excluded from the analysis. Upon review we found there were 10 caribou with locations outside of the Qamanirjuaq annual range (Table 1). The locations outside the ranges were removed (e.g., migrating to calving to the east of the Qamanirjuaq range and north of the Thelon River, or near Churchill, Manitoba). We also found and removed a cluster of 259 points in Whale Cove. Caribou that included duplicate datetime stamps were removed by selecting the first location; in total there were 935 duplicate locations.

Table 1. Collared Qamanirjuaq caribou locations excluded from calving range.

Caribou ID	Year	Number of locations
BL0580413	2014	92
QM1130411	2012	92
QM1290413	2015	346
QM1590415	2018	552
QM1650415	2015	506
QM1650415	2017	192
QM1700415	2016	552
QM1700415	2018	552
QM1700415	2019	552
UK2019013	2020	282

Analysis

Step 1: The prepared dataset included approximately 237,000 caribou locations. The annual number of collared caribou and caribou locations varied among years with the variation in locations due to both the number of collars deployed and more frequent fix rates in later years (Table 2). The dataset was imported into R and trajectories were created for caribou during each year to estimate movement metrics (e.g., speed) using the package *adehabitatLT* (Calenge 2019). Caribou speed was used to refine the annual caribou calving period by selecting the first and last date of any year where the median speed of the aggregated daily caribou movement was less than 5 km/day during the broader calving period in early to mid-June (Fig. 1). We constructed speed plots using caribou with 4-, 6-, 12- and 24-hour fixes, but we removed 5-minute fixes. These dates were used to refine locations during the calving season for all years included in the subsequent calving area estimation. We defined the area of low movement rate as ‘concentrated calving’.

Table 2. Collared Qamanirjuaq cow caribou and count of locations used to create movement trajectories.

Year	Collared cows	Count of locations
2012	13	1,188
2013	42	30,397
2014	26	14,063
2015	38	14,944
2016	45	22,591
2017	76	39,574
2018	52	28,627
2019	75	40,452
2020	50	26,042
2021	32	16,437
Total	482	237,182

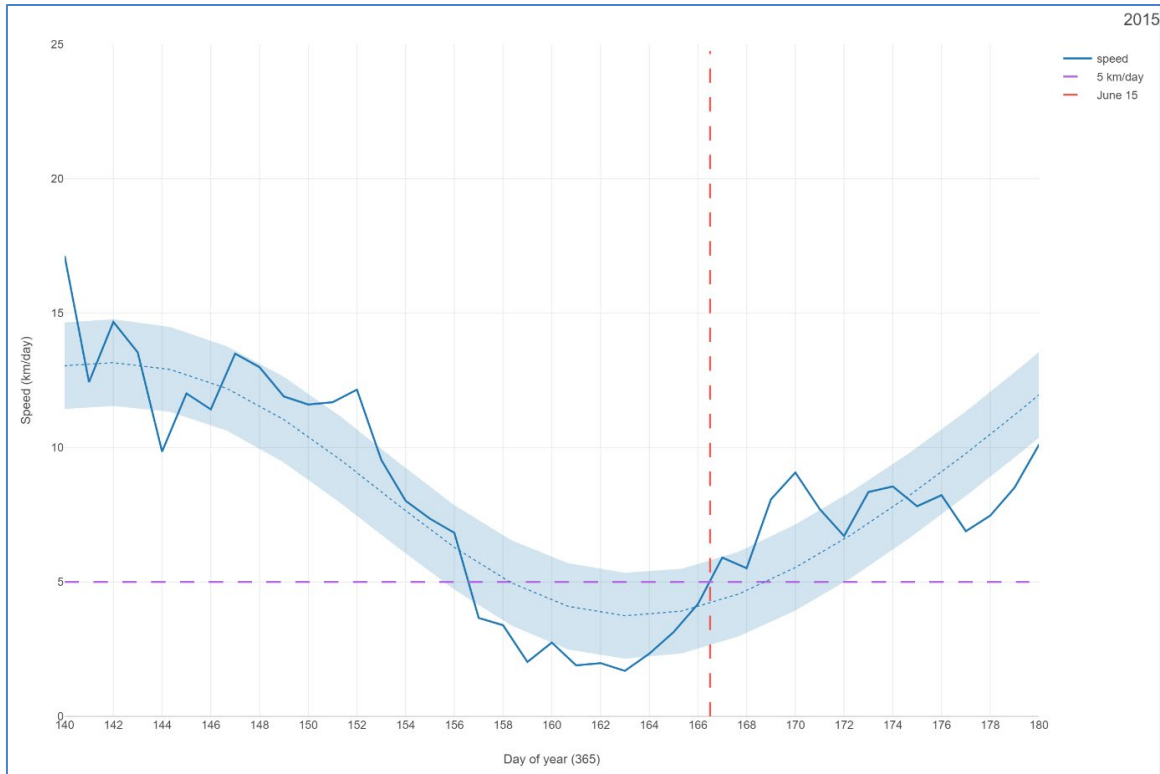


Figure 1. Median speed (km/day; dark blue line) of the aggregated daily caribou movement for Qamanirjuaq cow caribou during 20 May–29 June 2015. The blue dotted line is the smoothed average and the shading is 95% confidence intervals. For visual reference, the horizontal dashed purple line is 5 km/day and the vertical dashed red line is 15 June.

Step 2: Locations of each caribou were reduced to one per day by selecting the first location each day during the annual refined calving period (Table 3). The reduction in the number of caribou locations standardized comparisons among years. The reduced dataset was used to create annual calving ranges from 95% kernel density estimates using the R package *adehabitatHR* (Calenge 2019). Initially the concentrated calving area was created from the bivariate normal distribution using the reference (*href*) smoothing parameter. Upon review of the outputs, we decided that the *href* smoothing parameter was over smoothing and including too much area outside the concentrated calving area. We experimented with different kernel shapes and smoothing parameters to reduce over smoothing to generate an output that was biologically

reasonable and reflected the distribution of points. The method selected was the bivariate normal distribution using a 5 km smoothing parameter.

Table 3. Numbers of collared Qamanirjuaq cow caribou and locations used to create annual concentrated calving ranges.

Year	Collared cows	Count of locations
2012	13	117
2013	42	427
2014	25	235
2015	37	357
2016	45	443
2017	75	741
2018	52	520
2019	74	814
2020	47	647
2021	30	390
Total	473	5,135

Step 3: We overlapped annual concentrated calving polygons during 5- or 10-year periods (Fig. 2), then selected all areas with ≥ 2 years of overlap (in effect, eliminating areas used in only one year). This produced a continuous area polygon used in ≥ 2 years in the north-eastern portion of the calving area, with a few scattered areas of overlap (mostly 2 years in the 10-year analysis) to the southwest (primarily as a result of late calving in 2020). We selected the continuous polygon in each 5- or 10-year analysis as the area of concentrated calving.

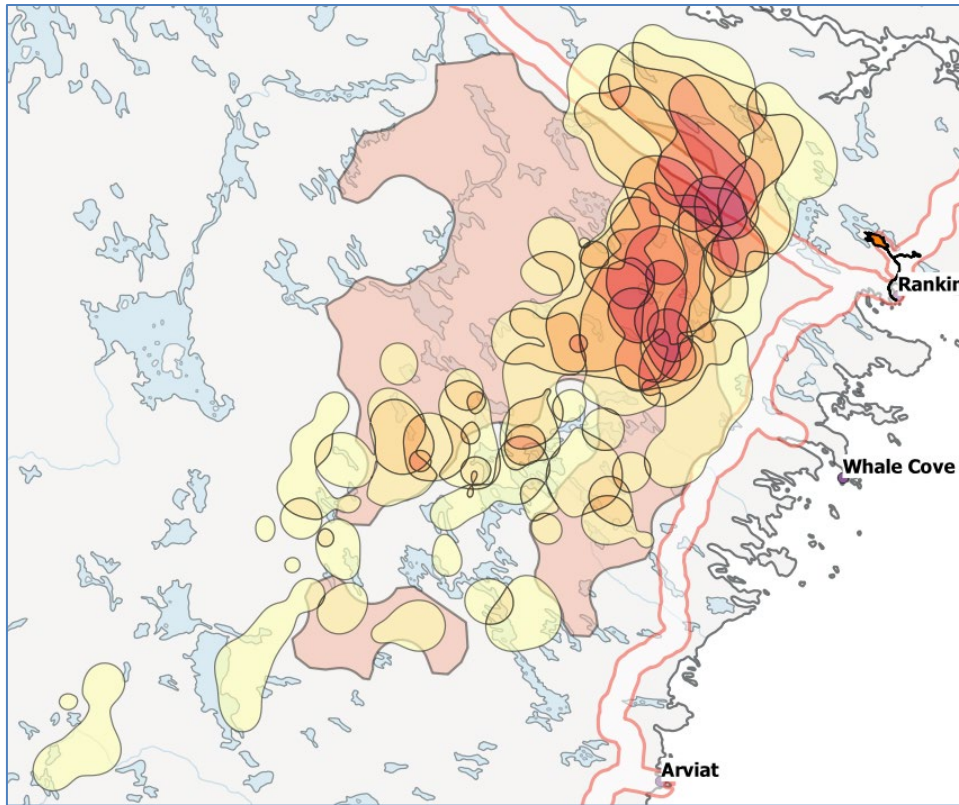


Figure 2. Overlapping annual concentrated calving polygons from the Qamanirjuaq caribou herd, 2012-21, using graduated coloring with darker shades indicating increasing annual overlap. Tan shading is the 2021 draft Nunavut Land Use Plan calving area.

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APPENDIX 4. KIVALLIQ INUIT ASSOCIATION'S MOBILE CARIBOU CONSERVATION MEASURES

KivIA's Mobile Measures are a follow-up to the longstanding Caribou Protection Measures in the Kivalliq Region where the Qamanirjuaq caribou herd migrates within the region for calving, post-calving through to the winter. DIAND's original Caribou Protection Measures were relatively effective unless caribou moved out of the Caribou Protection Area and were not monitored⁹. Then, land managers started to consider protection that would move with the caribou – mobile measures¹⁰ - to counter the disadvantages of area-specific protection. The DIAND's original Caribou Protection Measures are included in the 2000 Keewatin Land Use Plan¹¹ which is currently applicable to Crown land. The Caribou Protection Measures are applied to a fixed area of calving, post-calving and water-crossings and are typically referenced in NIRB's screening reports for land use projects.

KivIA developed Mobile Caribou Conservation Measures (Mobile Measures) in 2016 for land-use activities on Kivalliq IOL. KivIA's Mobile Measures work through monitoring caribou in the vicinity of a land use site to give early warning for mitigation. The monitoring component is flexible, does not rely on or require aerial monitoring, and can accommodate innovative technologies including drones or ground-based surveillance. The monitoring triggers mitigation based on pre-assigned thresholds (numbers and proximity of caribou to development coupled with seasonal sensitivity and movement rates). The thresholds trigger tiered mitigation applied with increasing intensity as increasing numbers of caribou approach the project, to avoid or minimize any potential disturbance to caribou.

KivIA applies Mobile Measures in conditions attached to Land Use Licenses¹². KivIA's Schedule B attached to licenses and leases describes Mobile Measures¹³. Schedule B lists

⁹ Gunn, A., K.G. Poole, J. Wierzchowski, and M. Campbell. 2007. Assessment of Caribou Protection Measures. Unpublished report submitted to Indian and Northern Affairs Canada, Gatineau, Québec, 45pp.

¹⁰ Weihs, F.H., and P.J. Usher. 2001. Towards the development of a policy on the management of human activities in caribou calving and post-calving grounds. Contract # 00-0210 for Department of Indian Affairs and Northern Development, Ottawa.

¹¹ Keewatin Regional Land Use Plan, NPC Public Registry: <https://lupit.nunavut.ca/portal/registry.php?public=docs>

¹² <https://www.kivalliqinuit.ca/access-to-inuit-owned-lands-2/>

¹³ <https://www.kivalliqinuit.ca/wp-content/uploads/2022/02/KIA-Land-Use-License-Terms-Conditions.pdf>

seasonal thresholds to trigger mitigation and the type of mitigation. KivIA relies on its land-use inspectors to deal with enforcement of conditions attached to its Land Use Licenses. Mobile Measures are for mineral exploration, not mines, which are governed by NIRB's terms and conditions determined during and following an environmental assessment.

Mobile Measures and caribou habitat protection

Mobile Measures are designed to avoid and minimize *indirect* habitat loss by reducing or halting activities that would otherwise displace caribou from their habitat. Mobile Measures themselves do not protect against *direct* impacts to habitat. However, KivIA's Mobile Measures are part of the Land Use Licenses issued for access to IOL which include conditions to avoid or minimize impacts on habitat from mineral exploration.

Nunavut's integrated regulatory system for mineral exploration.

NPC determines whether the proposal conforms to the land use plan and whether the proposal is exempt from screening¹⁴ (typically government activities or small-scale activities only requiring a Class B permit¹⁵). If it is not exempt, the proposal goes to NIRB for screening which leads to project-specific terms with monitoring and reporting requirements. NIRB's screening terms for mineral exploration specific to caribou typically include that the proponent should cease activities when caribou (a specified number or sex and age class) are in the vicinity (specified distance) so as to avoid diverting or blocking migration or movements.

NIRB's screening recommendations are consistent with the intent of Mobile Measures in the sense that the terms may be triggered by the approach of caribou within threshold distances. KivIA's Mobile Measures are more detailed about seasons and thresholds (Table 1). KivIA applies monitoring based on caribou sightings within two concentric zones centered on the exploration site, with surveillance effort to assess the likely arrival or presence of caribou. Monitoring includes Height-of-land surveys, ground observations and collared caribou. An 'Early Warning Zone' varies in size with caribou season (15–45 km radius which begins at the outer

¹⁴ https://www.nirb.ca/sites/default/files/Integrated_Process_NuPPAA.pdf

¹⁵ https://www.nunavut.ca/sites/default/files/2020-10-23_revised_conformity_determination_internal_procedure.pdf

extent of the 5 km Zone of Influence [ZOI]). For example, a smaller Early Warning Zone is used during winter when movement rates are generally lower and less directional, and a larger Early Warning Zone is used during spring migration when distances moved daily are generally higher and more directional. The 5 km radius ZOI is the area around a project site where the behaviour and distribution of caribou may change in response to the site's activities. The level of mitigation depends on the caribou numbers and the season.

Both KivIA and NIRB screening have requirements for the proponent to provide annual reports. NIRB's reporting requirements require a summary of results and mitigation actions, wildlife observations, potential impacts from the project, and an analysis of the effectiveness of mitigation measures for wildlife.

Table 1. Seasons, zone sizes and thresholds of caribou numbers counted in the Early Warning Zone (EWZ) and Zone of Influence (ZOI) to trigger corresponding mitigation actions (from Schedule B¹⁶, KivIA land access license applicable to IOL) Analysis of movement rates and local input are needed to refine the dates and number of seasons for other regions.

Season	Timing	Suggested zone radii (km)		Threshold number of collars/adult caribou		Summarized mitigation actions if thresholds passed in the ZOI
		EWZ ²	ZOI	EWZ	ZOI ⁵	
Designated calving grounds						
Spring migration (pre-calving)	6 Apr – 15 Apr	50	5	1/25	25	Immediately suspend drill operations, blasting activities and non-essential ground movements and aircraft traffic below 300 m above ground level (except as necessary for emergency purposes), Suspend ground operations and camp closure.
Calving / Post-calving	1 May – 31 Jul	N/A	N/A	N/A	N/A	Closed
Summer	1 Aug – 30 Sep	30	5	1/25	25	Immediately suspend drill operations, blasting activities and non-essential ground movements and aircraft traffic below 300 m above ground level (except as necessary for emergency purposes), Suspend ground operations and camp closure.
Fall/winter	1 Oct – 15 Apr	30	2.5	1/50	50	immediately reduce above-ground activities that have the potential to disturb caribou, including non-essential ground movements and aircraft traffic below 300 m above ground level (except as necessary for emergency purposes),

¹⁶ <https://www.kivalliqinuit.ca/wp-content/uploads/2022/02/KIA-Land-Use-License-Terms-Conditions.pdf>

Season	Timing	Suggested zone radii (km)		Threshold number of collars/adult caribou		Summarized mitigation actions if thresholds passed in the ZOI
		EWZ ²	ZOI	EWZ	ZOI ⁵	
Other seasonal ranges (outside designated calving grounds)						
Spring migration (pre-calving)	16 Apr – 31 May	50	5	1/25	25	Immediately suspend drill operations, blasting activities and non-essential ground movements and aircraft traffic below 300 m above ground level (except as necessary for emergency purposes), Suspend ground operations and camp closure.
Calving / Post-calving	1 Jun – 15 Jul	50	5	1/10	10	Immediately suspend drill operations, blasting activities and non-essential ground movements and aircraft traffic below 300 m above ground level (except as necessary for emergency purposes), Suspend ground operations and camp closure.
Summer	16 Jul – 30 Sep	30	5	1/25	25	Immediately suspend drill operations, blasting activities and non-essential ground movements and aircraft traffic below 300 m above ground level (except as necessary for emergency purposes) and camp closure.
Fall/winter	1 Oct – 15 Apr	30	2.5	1/50	50	immediately reduce above-ground activities that have the potential to disturb caribou, including non-essential ground movements and aircraft traffic below 300 m above ground level (except as necessary for emergency purposes),

¹ Dates provided for the Qamanirjuaq herd from Caslys (2016). The actual dates will differ among herds.

² The Early Warning Zone radius begins at the outer extent of the 5 km radius Zone of Influence.

³ Proposed numbers based on differences in relative risk among seasons. Caribou thresholds (generally collared individuals or incidental sightings) within the Early Warning Zone would justify notice to the exploration manager and the land use inspector of a potential suspension of flights and operations should caribou enter the Zone of Influence, and would trigger monitoring surveys within the Zone of Influence (generally ground observations or incidental aerial observations).

⁴ xx/yy represent thresholds of number of collared/observed caribou within the Early Warning Zone. The lower value of the collars or caribou will trigger a response. Thresholds triggered within the Early Warning Zone trigger increased monitoring.

⁵ xx/yy represent thresholds of number of collared/observed caribou within the ZOI to trigger main sets of mitigation responses.

Mobile Measures and GNWT's Bathurst Caribou Range Plan

KivIA was developing Mobile Measures in 2016, and by 2018 Mobile Measures were also being developed as a requirement for the Bathurst Caribou Range Plan (Range Plan)¹⁷. The Range Plan was co- developed by Indigenous governments and organizations, GNWT, Government of Nunavut (GN) and industry partners. Between 2018 and 2020, GNWT led a collaboration to develop Mobile Measures¹⁸ built on KivIA's measures and updated with minimum standards of monitoring and mitigation. Minimum standards were also a recommendation from GN's draft 2016 review of KivIA's Mobile Measures¹⁹.

Developing Mobile Measures for the Bathurst caribou herd included a framework document and implementation detail on government and the land use permit operator's roles and responsibilities, as well as reporting templates. The NWT government will provide mapping and advice to land use permit operators, but the costs of site monitoring and mitigation are borne by land use permit operator. COVID-19 limiting testing of the Range Plan Mobile Measures to desktop exercises but the intent is to implement the measures in 2022 (K. Clark, GNWT, pers. comm. 2022).

¹⁷ Government of the Northwest Territories (GNWT). 2019. Bathurst Caribou Range Plan. August 2019. Environment and Natural Resources, Government of the Northwest Territories, Yellowknife, NT. 86 + iii pp.

¹⁸ Government of the Northwest Territories (GNWT). 2022a. An Implementation Framework for Mobile Caribou Conservation Measures on the Bathurst Caribou Range. Environment and Natural Resources, February 2022. Government of the Northwest Territories (GNWT). 2022b. Mobile Caribou Conservation Measures – Operational Guidance. Environment and Natural Resources, February 2022.

¹⁹ Atkinson, S. 2016. Implementing Mobile Protection Measures for Caribou in Nunavut: Challenges, Costs and Effectiveness. Prepared for the Department of Environment, Government of Nunavut. September 2016 (draft v3). 90 pp.

Future application of Mobile Measures in Nunavut

Future application of Mobile Measures across Nunavut to avoid and minimize impacts of mineral exploration on caribou could draw on the existing KivIA's Mobile Measures, the GNWT framework and implementation guidelines, and NIRB's conditions applied to screening reports. The outcome will be a relatively standardized but adaptable conditions for land use permits and licenses applicable to barren-ground caribou seasonal ranges on IOL and Crown lands. The updated Mobile Measures could be applied as a condition within NPC's Conditional Use and Valued Ecosystem Component (VEC).

Coordination among government, RIAs and land use operators will be essential to successfully implement Mobile Measures (Table 2). Land use operators will be provided with Mobile Measures documentation early in their planning and are responsible to implement monitoring and mitigation actions, and to annually report on caribou protection. The current experience of NIRB's screening recommendations and KivIA's Mobile Measures have not revealed problems (although COVID-19 reduced exploration activities over the past 2 years). However, overall review of terms and their effectiveness would increase confidence in the applicability of Mobile Measures. Questions about monitoring requirements and capacity are addressed through reliance on the land use proponent rather than needing to establish costly herd level monitoring programs including an expansion of existing, government-led GPS collaring programs.

Table 2. Suggested progression of activities for a land use operation using Mobile Caribou Conservation Measures within Nunavut caribou range.

	Task	Land Agency and NIRB	Land Use Operator
1	Planning	CIRNAC (Crown lands) and RIAs (on IOL) publicizes the need for Mobile Measures through Chamber of Mines, Mining Recorders Office, NIRB website, RIAs, etc.	Land use operator is made aware of requirements for Mobile Measures through Chamber of Mines, Mining Recorders Office, NIRB website, RIAs, etc.
2	Planning	CIRNAC/RIAs has point of contact for Mobile Measures oversight.	Land use operator contacts CIRNAC (or RIA on IOL).
3	Planning	CIRNAC/RIAs provides and discusses Operational Guidance document and clarifies expectations/requirements.	Discusses Operational Guidance document and clarifies expectations/requirements.
4	Planning	Discusses and determines location relative to range assessment area and season of proposed operation.	Discusses and determines location relative to range assessment area and season of proposed operation.
5	Planning	Summary of expected seasonal caribou abundance and residency provided in Operational Guidance document.	Reviews caribou information and responds with proposed schedule of operations.
6	Planning	Size of Early Warning Zone and trigger levels of caribou are discussed and understood.	Size of Early Warning Zone and trigger levels of caribou are discussed and understood.
7	Planning	Reviews and agrees upon suggested list of tiered mitigations.	Provides potential list of tiered mitigations based on mineral cycle stage and type of activity.
8	Planning	Ensures project site contact information is received for information sharing.	Provides project site contact information to CIRNAC/RIAs for information sharing (e.g., emailing collar location maps).

	Task	Land Agency and NIRB	Land Use Operator
9	Operations	CIRNAC/RIAs provides timely emails with maps of collar locations relative to Early Warning Zone, Zone of Influence and project site.	Receives emails with maps of collar locations relative to Early Warning Zone, Zone of Influence and project site.
10	Operations	CIRNAC/RIAs available to respond to any questions or concerns during operations.	Monitors collar locations in the Early Warning Zone; ground or aerial observations.
11	Operations	CIRNAC/RIAs expects the operator to implement mitigation, and is available to respond to any questions and concerns during operations.	If caribou threshold exceeded, the land use operator will implement mitigation; monitoring within the Zone of Influence is advised.
12	Operations	CIRNAC/RIAs available to respond to any questions concerns during operations.	Continued monitoring and mitigation until caribou move out of the Early Warning Zone.
13	Reporting	CIRNAC/RIAs to provide an annual report on Mobile Measures-related activities.	Land user to provide an annual report on Mobile Measures-related activities.
14	Review	Assess the effectiveness of the Mobile Measures including consideration of costs, personnel requirements and achievement of desired outcomes.	Assess the effectiveness of the Mobile Measures including actions taken, costs, personnel requirements and consequences to operations.