



SCREENING DECISION REPORT NIRB FILE No.: 14YN017

NPC File No.: 148159

January 11, 2016

Following the Nunavut Impact Review Board's (NIRB or Board) assessment of all materials provided, the NIRB is recommending that a review of the Geological Survey of Canada's (GSC or Proponent) "Overby-Duggan, Nunavut Aeromagnetic Survey" is not required pursuant to paragraph 92(1)(a) of the *Nunavut Planning and Project Assessment Act* (NuPPAA).

Subject to the Proponent's compliance with the terms and conditions as set out in below, the NIRB is of the view that the project proposal is not likely to cause significant public concerns, and it is unlikely to result in significant adverse environmental and social impacts. The NIRB therefore recommends that the responsible Minister(s) accepts this Screening Decision Report.

OUTLINE OF SCREENING DECISION REPORT

- 1) REGULATORY FRAMEWORK
- 2) PROJECT OVERVIEW & THE NIRB ASSESSMENT PROCESS
- 3) FACTORS FOR DETERMINING SIGNIFICANCE OF IMPACTS
- 4) RECOMMENDED PROJECT-SPECIFIC TERMS AND CONDITIONS
- 5) MONITORING AND REPORTING REQUIREMENTS
- 6) OTHER NIRB CONCERNS AND RECOMMENDATIONS
- 7) REGULATORY REQUIREMENTS
- 8) CONCLUSION

REGULATORY FRAMEWORK

The primary objectives of the NIRB are set out in Section 12.2.5 of the Nunavut Land Claims Agreement (NLCA) as follows:

"In carrying out its functions, the primary objectives of NIRB shall be at all times to protect and promote the existing and future well-being of the residents and communities of the Nunavut Settlement Area, and to protect the ecosystemic integrity of the Nunavut Settlement Area. NIRB shall take into account the well-being of the residents of Canada outside the Nunavut Settlement Area."

These objectives are confirmed under section 23 of the NuPPAA.

The purpose of screening is provided for under section 88 of the NuPPAA:

“The purpose of screening a project is to determine whether the project has the potential to result in significant ecosystemic or socio-economic impacts and, accordingly, whether it requires a review by the Board...”

To determine whether a review of a project is required, the NIRB is guided by the considerations as set out under subsection 89(1) of NuPPAA:

“89. (1) The Board must be guided by the following considerations when it is called on to determine, on the completion of a screening, whether a review of the project is required:

- (a) a review is required if, in the Board’s opinion,*
 - i. the project may have significant adverse ecosystemic or socio-economic impacts or significant adverse impacts on wildlife habitat or Inuit harvest activities,*
 - ii. the project will cause significant public concern, or*
 - iii. the project involves technological innovations, the effects of which are unknown; and*
- (b) a review is not required if, in the Board’s opinion,*
 - i. the project is unlikely to cause significant public concern, and*
 - ii. its adverse ecosystemic and socioeconomic impacts are unlikely to be significant, or are highly predictable and can be adequately mitigated by known technologies.”*

It is noted that subsection 89(2) provides that the considerations set out in paragraph 89(1)(a) prevail over those set out in paragraph 89(1)(b).

Where the NIRB determines that a project may be carried out without a review, the NIRB has the discretion to recommend specific terms and conditions to be attached to any approval of the project proposal. Specifically, paragraph 92(2)(a) of NuPPAA provides:

“92. (2) In its report, the Board may also
(a) recommend specific terms and conditions to apply in respect of a project that it determines may be carried out without a review.”

PROJECT OVERVIEW & THE NIRB ASSESSMENT PROCESS

1. Project Description

The proposed “Overby-Duggan, Nunavut Aeromagnetic Survey” project is located within the Kitikmeot region, approximately 200 kilometres (km) south of Cambridge Bay, east of Bathurst Inlet, and west of the Queen Maud Migratory Bird Sanctuary. The Proponent intends to conduct airborne surveys to acquire high-resolution aeromagnetic data, including magnetic properties of bedrock, to inform land management decisions. The program is proposed to take place from March 1 to May 31, 2016.

According to the project proposal, the scope of the project includes the following undertakings, works or activities:

- Use of fixed-wing aircraft to conduct aeromagnetic surveys with a minimum ground clearance of 150 metres (m) and approximately 13,000 line kilometres (km) at a line spacing of 400 m for traverse lines and 2,400 m for orthogonal control lines;
 - Survey proximal to, but excluding, the Queen Maud Migratory Bird Sanctuary;
- Flights to originate from Cambridge Bay and land at municipal or private airports only;
- Transfer and storage of approximately 64,000 litres (L) of aviation fuel at the Cambridge Bay airport;
- Use of waste disposal and accommodations in Cambridge Bay by five (5) personnel; and
- Collected data to be used to support new ground-based geological mapping, provide information in support of mineral exploration activities, and be made publically available.

2. Scoping

The NIRB has identified no additional works or activities in relation to the project proposal.

3. Key Stages of the Screening Process

The following key stages were completed:

Date	Stage
November 20, 2015	Receipt of project proposal from the NPC
November 24, 2015	Information requests
November 25, 2015	Scoping pursuant to subsection 86(1) of the NuPPAA
November 25, 2015	Public engagement and comment request
December 17, 2015	Receipt of public comments
December 18, 2015	Opportunity to address comments
December 30, 2015	Proponent responded to comments/concerns raised by public
January 4, 2016	Ministerial extension

4. Public Comments and Concerns

From November 25, 2015 to December 16, 2015 the NIRB provided opportunity for the public to provide comments and concerns regarding the project proposal. The following is a summary of the comments and concerns received:

Kitikmeot Inuit Association (KIA)

- The KIA expressed concern that the 2015 annual reporting requirements pursuant to the KIA land use exemption (File No. KTX114X006) associated with previous project proposals under this file have not been complied with;
 - The KIA specifically noted a lack of lack of information on the status of fuel caching activities associated with the previous years' project and whether there is project related fuel currently located on Inuit Owned Land; and
- The KIA noted that it would hold the KIA renewal of the land use exemption (File No. KTX114X006) until its concerns were addressed.

Government of Nunavut – Department of Environment (GN-DOE)

- The GN-DOE raised concerns that a portion of the project proposal would spatially and temporally overlap with critical caribou habitat, including calving grounds, and spring migration corridors for the Beverly caribou population;
- The GN-DOE recommended that the Proponent consider additional mitigation measures, specifically:
 - Remove the survey area from the project that overlaps with the Beverly herd caribou calving grounds;
 - Project activities be completed prior to April 10;
 - Additional mitigation be proposed related to suspending activities when caribou are detected, and clarification be provided on the communication and decision making process for implementing the suspensions;
 - Provide additional reporting on wildlife sightings to the GN; and
- The GN-DOE noted the lack of information related to community consultations undertaken and the potential for significant public concern regarding indirect project related impacts resulting from potential future mineral development.

Environment Canada (EC)

- EC reminded the Proponent that it would need to comply with the *Canadian Environmental Protection Act 1999*, *Fisheries Act*, *Migratory Birds Convention Act 1994*, and the *Species at Risk Act* and ensure that all required permits are obtained;
- EC provided recommended mitigation measures to reduce aircraft disturbance to migratory birds, including flight paths and altitudes and avoidance measures.

Indigenous and Northern Affairs Canada (INAC)

- INAC had no comments or additional terms and conditions related to the project proposal.

5. Comments and Concerns with respect to Inuit Qaujimaningit

No concerns or comments were received with respect to Inuit Qaujimaningit in relation to the proposed project.

6. Proponent's Response to Public Comments and Concerns

The following is a summary of the Proponent's response to concerns as received by December 30, 2015:

- Noted that the Kitikmeot Inuit Association (KIA) had been contacted on December 8, 2015 to discuss concerns regarding outstanding annual reporting requirements pursuant to the KIA land use exemption associated with the previous years' project. The Proponent stated that it was unclear which license or activity the comment referred to and was waiting a response;
- Noted that the Government of Nunavut (GN) had been contacted on December 18, 2015 regarding comments related to calving grounds and spring migration corridors for the Beverly caribou population. The Proponent has made additional commitments to address the caribou disturbance issues raised, although it should be noted that some commitments may require further discussion with the GN (see Proponent Commitments section);

- Submitted an updated Wildlife Impact Mitigation and Monitoring Plan; and
- The GSC identified the community organizations that it had attempted to contact on October 20, 2015 via letter correspondence and informational posters; the Proponent noted that it had not received a response from any of these organizations.

FACTORS FOR DETERMINING SIGNIFICANCE OF IMPACTS

In determining whether a review of the project is required, the Board considered whether the project proposal had a potential to result in significant ecosystemic or socio-economic impacts.

Accordingly, the assessment of impact significance was based on the analysis of those factors that are set out under section 90 of NuPPAA. The Board took particular attention to take into account traditional knowledge and Inuit Qaujimaningit in carrying out its assessment and determination of the significance of impacts.

The following is a summary of the Board's assessment of the factors that are relevant to the determination of significant impacts with respect of this project proposal:

1. *The size of the geographic area, including the size of wildlife habitats, likely to be affected by the impacts.*

The proposed project would take place in a geographic area of approximately 4,000 square kilometres (km²). The proposed activities may take place within habitats for many far-ranging wildlife species, including habitats for the Ahiak and Beverly caribou herds, specifically those used for caribou calving, post-calving, and migration. In addition, the proposed project has a physical footprint consisting of daily transportation to and from Cambridge Bay for access to personnel accommodations and aircraft maintenance and re-fuelling activities.

2. *The ecosystemic sensitivity of that area.*

The proposed project would occur in an area that has been identified by the Proponent and parties as potential calving and post-calving habitat for the Ahiak and Beverly caribou herds. The Government of Nunavut – Department of Environment (GN-DOE) further identified that the proposed project would overlap with spring migration corridors for the Beverly caribou herds. The Proponent has committed to conduct project activities outside of the calving and post-calving seasons for both populations and not conducting airborne surveys over calving grounds until further consultation with the GN. In addition, project activities would be taking place adjacent to the Queen Maud Migratory Bird Sanctuary.

3. *The historical, cultural and archaeological significance of that area.*

Due to the nature of the proposed project, activities would not be expected to interact or impact the historical, cultural or archaeological significance of the area. The Proponent has consulted with community and municipal organizations in Cambridge Bay and Kugluktuk which have revealed no particular historical, cultural or archaeological concerns related to the proposed project.

4. *The size of the human and the animal populations likely to be affected by the impacts.*

The proposed project would take place approximately 200 km from Cambridge Bay, the nearest community; as such no human populations are likely to be affected by project impacts. Project activities would be taking place in calving, post-calving, and migration habitats for the Ahiak and Beverly caribou herds; however, the Proponent has committed to undertaking project activities outside of the calving and post-calving periods for both herds. The Proponent has further committed to not conducting proposed activities over areas defined as calving grounds unless the GN provides notification of an acceptable time to do so.

Project activities would also be taking place in proximity to the Queen Maud Migratory Bird Sanctuary, and as such, the project would likely interact with migratory bird populations. The Proponent has committed to avoid known concentrations of birds by a minimum lateral distance of 1,500 metres.

The Proponent has further submitted a Wildlife Impact Mitigation and Monitoring Plan that includes specific wildlife avoidance, monitoring and reporting measures to be undertaken during the proposed project for caribou and migratory birds.

5. *The nature, magnitude and complexity of the impacts; the probability of the impacts occurring; the frequency and duration of the impacts; and the reversibility or irreversibility of the impacts.*

As the “Overby-Duggan, Nunavut Aeromagnetic Survey” is a proposed aerial survey project, the nature of potential impacts is considered to be well-known, with potential for infrequent, localized impacts to the biophysical environment that are temporary in nature and mitigable with due care. However, parties noted that the proposed project activities could result in negative and potentially long-term impacts to caribou herds attempting to calve or migrate within the project footprint.

6. *The cumulative impacts that could result from the impacts of the project combined with those of any other project that has been carried out, is being carried out or is likely to be carried out.*

No cumulative impacts have been identified as potentially resulting from this proposed project in association with any projects that have been carried out, are being carried out or are likely to be carried out.

7. *Any other factor that the Board considers relevant to the assessment of the significance of impacts.*

No other specific factors have been identified as relevant to the assessment of this project proposal.

In considering the factors as set out above in the screening of the project proposal, the NIRB has identified a number of issues and provides the following views regarding whether or not the proposed project has the potential to result in significant impacts, and has proposed terms and conditions that would mitigate the potential adverse impacts identified.

Administrative Conditions:

To encourage compliance with applicable regulatory requirements and assist the Board and responsible authorities with compliance and effects monitoring for project activities, the following project-specific terms and conditions have been recommended: 1-4.

1. Ecosystem, wildlife habitat and Inuit harvesting activities:

Issue 1: Potential negative impacts to caribou (Beverly and Ahiak caribou herds) from frequent low-flying flights over lands used for calving, post-calving, and migration corridors.

Board views: As discussed above in the assessment of factors relevant to this project proposal, project activities could overlap with areas actively used by caribou herds for migration and calving activities. In addition, there is the potential for related impacts, particularly regarding calving, to other caribou herds, such as the Bathurst herd. While proposed activities could potentially result in impacts to the long-term health and productivity of migratory caribou populations in this area, including the loss of migratory behaviour over time, potential impacts would likely be temporary due to the relatively short length of the project (one (1) season). In addition, while the magnitude of potential impacts resulting from proposed activities is unknown, the Proponent has provided a Wildlife Impact Mitigation and Monitoring Plan. The Proponent has further committed to concluding airborne activities by April 10th and not conducting activities over areas defined as calving grounds unless the GN provides notification that of an acceptable time to do so. The GSC noted its willingness to work with the applicable authorities to manage potential project induced impacts to caribou herds and has committed to using information provided by the Hunters and Trappers Organizations in flight planning (see Proponent Commitments section).

Recommended Mitigation Measures: It is recommended that potential negative impacts may be mitigated by measures such as requiring the Proponent to maintain seasonal restrictions and suspend activities if caribou are observed. The following terms and conditions are recommended to mitigate the potential adverse impacts: 5-8, and 12-17.

Issue 2: Potential negative impacts to migratory birds from frequent flights over lands in proximity to the Queen Maud Migratory Bird Sanctuary.

Board Views: As discussed above in the assessment of factors relevant to this project proposal, proposed project activities would occur over land adjacent to the Queen Maud Migratory Bird Sanctuary and would likely interact with migratory birds. While there is potential for negative project induced impacts to birds, impacts would likely be felt at the individual level, be localized and infrequent. Further, the Proponent has provided a Wildlife Impact Mitigation and Monitoring Plan (see Proponent Commitments section).

Recommended Mitigation Measures: It is recommended that potential negative impacts may be mitigated by measures such as requiring the Proponent suspend activities if birds are observed. The following terms and conditions are recommended to mitigate the potential adverse impacts: 9-13.

2. Socio-economic effects on northerners:

Issue 3: Potential positive impact as the Proponent has committed to sharing research findings via an open-access data repository.

Board Views: The Proponent has committed to sharing data collected through the proposed project via the Geoscience Data Repository for Geophysical Data. This open-access data repository is accessible online and research findings would contribute to the understanding of the geological knowledge of the area.

Recommended Mitigation Measures: Term and condition 16 has been recommended to ensure that the Proponent consults with the local community regarding project updates and activities in the region.

3. Significant public concern:

Issue 4: No significant public concern was expressed during the public commenting period for this file.

Board Views: Follow up consultation and involvement of local community members is expected to mitigate any potential for public concern resulting from project activities.

Recommended Mitigation Measures: Term and condition 16 is recommended to mitigate any public concern resulting from the proposed project.

4. Technological innovations for which the effects are unknown:

No specific issues have been identified associated with this project proposal.

In considering the above factors and subject to the Proponent's compliance with the terms and conditions necessary to mitigate against the potential adverse environmental and social effects, the Board is of the view that the proposed project is unlikely to cause significant public concern and its adverse ecosystemic and socioeconomic impacts are unlikely to be significant, or are highly predictable and can be adequately mitigated by known technologies.

RECOMMENDED PROJECT-SPECIFIC TERMS AND CONDITIONS

The Board is recommending the following specific terms and conditions to apply in respect of the project:

General

1. The Geological Survey of Canada (the Proponent) shall maintain a copy of the Project Terms and Conditions at the site of operation at all times.
2. The Proponent shall forward copies of all permits obtained and required for this project to the Nunavut Impact Review Board (NIRB) prior to the commencement of the project.
3. The Proponent shall operate in accordance with all commitments stated in correspondence provided to the Nunavut Planning Commission (Application to Determine Conformity, November 20, 2015), the NIRB (additional information including e-mail correspondence on November 24 and 25, 2015 and December 29, 2015 and updated Wildlife Impact Mitigation and Monitoring Plan submitted on December 30, 2015).
4. The Proponent shall operate the site in accordance with all applicable Acts, Regulations and Guidelines.

Waste Disposal

5. The Proponent shall dispose of any accumulated wastes at an approved facility. All such wastes shall be kept inaccessible to wildlife at all times.

Wildlife - General

6. The Proponent shall ensure that there is no damage to wildlife habitat in conducting this operation.
7. The Proponent shall not harass wildlife. This includes persistently worrying or chasing animals, or disturbing large groups of animals.
8. The Proponent shall ensure that all project personnel are made aware of the measures to protect wildlife and are provided with training and/or advice on how to implement these measures.

Migratory Birds and Raptors Disturbance

9. The Proponent shall minimize activities during periods when birds are particularly sensitive to disturbance such as migration, nesting and moulting.
10. The Proponent shall ensure its aircraft avoid excessive hovering or circling over areas where bird presence is likely.

Aircraft Flight Restrictions

11. The Proponent shall ensure that aircraft maintain a vertical distance of 1000 metres and a horizontal distance of 1500 metres from any observed groups (colonies) of migratory birds. Aircraft should avoid critical and sensitive wildlife areas at all times by choosing alternate flight corridors.
12. The Proponent shall ensure that aircraft/helicopter do not, unless for emergency, touch-down in areas where wildlife are present.
13. The Proponent shall advise all pilots of relevant flight restrictions and enforce their application over the project area, including flight paths to/from the project area.

Caribou and Muskoxen Disturbance

14. The Proponent shall cease activities that may interfere with the migration or calving of caribou or muskox, until the caribou or muskox have passed or left the area.
15. During the period of May 15 to July 15, when caribou are observed within 1 km of project operations, the Proponent shall suspend low-level flights.

Other

16. The Proponent should, to the extent possible, hire local people and consult with local residents regarding their activities in the area and available Inuit Qaujimaningit that can inform project activities.
17. The Proponent shall ensure that project activities do not interfere with Inuit wildlife harvesting or traditional land use activities.

MONITORING AND REPORTING REQUIREMENTS

In addition, the Board is recommending the following:

Activity Suspension Plan

1. The Proponent shall submit an activity suspension plan with a copy provided to the Nunavut Impact Review Board and Government of Nunavut-Department of Environment (GN-DOE) prior to activities being undertaken. The Board recommends that the Proponent consult with the GN-DOE prior to submitting the plan and any related documents. The activity suspension plan must contain, but not be limited to, the following information:
 - a. Measures to detect concentrations of caribou;
 - b. Chain of command for suspension of work;
 - c. Length of time to implement activity suspensions; and
 - d. Method of determining length of time of activity suspension and when the suspension would be lifted.

Wildlife Log/Record of Observations

1. The Proponent shall maintain a record of wildlife observations while operating within the project area. The wildlife record or report should include locations (i.e., latitude and longitude), species, number of animals, a description of the animal activity, and a description of the gender and age of animals if possible. Prior to conducting project activities, the Proponent should include a map with the location of any sensitive wildlife sites such as denning sites, calving areas, caribou crossing sites and migration routes, and raptor nests in the project area, and identify the timing of critical life history events (i.e., calving, mating, denning and nesting). Additionally, the Proponent should indicate potential impacts from the project, and ensure that operational activities are managed and modified to avoid impacts on wildlife and sensitive sites.

A copy of this wildlife record or report should be submitted annually at the end of the operational season to the Nunavut Impact Review Board with copy to the following contacts:

- a) Melanie Wilson, Ecosystems Research/EA Biologist, Government of Nunavut – Department of Environment, mwilson@gov.nu.ca.

OTHER NIRB CONCERNS AND RECOMMENDATIONS

In addition to the project-specific terms and conditions, the Board is recommending the following:

Migratory Birds

1. The Proponent review Canadian Wildlife Services' "Key migratory bird terrestrial habitat sites in the Northwest Territories and Nunavut", available at the following link: <http://publications.gc.ca/site/eng/317630/publication.html> and "Key marine habitat sites for migratory birds in Nunavut and the Northwest Territories", available at the following link: <http://publications.gc.ca/site/eng/392824/publication.html>. The guide provides information to the Proponent on key terrestrial and marine habitat areas that are essential to the welfare of various migratory bird species in Canada.
2. For further information on how to protect migratory birds, their nests and eggs when planning or carrying out project activities, consult Environment Canada's Incidental Take web page and the fact sheet "Planning Ahead to Reduce the Risk of Detrimental Effects to Migratory Birds, and their Nests and Eggs" available at <http://www.ec.gc.ca/paom-itmb/>.

REGULATORY REQUIREMENTS

The Proponent is also advised that the following legislation may apply to the project:

Acts and Regulations

1. The *Migratory Birds Convention Act* and *Migratory Birds Regulations* (<http://laws-lois.justice.gc.ca/eng/acts/M-7.01/>).
2. The *Species at Risk Act* (<http://laws-lois.justice.gc.ca/eng/acts/S-15.3/index.html>). Attached in **Appendix A** is a list of Species at Risk in Nunavut.
3. The *Wildlife Act* (<http://www.canlii.org/en/nu/laws/stat/snu-2003-c-26/latest/snu-2003-c-26.html>) which contains provisions to protect and conserve wildlife and wildlife habitat, including specific protection measures for wildlife habitat and species at risk.
4. The *Nunavut Act* (<http://laws-lois.justice.gc.ca/eng/acts/N-28.6/>). The Proponent must comply with the proposed terms and conditions listed in the attached **Appendix B**.
5. The *Aeronautics Act* (<http://laws-lois.justice.gc.ca/eng/acts/A-2/>).

CONCLUSION

The foregoing constitutes the Board's screening decision with respect to the Geological Survey of Canada's "Overby-Duggan, Nunavut Aeromagnetic Survey" project proposal.

Dated January 11, 2016 at Arviat, NU.



Elizabeth Copland, Chairperson

Attachments: Appendix A: Species at Risk in Nunavut
 Appendix B: Archaeological and Palaeontological Resources Terms and Conditions for Land Use
 Permit Holders

Appendix A

Species at Risk in Nunavut

Due to the requirements of Section 79(2) of the Species At Risk Act (SARA), and the potential for project-specific adverse effects on listed wildlife species and its critical habitat, measures should be taken as appropriate to avoid or lessen those effects, and the effects need to be monitored. Project effects could include species disturbance, attraction to operations and destruction of habitat. This section applies to all species listed on Schedule 1 of SARA, as listed in the table below, or have been assessed by the Committee on the Status of Endangered Wildlife in Canada (COSEWIC), which may be encountered in the project area. This list may not include all species identified as at risk by the Territorial Government. The following points provide clarification on the applicability of the species outlined in the table.

- Schedule 1 is the official legal list of Species at Risk for SARA. SARA applies to all species on Schedule 1. The term “listed” species refers to species on Schedule 1.
- Schedule 2 and 3 of SARA identify species that were designated at risk by the COSEWIC prior to October 1999 and must be reassessed using revised criteria before they can be considered for addition to Schedule 1.
- Some species identified at risk by COSEWIC are “pending” addition to Schedule 1 of SARA. These species are under consideration for addition to Schedule 1, subject to further consultation or assessment.

If species at risk are encountered or affected, the primary mitigation measure should be avoidance. The Proponent should avoid contact with or disturbance to each species, its habitat and/or its residence. All direct, indirect, and cumulative effects should be considered. Refer to species status reports and other information on the species at risk Registry at <http://www.sararegistry.gc.ca> for information on specific species.

Monitoring should be undertaken by the Proponent to determine the effectiveness of mitigation and/or identify where further mitigation is required. As a minimum, this monitoring should include recording the locations and dates of any observations of species at risk, behaviour or actions taken by the animals when project activities were encountered, and any actions taken by the proponent to avoid contact or disturbance to the species, its habitat, and/or its residence. This information should be submitted to the appropriate regulators and organizations with management responsibility for that species, as requested.

For species primarily managed by the Territorial Government, the Territorial Government should be consulted to identify other appropriate mitigation and/or monitoring measures to minimize effects to these species from the project.

Mitigation and monitoring measures must be undertaken in a way that is consistent with applicable recovery strategies and action/management plans.

Schedules of SARA are amended on a regular basis so it is important to check the SARA registry (www.sararegistry.gc.ca) to get the current status of a species.

Updated: June 2015

Species at Risk ¹	COSEWIC Designation	Schedule of SARA	Government Organization with Primary Management Responsibility ²
Eskimo Curlew	Endangered	Schedule 1	EC
Ivory Gull	Endangered	Schedule 1	EC
Ross's Gull	Threatened	Schedule 1	EC
Harlequin Duck (Eastern population)	Special Concern	Schedule 1	EC
Rusty Blackbird	Special Concern	Schedule 1	GN
Peregrine Falcon	Special Concern (<i>anatum-tundrius</i> complex ³)	Schedule 1 - Threatened (<i>anatum</i>) Schedule 3 – Special Concern (<i>tundrius</i>)	GN
Short-eared Owl	Special Concern	Schedule 3	GN
Red Knot (<i>rufa</i> subspecies)	Endangered	Schedule 1	EC
Red Knot (<i>islandica</i> subspecies)	Special Concern	Schedule 1	EC
Horned Grebe (Western population)	Special Concern	Pending	EC
Red-necked Phalarope	Special concern	Pending	EC
Buff-breasted Sandpiper	Special concern	Pending	EC
Felt-leaf Willow	Special Concern	Schedule 1	GN
Porsild's Bryum	Threatened	Schedule 1	GN
Peary Caribou	Endangered	Schedule 1	GN
Barren-ground Caribou (Dolphin and Union population)	Special Concern	Schedule 1	GN
Polar Bear	Special Concern	Schedule 1	GN/DFO
Grizzly Bear	Special Concern	Pending	GN
Wolverine	Special Concern	Pending	GN
Atlantic Cod, Arctic Lakes	Special Concern	Pending	DFO
Atlantic Walrus	Special Concern	Pending	DFO
Beluga Whale (Cumberland Sound population)	Threatened	Schedule 2	DFO
Beluga Whale (Eastern Hudson Bay population)	Endangered	Pending	DFO
Beluga Whale (Western Hudson Bay population)	Special Concern	Pending	DFO
Beluga Whale (Eastern High Arctic – Baffin Bay population)	Special Concern	Pending	DFO
Bowhead Whale (Eastern Canada – West Greenland population)	Special Concern	Pending	DFO
Bowhead Whale (Eastern Arctic population)		Schedule 2	DFO
Killer Whale (Northwest Atlantic / Eastern Arctic populations)	Special Concern	Pending	DFO
Narwhal	Special Concern	Pending	DFO

Note: DFO: Fisheries and Oceans Canada; EC: Environment Canada; GN: Government of Nunavut

¹ The Department of Fisheries and Oceans has responsibility for aquatic species.

² Environment Canada (EC) has a national role to play in the conservation and recovery of Species at Risk in Canada, as well as responsibility for management of birds described in the Migratory Birds Convention Act (MBCA). Day-to-day management of terrestrial species not covered in the MBCA is the responsibility of the Territorial Government. Populations that exist in National Parks are also managed under the authority of the Parks Canada Agency.

³ The *anatum* subspecies of Peregrine Falcon is listed on Schedule 1 of SARA as threatened. The *anatum* and *tundrius* subspecies of Peregrine Falcon were reassessed by COSEWIC in 2007 and combined into one subpopulation complex. This subpopulation complex was assessed by COSEWIC as Special Concern.

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Appendix B:
Archaeological and Palaeontological Resources Terms and Conditions for Land Use Permit Holders



INTRODUCTION

The Department of Culture and Heritage (CH) routinely reviews land use applications sent to the Nunavut Water Board, Nunavut Impact Review Board and the Aboriginal Affairs and Northern Development Canada. These terms and conditions provide general direction to the permittee/proponent regarding the appropriate actions to be taken to ensure the permittee/proponent carries out its role in the protection of Nunavut's archaeological and palaeontological resources.

TERMS AND CONDITIONS

- 1) The permittee/proponent shall have a professional archaeologist and/or palaeontologist perform the following **Functions** associated with the **Types of Development** listed below or similar development activities:

	Types of Development (See Guidelines below)	Function (See Guidelines below)
a)	Large scale prospecting	Archaeological/Palaeontological Overview Assessment
b)	Diamond drilling for exploration or geotechnical purpose or planning of linear disturbances	Archaeological/ Palaeontological Inventory
c)	Construction of linear disturbances, Extractive disturbances, Impounding disturbances and other land disturbance activities	Archaeological/ Palaeontological Inventory or Assessment or Mitigation

Note that the above-mentioned functions require either a Nunavut Archaeologist Permit or a Nunavut Palaeontologist Permit. CH is authorized by way of the *Nunavut and Archaeological and Palaeontological Site Regulations*¹ to issue such permits.

¹ P.C. 2001-1111 14 June, 2001

- 2) The permittee/proponent shall not operate any vehicle over a known or suspected archaeological or palaeontological site.
- 3) The permittee/proponent shall not remove, disturb, or displace any archaeological artifact or site, or any fossil or palaeontological site.
- 4) The permittee/proponent shall immediately contact CH at (867) 934-2046 or (867) 975-5500 should an archaeological site or specimen, or a palaeontological site or fossil, be encountered or disturbed by any land use activity.
- 5) The permittee/proponent shall immediately cease any activity that disturbs an archaeological or palaeontological site encountered during the course of a land use operation until permitted to proceed with the authorization of CH.
- 6) The permittee/proponent shall follow the direction of CH in restoring disturbed archaeological or palaeontological sites to an acceptable condition. If these conditions are attached to either a Class A or B Permit under the Territorial Lands Act Aboriginal Affairs and Northern Development Canada directions will also be followed.
- 7) The permittee/proponent shall provide all information requested by CH concerning all archaeological sites or artifacts and all palaeontological sites and fossils encountered in the course of any land use activity.
- 8) The permittee/proponent shall make best efforts to ensure that all persons working under its authority are aware of these conditions concerning archaeological sites and artifacts and palaeontological sites and fossils.
- 9) If a list of recorded archaeological and/or palaeontological sites is provided to the permittee/proponent by CH as part of the review of the land use application the permittee/proponent shall avoid the archaeological and/or palaeontological sites listed.
- 10) Should a list of recorded sites be provided to the permittee/proponent, the information is provided solely for the purpose of the proponent's land use activities as described in the land use application, and must otherwise be treated confidentially by the proponent.

Legal Framework

As stated in Article 33 of the *Nunavut Land Claims Agreement*:

Where an application is made for a land use permit in the Nunavut Settlement Area, and there are reasonable grounds to believe that there could be sites of archaeological importance on the lands affected, no land use permit shall be issued without written consent of the Designated Agency. Such consent shall not be unreasonably withheld. [33.5.12]

Each land use permit referred to in Section 33.5.12 shall specify the plans and methods of archeological site protection and restoration to be followed by the permit holder, and any other conditions the Designated Agency may deem fit. [33.5.13]

Palaeontology and Archaeology

Under the *Nunavut Act*², the federal government can make regulations for the protection, care and preservation of palaeontological and archaeological sites and specimens in Nunavut. Under the *Nunavut Archaeological and Palaeontological Sites Regulations*³, it is illegal to alter or disturb any palaeontological or archaeological site in Nunavut unless permission is first granted through the permitting process.

Definitions

As defined in the *Nunavut Archaeological and Palaeontological Sites Regulations*, the following definitions apply:

“archaeological site” means a place where an archaeological artifact is found.

“archaeological artifact” means any tangible evidence of human activity that is more than 50 years old and in respect of which an unbroken chain of possession or regular pattern of usage cannot be demonstrated, and includes a Denesuline archaeological specimen referred to in section 40.4.9 of the Nunavut Land Claims Agreement.

“palaeontological site” means a site where a fossil is found.

“fossil” includes:

Fossil means the hardened or preserved remains or impression of previously living organisms or vegetation and includes:

- (a) natural casts;*
- (b) preserved tracks, coprolites and plant remains; and*
- (c) the preserved shells and exoskeletons of invertebrates and the preserved eggs, teeth and bones of vertebrates.*

² s. 51(1)

³ P.C. 2001-1111 14 June, 2001

Guidelines for Developers for the Protection of Archaeological Resources in the Nunavut Territory

(Note: Partial document only, complete document at: www.ch.gov.nu.ca/en/Archaeology.aspx)

Introduction

The following guidelines have been formulated to ensure that the impacts of proposed developments upon heritage resources are assessed and mitigated before ground surface altering activities occur. Heritage resources are defined as, but not limited to, archaeological and historical sites, burial grounds, palaeontological sites, historic buildings and cairns. Effective collaboration between the developer, the Department of Culture, Language, Elders and Youth (CH), and the contract archaeologist(s) will ensure proper preservation of heritage resources in the Nunavut Territory. The roles of each are briefly described.

CH is the Nunavut Government agency which oversees the protection and management of heritage resources in Nunavut, in partnership with land claim authorities, regulatory agencies, and the federal government. Its role in mitigating impacts of developments on heritage resources is as follows: to identify the need for an impact assessment and make recommendations to the appropriate regulatory agency; set the terms of reference for the study depending upon the scope of the development; suggest the names of qualified individuals prepared to undertake the study to the developer; issue an archaeologist or palaeontologist permit authorizing field work; assess the completeness of the study and its recommendations; and ensure that the developer complies with the recommendations.

The primary regulatory agencies that CH provides information and assistance to are the Nunavut Impact Review Board, for development activities proposed for Inuit Owned Lands (as defined in Section 1.1.1 of the Nunavut Land Claims Agreement), and the Aboriginal Affairs and Northern Development Canada, for development activities proposed for federal Crown Lands.

A developer is the initiator of a land use activity. It is the obligation of the developer to ensure that a qualified archaeologist or palaeontologist is hired to perform the required study and that provisions of the contract with the archaeologist or palaeontologist allow permit requirements to be met; i.e. fieldwork, collections management, artifact and specimen conservation, and report preparation. On the recommendation of the contract archaeologist or palaeontologist in the field and the Government of Nunavut, the developer shall implement avoidance or mitigative measures to protect heritage resources or to salvage the information they contain through excavation, analysis, and report writing. The developer assumes all costs associated with the study in its entirety.

Through his or her active participation and supervision of the study, the contract archaeologist or palaeontologist is accountable for the quality of work undertaken and the quality of the report produced. Facilities to conduct fieldwork, analysis, and report preparation should be available to this individual through institutional, agency, or company affiliations. Responsibility for the curation of objects recovered during field work while under study and for documents generated in the course of the study as well as remittance of artifacts, specimens and documents to the repository specified on the permit accrue to the contract archaeologist or palaeontologist. This individual is also bound by the legal requirements of the *Nunavut Archaeological and*

Types of Development

In general, those developments that cause concern for the safety of heritage resources will include one or more of the following kinds of surface disturbances. These categories, in combination, are comprehensive of the major kinds of developments commonly proposed in Nunavut. For any single development proposal, several kinds of these disturbances may be involved

- *Linear disturbances: including the construction of highways, roads, winter roads, transmission lines, and pipelines;*
- *Extractive disturbances: including mining, gravel removal, quarrying, and land filling;*
- *Impoundment disturbances: including dams, reservoirs, and tailings ponds;*
- *Intensive land use disturbances: including industrial, residential, commercial, recreational, and land reclamation work, and use of heritage resources as tourist developments.*
- *Mineral, oil and gas exploration: establishment of camps, temporary airstrips, access routes, well sites, or quarries all have potential for impacting heritage resources.*

Types of Studies Undertaken to Preserve Heritage Resources

Overview: An overview study of heritage resources should be conducted at the same time as the development project is being designed or its feasibility addressed. They usually lack specificity with regard to the exact location(s) and form(s) of impact and involve limited, if any, field surveys. Their main aim is to accumulate, evaluate, and synthesize the existing knowledge of the heritage of the known area of impact. The overview study provides managers with baseline data from which recommendations for future research and forecasts of potential impacts can be made. A Class I Permit is required for this type of study if field surveys are undertaken.

Reconnaissance: This is done to provide a judgmental appraisal of a region sufficient to provide the developer, the consultant, and government managers with recommendations for further development planning. This study may be implemented as a preliminary step to inventory and assessment investigations except in cases where a reconnaissance may indicate a very low or negligible heritage resource potential. Alternately, in the case of small-scale or linear developments, an inventory study may be recommended and obviate the need for a reconnaissance.

The main goal of a reconnaissance study is to provide baseline data for the verification of the presence of potential heritage resources, the determination of impacts to these resources, the generation of terms of reference for further studies and, if required, the advancement of preliminary mitigative and compensatory plans. The results of reconnaissance studies are primarily useful for the selection of alternatives and secondarily as a means of identifying impacts that must be mitigated after the final siting and design of the development project.

Depending on the scope of the study, a Class 1 or Class 2 Permit is required for this type of investigation.

Inventory: A resource inventory is generally conducted at that stage in a project's development at which the geographical area(s) likely to sustain direct, indirect, and perceived impacts can be well defined. This requires systematic and intensive fieldwork to ascertain the effects of all possible and alternate construction components on heritage resources. All heritage sites must be recorded on Government of Nunavut Site Survey forms. Sufficient information must be amassed from field, library and archival components of the study to generate a predictive model of the heritage resource base that will:

- allow the identification of research and conservation opportunities;
- enable the developer to make planning decisions and recognize their likely effects on the known or predicted resources; and
- make the developer aware of the expenditures, which may be required for subsequent studies and mitigation. A Class 1 or 2 permit is required.

Assessment: At this stage, sufficient information concerning the numbers and locations of heritage resources will be available, as well as data to predict the forms and magnitude of impacts. Assessments provide information on the size, volume, complexity and content of a heritage resource, which is used to rank the values of different sites or site types given current archaeological knowledge. As this information will shape subsequent mitigation program(s), great care is necessary during this phase.

Mitigation: This refers to the amelioration of adverse impacts to heritage resources and involves the avoidance of impact through the redesign or relocation of a development or its components; the protection of the resource by constructing physical facilities; or, the scientific investigation and recovery of information from the resource by excavation or other method. The type(s) of appropriate mitigative measures are dictated by their viability in the context of the development project. Mitigation strategies must be developed in consultation with, and approved by, the Department of Culture and Heritage. It is important to note that mitigation activities should be initiated as far in advance of the construction of the development as possible.

Surveillance and monitoring: These may be required as part of the mitigation program.

Surveillance may be conducted during the construction phase of a project to ensure that the developer has complied with the recommendations.

Monitoring involves identification and inspection of residual and long-term impacts of a development (i.e. shoreline stability of a reservoir); or the use of impacts to disclose the presence of heritage resources, for example, the uncovering of buried sites during the construction of a pipeline.