



## SCREENING DECISION REPORT NIRB FILE No.: 22YN021

NPC File No.: 149746

**June 23, 2022**

Following the Nunavut Impact Review Board’s (NIRB or Board) assessment of all materials provided, the NIRB is recommending that a review of Fisheries and Oceans Canada’s (DFO) “Passive Acoustic Monitoring and UAV Assessment of the Impacts of Shipping and Development on High Arctic Beluga Whales and Narwhals” is not required pursuant to Article 12, Section 12.4.4(a) of the *Agreement between the Inuit of the Nunavut Settlement Area and Her Majesty the Queen in right of Canada (Nunavut Agreement)* and s. 92(1)(a) of the *Nunavut Planning and Project Assessment Act*, S.C. 2013, c. 14, s. 2 (*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 accepts this Screening Decision Report.

### OUTLINE OF SCREENING DECISION REPORT

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The primary objectives of the NIRB are set out in Article 12, Section 12.2.5 of the *Nunavut Agreement* and are confirmed by s. 23 of the *NuPPAA*:

*Nunavut Agreement*, Article 12, Section 12.2.5: 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.

The purpose of screening is provided for under Article 12, Section 12.4.1 of the *Nunavut Agreement* and s. 88 of the *NuPPAA* which states:

*NuPPAA*, s. 88: 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 Article 12, Section 12.4.2(a) and (b) of the *Nunavut Agreement* and s. 89(1) of *NuPPAA* which states:

*NuPPAA*, s. 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 under Article 12, Section 12.4.2(c) and s. 89(2) of the *NuPPAA* provides that the considerations set out in s.89(1)(a) prevail over the considerations set out in s. 89(1)(b) of the *NuPPAA*.

As set out under Article 12, Section 12.4.4 of the *Nunavut Agreement* and s. 92(1) of the *NuPPAA*, upon conclusion of the screening process, the Board must provide its written report the Minister. The contents of the NIRB's report are specified under *NuPPAA*:

*NuPPAA*, s. 92(1): The Board must submit a written report to the responsible Minister containing a description of the project that specifies its scope and indicating that:

- (a) a review of the project is not required;
- (b) a review of the project is required; or
- (c) the project should be modified or abandoned.

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 pursuant to paragraph 92(2)(a) of *NuPPAA* as follows:

*NuPPAA*, s. 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 REFERRAL

On April 11, 2022, the NIRB received a referral to screen Fisheries and Oceans Canada's (DFO) "Passive Acoustic Monitoring and UAV Assessment of the Impacts of Shipping and Development on High Arctic Beluga Whales and Narwhals" project proposal from the Nunavut Planning Commission (Commission), with an accompanying positive conformity determination with the North Baffin Regional Land Use Plan.

Pursuant to Article 12, Sections 12.4.1 and 12.4.4 of the *Nunavut Agreement* and s. 87 of the *NuPPAA*, the NIRB commenced screening this project proposal and assigned it file number **22YN021**.

#### PROJECT OVERVIEW & THE NIRB ASSESSMENT PROCESS

### 1. Screening Process Timelines

The following key stages were completed for the screening process:

Date	Stage
April 12, 2022	Receipt of project proposal and positive conformity determination (North Baffin Regional Land Use Plan) from the Commission.
April 12, 2022 & April 21, 2022	Requests to Proponent for additional information in order to carry out screening pursuant to s. s. 144(1) of the <i>NuPPAA</i>
April 20, 2022	Proponent responded to information requests and provided additional information
April 22, 2022	Scoping pursuant to s. 86(1) of the <i>NuPPAA</i>
April 27, 2022	Public engagement and comment request
May 18, 2022	Receipt of public comments
May 24, 2022	Proponent provided with an opportunity to address comments/concerns raised by public

Date	Stage
June 3, 2022	Proponent responded to comments/concerns raised by public
June 2, 2022	Ministerial extension requested from the Minister of Fisheries and Oceans and the Canadian Coast Guard
June 23, 2022	Issuance of Screening Decision Report

## 2. Project Scope

All documents received and pertaining to this project proposal can be accessed from the NIRB's online public registry at [www.nirb.ca/project/125688](http://www.nirb.ca/project/125688).

<b>Project:</b>	Passive Acoustic Monitoring and UAV Assessment of the Impacts of Shipping and Development on High Arctic Beluga Whales and Narwhals				
<b>Region:</b>	Qikiqtani (North Baffin)				
<b>Location:</b>	Creswell Bay				
<b>Closest Community:</b>	Resolute Bay	<b>Distance (approximate)</b>	218 kilometres (km)	<b>Direction</b>	North
<b>Summary of Project Description:</b>	The Proponent intends to use drone video and photographs to look at the body size of whales, measure ship noise and beluga and narwhal vocalizations, observe beluga and narwhal behaviour in the presence and absence of vessels, assess interactions between narwhal and beluga, and collect biopsy samples to look at hormone levels and genetics in the whales.				
<b>Project Proposed Timeline:</b>	July to August, 2022				

As required under s. 86(1) of the *NuPPAA*, the Board accepts the scope of the project as set out by DFO in the proposal. The scope of the project proposal includes the following undertakings, works, or activities:

- Twin Otter used for pick up and drop off of equipment and personnel;
- Set up and use of six (6) person temporary camp;
- Use of two (2) zodiacs to collect tissue samples, deploy hydrophones, and to operate drones for video and imagery;
- Use of two (2) drones to take videos of whales;
  - Will be flown a minimum of 20m over the surface of the water.
- Use of a CO2 air rifle to collect tissue samples from whales;
- Deployment of two (2) hydrophones to study whale vocalization;
- Deployment of underwater camera to record behaviours of whales;
- Storage and use of fuel for zodiacs;
- Sourcing of water at the Creswell River near camp;
- Sewage Waste to be buried on land; and
- All non-combustible waste to be brought to Polar Continental Shelf Program camp for proper disposal.

### 3. Inclusion or Exclusion to Scoping List

The NIRB has identified no additional works or activities in relation to the project proposal. As a result, the NIRB proceeded with screening the project based on the scope as described above.

### 4. Public Comments and Concerns

Notice regarding the NIRB's screening of this project proposal was distributed on April 27, 2022, to community organizations in Resolute Bay, Arctic Bay, Pond Inlet, Gjoa Haven, Taloyoak and Kugaaruk as well as to relevant federal and territorial government agencies, Inuit organizations and other parties. The NIRB requested that interested parties review the proposal and provide the Board with any comments or concerns by May 18, 2022, regarding:

- Whether the project proposal is likely to arouse significant public concern; and if so, why;
- Whether the project proposal is likely to cause significant adverse eco-systemic or socio-economic effects; and if so, why;
- Whether the project proposal is likely to cause significant adverse impacts on wildlife habitat or Inuit harvest activities; and if so, why;
- Whether the project proposal is of a type where the potential adverse effects are highly predictable and mitigable with known technology, (and providing any recommended mitigation measures); and
- Any matter of importance to the Party related to the project proposal.

On or before May 18, 2022, the NIRB received comments from the following interested parties:

- **Government of Nunavut (GN)**
- **Crown-Indigenous Relations and Northern Affairs Canada (CIRNAC)**
- **Fisheries and Oceans Canada (DFO)**
- **Transport Canada (TC)**

*a. Summary of Public Comments and Concerns Received during the Public comment period of this file*

The following provides a summary of the comments and concerns received by the NIRB:

#### GN

- The proponent exercises caution in their movements in the area specifically with regards to aircraft landings and the placement of temporary campsites. It is recommended that landing areas be visually inspected prior to landing and take off, and that camp be erected away from any archaeological/historical sites or features.
- The proponent should avoid conducting activities in the vicinity (50 m buffer zone) of archaeological/historical sites or features. If archaeological sites or features are encountered, activities should immediately be interrupted and moved away from this location. Each site encountered needs to be recorded and reported to the Territorial Archaeology Office.

## CIRNAC

- Recommends that the Proponent ensure that any waste, fuel and food items are sealed in odour-proof container(s) to prevent attraction of wildlife.
- Recommends that any fuel or hazardous material is stored a minimum of 31 metres from the high-water mark of any water body in a secondary containment berm, and that any human wastes are deposited a minimum of 31 metres from the high water mark of any waterbody.
- Recommends that the Proponent prioritize the employment and training of local Inuit as well as procurement with Inuit-owned businesses when implementing project activities;
- Recommends that the Proponent consult with the Hamlet of Grise Fiord, the Iviq Hunters and Trappers Association, community members, and other organizations which may have an interest in the project's activities.

## DFO

- Notes that it is the Proponents duty to notify DFO if they have caused, or about to cause, the death of fish by means other than fishing and /or the harmful alteration, disruption or destruction of fish habitat.

## TC

- Recommends that the Proponent review legal requirements when flying drones, available online at Transport Canada's website.

On May 20, 2022, the NIRB received late comment submissions from the following interested parties:

- **Qikiqtani Inuit Association (QIA)**
- QIA's comments are included as **Appendix A**.

### *b. Comments and Concerns with respect to Inuit Qaujimaningit, Traditional, and Community Knowledge*

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

## 5. Proponent's Response to Public Comments and Concerns

On May 24, 2022, due to the concerns and questions identified in the comments received from parties, the NIRB provided an opportunity for the Proponent to respond to the concerns raised during the commenting period. The following is a summary of the Proponent's response to concerns as received on June 3, 2022:

- In response to concerns regarding an Animal Use Protocol and Application to Disturb Marine Mammals, the Proponent noted that they have submitted the proper paperwork.
- In response to concerns regarding legal requirements when flying drones, the Proponent noted that the requirements have been reviewed and one drone pilot in camp is certified through TC.

- In response to concerns regarding the storage of fuel and human wastes, the Proponent stated that both fuel and human wastes will be stored a minimum of thirty-one metres away from the high-water mark.
- In response to concerns regarding employment and training of local Inuit, the Proponent noted that they are in the process of hiring two local participants from Resolute Bay. They will be equal members of the team and trained on all aspects of the research.
- In response to concerns regarding archeological and historical sites while setting up the camp, inspecting the landing strip and recording any archeological and historical sites encountered, the Proponent noted that they will exercise caution to not disturb any archeological/historical sites, that they will use the current demarcated landing strip and that if any archeological sites or features are encountered, that they will be reported to the Territorial Archeology Office.
- In response to concerns regarding satellite-tagging and capture of whales using nets, the Proponent has noted that they have revised to postpone any tagging work for at least one year. The Proponent also noted that the focus of the field study in 2022 will be on behavioural observations, remote biopsy sampling and passive monitoring via small aerial drones, cameras, and hydrophones. Furthermore, the field study will only occur in one place: Creswell Bay.
- In response to concerns regarding participation of Mr. Kilabuk, the Proponent noted that Mr. Kilabuk will only be leading the Cumberland Sound fieldwork; the Animal Use Protocol encompasses both projects because it focused on methodologies and species (not locations).
- In response to concerns regarding the hiring of local Inuit to participate in the 2022 field work, the Proponent noted that they are in the process of hiring two Resolute Bay community members to participate in the 2022 field program.
- In response to concerns regarding the prioritization of tagging or biopsy sampling, the Proponent noted that only biopsy sampling will occur in year 1. In future efforts tagging will be prioritized.
- In response to concerns regarding animals displaying “active avoidance of the research vessel”, the Proponent noted that active avoidance is defined as directed movements away from the observer/boat. This can be measured as a change in direction and/or increase in swim speed. The Proponent noted that whale behaviour will be monitored for the entire 20 minutes to assess the proportion of times a whale actively avoids the observer/boat.
- In response to concerns regarding the 20-metre minimum height for the drone, the Proponent noted that the altitude of the drone will be constantly monitored and adjusted if requires to minimize disturbance to marine mammals.
- In response to concerns regarding drone activities interfering with Inuit harvesting activities, the Proponent noted that they consulted with Inuit organizations and has actively sought to hire community members with drone expertise as well as train others in the area. The Proponent also noted that they will be working with local cabin owners in the area and will ensure they do not interfere with harvesting activities.
- In response to concerns regarding consultation on Passive Acoustic Monitoring devices, the Proponent noted that the Resolute Bay HTA approved the use of a hydrophone for the short-term camp set up.



- In response to concerns regarding sampling while active harvesting is on-going, the Proponent noted that safety of all personnel and the whales is the number one priority and so research activities would be paused while active hunting is occurring.
- In response to concerns regarding avoidance of ship strikes on whales, the Proponent noted that the project will use small, inflatable boats with outboard engines. The Proponent also noted that to minimize the potential for boat strikes and reduce noise disturbance, boats will be used sparingly, will be mainly launched when whales are not close by, and will be running on low speeds. However, part of the study is to assess the impacts of boat noise and presence on whale behaviours. The Proponent will therefore monitor reactions to the inflatable boats.
- In response to comments regarding all comments submitted for this project proposal, the Proponent noted that they appreciate all comments and questions and have provided responses to all comments made by all organizations. The Proponent noted that they are in the process of attaining Transport Canada's requirements for drone flights.
- In response to concerns regarding any landings or use of Inuit Owned Lands will require an appropriate land use authorization from QIA, the Proponent noted that an application to the land use planning commission has been submitted. The Proponent will reach out to the QIA to see if anything further is required.

## 6. Time of Report Extension

As a result of the time required to allow time to address comments and concerns received by parties, the NIRB was not able to provide its screening decision report to the responsible Minister within 45 days as required by Article 12, Section 12.4.5 of the *Nunavut Agreement* and s. 92(3) of the *NuPPAA*. Therefore, on June 2, 2022, the NIRB wrote to the Minister of Fisheries and Oceans and the Canadian Coast Guard, Government of Canada, seeking an extension to the 45-day timeline for the provision of the Board's Report.

### ASSESSMENT OF THE PROJECT PROPOSAL IN ACCORDANCE WITH PART 3 OF *NuPPAA*

In determining whether a review of the project is required, the Board considered whether the project proposal had 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 s. 90 of the *NuPPAA*. The Board took particular care to take into account Inuit Qaujimaningit, traditional and community knowledge 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:

Factor	Comment
The size of the geographic area, including the size of wildlife habitats, likely to be affected by the impacts.	<ul style="list-style-type: none"> <li>▪ The physical footprint of the proposed project components is within the terrestrial area and marine waters of Creswell Bay.</li> </ul>



Factor	Comment
	<ul style="list-style-type: none"> <li>The proposed project would take place within habitats of far-ranging terrestrial wildlife such as migratory and non-migratory birds, Arctic fox, Arctic hare, and Species at Risk such as Polar Bear. As well as marine wildlife such as fish and fish habitat, beluga whales, narwhales, and seal.</li> </ul>
The ecosystemic sensitivity of that area.	<ul style="list-style-type: none"> <li>No specific areas of ecosystemic sensitivity have been identified by the Proponent within the physical footprint of the proposed project.</li> </ul>
The historical, cultural, and archaeological significance of that area.	<ul style="list-style-type: none"> <li>No specific areas of historical, cultural, and archaeological significance have been identified by the Proponent within the physical footprint of the proposed project.</li> </ul>
The size of the human and the animal populations likely to be affected by the impacts.	<ul style="list-style-type: none"> <li>The proposed project may affect marine mammal movements, which may affect the chances for Inuit harvesting activities.</li> </ul>
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.	<ul style="list-style-type: none"> <li>A zone of influence of up to 20 km from the most potentially-disruptive project activities was selected for the NIRB's assessment.</li> <li>With adherence to the relevant regulatory requirements and application of the mitigation measures recommended by the NIRB, no significant residual effects are expected to occur.</li> </ul>
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.	<ul style="list-style-type: none"> <li>The NIRB has not identified any past, present, and reasonably foreseeable projects at this time; however, the mitigation measures recommended by the NIRB have been designed to reduce cumulative effects should projects occur in the area in the future.</li> </ul>
Any other factor that the Board considers relevant to the assessment of the significance of impacts.	<ul style="list-style-type: none"> <li>The Board notes the project will provide information on whale populations which has been noted as important for the evaluation of effects of other activities and the health of the population.</li> </ul>

#### VIEWS OF THE BOARD

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

The NIRB has listed specific Acts and Regulations below that may be applicable to the project proposal but this list should not be considered as a complete list and the Proponent is responsible to ensure that it follows all Acts and Regulations that may be applicable to the project proposal.

**Ecosystem, wildlife habitat and Inuit harvesting activities:**

<b>Valued Component</b>	Migratory and non-migratory birds, Arctic hare, Arctic Fox, and Species at Risk such as Polar Bears.
<b>Potential effects:</b>	Potential adverse effects to migratory and non-migratory birds, Arctic hare, Arctic fox and Species at Risk from noise and visual disturbance generated from the setup of a temporary camp and transportation of personnel and equipment via aircraft and boat and from research activities.
<b>Nature of Impacts:</b>	The potential for impacts is considered to be limited due to infrequent and temporary activities and any resulting impacts would be expected to be reversible.
<b>Mitigating Factors:</b>	The Proponent proposes to camp at established campsites recommended by local guides to reduce impacts on wildlife and to remove wastes for proper disposal.
<b>Proposed Terms and Conditions:</b>	Waste Management – 8 Fuel and Chemical Storage – 9 through 12 Wildlife – General – 13 through 15 Migratory Birds and Raptors Disturbance – 16 through 19 Land Use and Restoration of Disturbed Areas – 20 through 24 Camps – 25 and 26
<b>Related Acts and/or Regulations:</b>	1. The <i>Species at Risk Act</i> ( <a href="http://laws-lois.justice.gc.ca/eng/acts/S-15.3/index.html">http://laws-lois.justice.gc.ca/eng/acts/S-15.3/index.html</a> ). Attached in <b>Appendix B</b> is a list of Species at Risk in Nunavut.  2. The <i>Wildlife Act (Nunavut)</i> and its corresponding regulations ( <a href="http://www.canlii.org/en/nu/laws/stat/snu-2003-c-26/latest/snu-2003-c-26.html">http://www.canlii.org/en/nu/laws/stat/snu-2003-c-26/latest/snu-2003-c-26.html</a> ).

<b>Valued Component</b>	Marine wildlife such as fish and fish habitat, seals, narwhal, and beluga whales
<b>Potential effects:</b>	Potential adverse effects to marine wildlife and Species at Risk from noise and visual disturbance generated from the transportation of personnel and equipment via boat and research activities.
<b>Nature of Impacts:</b>	The potential for impacts is considered to be limited due to infrequent and temporary activities and any resulting impacts would be expected to be reversible. The Board notes that the nature of the research requires some interaction with whales.
<b>Mitigating Factors:</b>	The Proponent proposes to use remote monitoring equipment wherever possible to reduce impacts on marine wildlife and to remove wastes for proper disposal. The Proponent has committed to reducing speed around

	whales as well as stopping all research activities if hunting occurs in the area.
<b>Proposed Terms and Conditions:</b>	Water Courses/Water Bodies – 6 and 7 Waste Management – 8 Fuel and Chemical Storage – 9 through 12 Wildlife General – 13 through 15 Marine-Based Activities – 27 through 34
<b>Related Acts and/or Regulations:</b>	1. The <i>Species at Risk Act</i> ( <a href="http://laws-lois.justice.gc.ca/eng/acts/S-15.3/index.html">http://laws-lois.justice.gc.ca/eng/acts/S-15.3/index.html</a> ). Attached in <b>Appendix B</b> is a list of Species at Risk in Nunavut.  2. The <i>Wildlife Act (Nunavut)</i> and its corresponding regulations ( <a href="http://www.canlii.org/en/nu/laws/stat/snu-2003-c-26/latest/snu-2003-c-26.html">http://www.canlii.org/en/nu/laws/stat/snu-2003-c-26/latest/snu-2003-c-26.html</a> ).

<b>Valued Component</b>	Surface water quality, soil and vegetation
<b>Potential effects:</b>	Potential adverse impacts to surface water quality, the land and vegetation from the establishment of a temporary camp, disposal of sewage, and greywater at the temporary camps and the use of a boat for project activities.
<b>Nature of Impacts:</b>	The potential for impacts is considered to be limited due to infrequent and temporary activities and any resulting impacts would be expected to be reversible
<b>Mitigating Factors:</b>	The Proponent also noted that an emergency spill kit will be kept at the campsite at all times. Further, the Proponent indicated that all personnel will be made aware of appropriate protocols for handling, storing, and pouring fuel.
<b>Proposed Terms and Conditions:</b>	Waste Management – 8 Fuel and Chemical Storage – 9 through 12 Land Use and Restoration of Disturbed Areas – 20 through 24 Camps – 25 and 26
<b>Related Acts and/or Regulations:</b>	1. The <i>Fisheries Act</i> ( <a href="http://laws-lois.justice.gc.ca/eng/acts/F-14/index.html">http://laws-lois.justice.gc.ca/eng/acts/F-14/index.html</a> ). 2. The <i>Nunavut Waters and Nunavut Surface Rights Tribunal Act</i> ( <a href="http://laws-lois.justice.gc.ca/eng/acts/n-28.8/">http://laws-lois.justice.gc.ca/eng/acts/n-28.8/</a> ).

<b>Valued Component</b>	Inuit harvesting and traditional land use activities
<b>Potential effects:</b>	Potential affects on Inuit harvesting from the disturbance of marine mammals from research activities, however, the Proponent has noted that all activities will stop if Inuit harvesting activities occur in the area. The Board is recommending terms and conditions to ensure project activities are informed by available Inuit Qaujimaningit and that project activities do not interfere with Inuit wildlife harvesting or traditional land use activities.

<b>Nature of Impacts:</b>	Noise from the research activities, as well as biopsy samples may temporarily change distribution of harvested species through avoidance and may affect personal enjoyment of the land. The potential for impacts is considered to be minimal due to the temporary and low-impact nature of the activities and any resulting impacts would be expected to be reversible.
<b>Mitigating Factors:</b>	Due to the distance from multiple communities, it is possible that the area could be used for traditional activities; however, no comments were received from the community on this aspect.
<b>Proposed Terms and Conditions:</b>	Other – 38 and 39
<b>Related Acts and/or Regulations:</b>	1. The <i>Nunavut Act</i> ( <a href="http://laws-lois.justice.gc.ca/eng/acts/N-28.6/">http://laws-lois.justice.gc.ca/eng/acts/N-28.6/</a> ). The Proponent must comply with the proposed terms and conditions listed in the attached <b>Appendix C</b> .

### **Socio-economic effects on northerners:**

<b>Valued Component</b>	Archaeological and Historical Sites
<b>Potential effects:</b>	No specific areas of historical, cultural, and archaeological significance have been identified by the Proponent or Government of Nunavut within the physical footprint of the proposed project. The marine-based nature of the activities makes it unlikely to encounter any sites.
<b>Nature of Impacts:</b>	The potential for impacts is considered to be minimal due to the nature of the activities and due care of the Proponent to avoid disturbance of historical sites.
<b>Mitigating Factors:</b>	If any historical sites are found the Proponent will be required to contact the Government of Nunavut, Culture and Heritage.
<b>Proposed Terms and Conditions:</b>	Heritage Sites – 35 through 37 Other - 38
<b>Related Acts and/or Regulations:</b>	1. The <i>Nunavut Act</i> ( <a href="http://laws-lois.justice.gc.ca/eng/acts/N-28.6/">http://laws-lois.justice.gc.ca/eng/acts/N-28.6/</a> ). The Proponent must comply with the proposed terms and conditions listed in the attached <b>Appendix C</b> .

<b>Valued Component</b>	Local hiring, contracting and economic impact
<b>Potential effects:</b>	The potential for impacts is considered to be positive as the Proponent has committed to training and hiring three (3) local Inuit to assist with the research activities.
<b>Nature of Impacts:</b>	The potential for impacts is considered to be positive for the local Inuit who will be trained and hired, and to local companies from the purchase of local goods and use of local facilities.
<b>Mitigating Factors:</b>	Recommended terms and conditions
<b>Proposed Terms and Conditions:</b>	Other - 40

<b>Related Acts and/or Regulations:</b>	N/A
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**Significant public concern:**

<b>Valued Component</b>	<b>Public Concern</b>
<b>Potential effects:</b>	No significant public concern was expressed during the public commenting period for this file; however, the Board recommends term and conditions to ensure project activities do not interfere with Inuit wildlife harvesting or traditional land use activities, to the extent possible hire local people and access local services where possible, and to ensure planned activities in the area utilizes available Inuit Qaujimaningit.
<b>Nature of Impacts:</b>	The potential for impacts is considered to be minimal as long as the Proponent follow the recommended terms and conditions.
<b>Mitigating Factors:</b>	Recommended terms and conditions.
<b>Proposed Terms and Conditions:</b>	Other – 38 through 40
<b>Related Acts and/or Regulations:</b>	N/A

**Technological innovations for which the effects are unknown:**

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

**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: 1-5.

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. Fisheries and Oceans Canada (the Proponent) shall maintain a copy of the Project Terms and Conditions at the site of operation at all times and make it accessible to enforcement officers upon request.

2. The Proponent shall operate in accordance with all commitments stated in correspondence provided to the Nunavut Planning Commission (NPC File No.: 149746) and the NIRB (Online Application Form, April 20, 2022). This information should be accessible to enforcement officers upon request.
3. The Proponent shall operate the site in accordance with all applicable Acts, Regulations and Guidelines.
4. The Proponent shall ensure that it meets the standards and/or limits as set out in the authorizing agencies' permits or licences as required for this project.
5. The Proponent shall ensure that all personnel, staff and contractors are adequately trained prior to commencement of all project activities, and shall be made aware of all operational plans, management plans, guidelines and Proponent commitments relating to the project.

#### **Water courses/Water bodies (including fresh and marine waters)**

6. The Proponent shall not extract water from any fish-bearing water body unless the water intake hose is equipped with a screen of appropriate mesh size to ensure that there is no entrapment of fish. Small lakes or streams should not be used for water withdrawal unless otherwise authorized by the appropriate authorizing agency.
7. The Proponent shall not deposit, nor permit the deposit of any fuel, chemicals, wastes (including wastewater) or sediment into any water body. The Proponent should have in place an Emergency Spill Response Plan that is approved by the appropriate authorizing agency(ies).

#### **Waste Management**

8. The Proponent shall manage all hazardous and non-hazardous waste including food, domestic wastes, debris, and petroleum-based chemicals (e.g., greases, gasoline, etc.) in such a manner to avoid release into the environment and access to wildlife at all times until disposed of appropriately or at an approved facility.

#### **Fuel and Chemical Storage**

9. The Proponent shall have a Spill Contingency Plan in place at all fuel storage or transfer locations and shall ensure that appropriate spill response equipment and clean-up materials (e.g., shovels, pumps, barrels, drip pans, and absorbents) are readily available.
10. The Proponent shall follow the authorizing agencies' direction for management and removal of hazardous materials and wastes (e.g., contaminated soils, sediment and waste oil).
11. The Proponent shall ensure that wildlife deterrent systems are utilized at the time of a spill incident in order to avoid wildlife (terrestrial or marine) and migratory birds from being contaminated.
12. The Proponent shall ensure that all spills of fuel or other deleterious materials of 100 litres or more must be reported immediately to the 24-hour Spill Line at (867) 920-8130.

#### **Wildlife – General**

13. The Proponent shall not substantially alter or damage or destroy any wildlife habitat in conducting this operation unless otherwise authorized by the appropriate authorizing agencies.

14. The Proponent shall not chase, weary, harass or molest wildlife. This includes persistently circling, chasing, hovering over, pursuing or in any other way harass wildlife, or disturbing large groups of animals, except as necessary and unavoidable in order to carry out research activities.
15. The Proponent shall not hunt or fish, unless proper Nunavut authorizations have been acquired.

### **Migratory Birds and Raptors Disturbance**

16. The Proponent shall carry out all phases of the project in a manner that protects migratory birds and avoids harming, killing or disturbing migratory birds or destroying, disturbing or taking their nests or eggs. In this regard, the Proponent shall take into account Environment and Climate Change Canada's *Avoidance Guidelines*. The Proponent's actions in applying the *Avoidance Guidelines* shall be in compliance with the *Migratory Birds Convention Act, 1994* and with the *Species at Risk Act*.
17. The Proponent shall not disturb or destroy the nests or eggs of any birds. If active nests of any birds are discovered or located (i.e., with eggs or young), the Proponent shall avoid these areas until nesting is complete and the young have naturally left the vicinity of the nest by establishing a protection buffer zone<sup>1</sup> appropriate for the species and the surrounding habitat.
18. The Proponent shall avoid the seaward site of seabird colonies and areas used by flocks of migrating waterfowl, a minimum distance away on the recommendation of the appropriate authorizing agencies.
19. The Proponent shall not pursue seabirds or waterbirds swimming on the water surface and shall avoid concentrations of these birds if encountered on the water.

### **Land Use and Restoration of Disturbed Areas**

20. The Proponent shall use existing trails where possible during project activities on the land.
21. The Proponent shall ensure that the land use area is kept clean and tidy at all times.
22. The Proponent shall avoid disturbance on slopes prone to natural erosion, and alternative locations shall be utilized.
23. The Proponent shall remove all garbage, fuel and equipment at the end of each field season.
24. The Proponent shall ensure that all disturbed areas are restored to a stable or pre-disturbed state using Best Available Technology Economically Achievable (BATEA) upon completion of work.

### **Camps**

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<sup>1</sup> Recommended setback distances to define buffer zones have been established by Environment and Climate Change Canada for different bird groups nesting in tundra habitat and can be found at [www.ec.gc.ca/paom-itmb](http://www.ec.gc.ca/paom-itmb).



25. The Proponent shall ensure that all camps are located durable surfaces, such as gravel or sand that is consolidated and can withstand repeated, heavy use. Measures shall be put in place to prevent erosion, trail formation and damage to the ground.
26. The Proponent shall not erect camps or store materials on the surface ice of lakes or streams, except that which is for immediate use.

### **Marine-Based Activities**

27. The Proponent shall ensure that noise be kept to a minimum and shall refrain from making sharp or loud noises, blowing horns or whistles and shall maintain constant engine noise levels.
28. The Proponent shall not visit cliffs used by nesting and breeding birds during the late afternoon or early evening hours during the months of August and September.
29. Except where necessary and unavoidable due to the research activities, the Proponent shall not attempt to intersect or interfere with the movements of marine mammals. This includes ensuring that there are no wake zones within 250 metres and a minimum of 100 metre no go zone around marine mammals. Strategic positioning of vessels ahead of the path being traveled by mobile mammals and waiting for the mammals to pass is also prohibited except as necessary and unavoidable in order to conduct the research activities.
30. When marine mammals appear to be trapped or disturbed by vessel movements, the Proponent shall implement appropriate measures to mitigate disturbance, including stoppage of movement until wildlife have moved away from the immediate area.
31. The Proponent shall maintain a distance of 100 metres if a Polar Bear is encountered on land or ice while conducting activities from a zodiac or other small craft; all interaction with Polar Bears should be avoided if possible.
32. The Proponent shall maintain a distance of 500 metres of a walrus haul out while conducting activities from a zodiac or other small craft.
33. The Proponent shall suspend all project activities should any dead fish or wildlife (both marine and terrestrial), or any injured wildlife be observed during any works or activities in and around the marine waters. Activities may only be resumed on the recommendation of the authorizing agencies.
34. The Proponent shall report all incidents, injuries, or sightings of marine mammals to the appropriate authorizing agencies.

### **Heritage Sites**

35. The Proponent shall ensure that archaeological and paleontological sites are not purposely or inadvertently disturbed by clients or staff as a result of project activities.
36. The Proponent shall ensure that all clients and staff are aware of the Proponent's responsibilities and requirements regarding archaeological or palaeontological sites that are encountered during land-based activities. This should include briefings explaining the prohibitions regarding removal of artifacts, and defacing or writing on rocks and infrastructure.
37. No activities shall be conducted in the vicinity (50 metres buffer zone) of any archaeological/historical sites. If archaeological sites or features are encountered, activities

shall immediately be interrupted and moved away from this location. Each site encountered needs to be recorded and reported to the Government of Nunavut-Department of Culture and Heritage.

### **Other**

38. The Proponent should consult with local residents regarding their activities in the area and solicit available Inuit Qaujimaningit and information that can inform project activities.
39. The Proponent shall ensure that project activities do not interfere with Inuit wildlife harvesting or traditional land use activities.
40. The Proponent should, to the extent possible, hire local people and access local services where possible.

## **MONITORING AND REPORTING REQUIREMENTS**

In addition, the Board is recommending the following:

### **Annual Report**

1. The Proponent shall submit a comprehensive annual report with copies provided to the Nunavut Impact Review Board, Qikiqtani Inuit Association, and Government of Nunavut – Department of Environment, by March 31<sup>st</sup> of each year of permitted activities beginning March 31, 2023. The annual report must contain at least the following information:
  - a) A summary of activities undertaken for the year, including:
    - a map showing the approximate location of biopsy sites;
    - a map showing the approximate location of satellite tagging sites;
    - a description of local hires, contracting opportunities and initiatives;
    - flight altitudes, frequency of flights and anticipated flight routes;
    - site photos;
  - b) A work plan for the following year, including any progressive reclamation work undertaken;
  - c) A summary of community consultations undertaken throughout the year, providing copy of materials presented to community members, a description of issues and concerns raised, discussions with community members and advice offered to the company as well as any follow-up actions that were required or taken to resolve any concerns expressed about the project proposal;
  - d) A log of instances in which community residents occupy or transit through the project area for the purpose of traditional land use or harvesting. This log should include the location and number of people encountered, activity being undertaken (e.g., berry picking, fishing, hunting, camping, etc.), date and time; and any mitigation measures or adaptive management undertaken to prevent disturbance;
  - e) A discussion of issues related to wildlife and environmental monitoring, including the number of cease-work orders required as a result of proximity to marine mammals and any other wildlife;

- f) A brief summary of WMMP results as well as any mitigation actions that were undertaken. In addition, the Proponent shall maintain a record of wildlife observations while operating within the project area and include it as part of the summary report. The summary report based on wildlife observations should include the following:
1. 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.
  2. Prior to conducting project activities, the Proponent should map the location of any sensitive wildlife sites such as denning sites, calving areas, caribou crossing sites, and raptor nests in the project area, and identify the timing of critical life history events (i.e., calving, mating, denning and nesting).
  3. 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.
- g) An analysis of the effectiveness of mitigation measures for wildlife;
- h) Summary of any heritage sites encountered during the research activities, any follow-up action or reporting required as a result and how project activities were modified to mitigate impacts on the heritage sites;
- i) Summary of its knowledge of Inuit land use in/near the project area and explain how project activities were modified to mitigate impacts on Inuit land use; and
- j) A summary of how the Proponent has complied with conditions contained within this Screening Decision, and all conditions as required by other authorizations associated with the project proposal.

#### OTHER NIRB CONCERNS AND RECOMMENDATIONS

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

#### **Change in Project Scope**

1. Responsible authorities or Proponent shall notify the Nunavut Planning Commission and/or Parks Canada as appropriate, and the NIRB of any changes in operating plans or conditions, including phase advancement, associated with this project prior to any such change.

#### **Copy of licences, etc. to the Board and Commission**

2. The NIRB respectfully requests that responsible authorities submit a copy of each licence, permit or other authorization issued for the Project to the NIRB to assist in enabling possible project monitoring that may be required. Please forward a copy of the licences, permits and/or other authorizations to the NIRB directly at [info@nirb.ca](mailto:info@nirb.ca) or upload a copy to the NIRB's online registry at [www.nirb.ca](http://www.nirb.ca).

#### **Use of Inuit Qaujimaningit**

3. The Proponent is encouraged to work with local communities and knowledge holders to inform project design, to carry out the project, and to confirm or validate the perspectives represented in publications produced as part of the project. Care should be taken to ensure that Inuit

Qaujimaningit and local knowledge collected for the project is used with permission and is accurately represented.

### **Bear and Carnivore Safety**

4. The Proponent should review the Government of Nunavut's booklet on Bear Safety, which can be downloaded from this link: [http://gov.nu.ca/sites/default/files/bear\\_safety\\_-\\_reducing\\_bear-people\\_conflicts\\_in\\_nunavut.pdf](http://gov.nu.ca/sites/default/files/bear_safety_-_reducing_bear-people_conflicts_in_nunavut.pdf). Further information on bear/carnivore detection and deterrent techniques can be found in the "*Safety in Grizzly and Black Bear Country*" pamphlet, which can be downloaded from this link: [https://www.enr.gov.nt.ca/sites/enr/files/resources/safety\\_in\\_grizzly\\_and\\_black\\_bear\\_country\\_english.pdf](https://www.enr.gov.nt.ca/sites/enr/files/resources/safety_in_grizzly_and_black_bear_country_english.pdf).
5. There are Polar Bear and grizzly bear safety resources available from the Bear Smart Society with videos on Polar Bear safety available in English, French and Inuktitut at <http://www.bearsmart.com/play/safety-in-polar-bear-country/>. Information can also be obtained from Parks Canada's website on bear safety at the following link: <http://www.pc.gc.ca/eng/pn-np/nu/quttinirpaaq/visit/visit6/d.aspx> or in reviewing the "*Safety in Polar Bear Country*" pamphlet, which can be downloaded from the following link: [http://www.pc.gc.ca/eng/pn-np/nu/quttinirpaaq/visit/visit6/~media/pn-np/nu/auyuittuq/pdf/shared/PolarBearSafety\\_English.ashx](http://www.pc.gc.ca/eng/pn-np/nu/quttinirpaaq/visit/visit6/~media/pn-np/nu/auyuittuq/pdf/shared/PolarBearSafety_English.ashx).
6. Any problem wildlife or any interaction with carnivores should be reported immediately to the local Government of Nunavut, Department of Environment Conservation Office (Conservation Officer of Resolute Bay, phone: (867) 252-3879).

### **Species at Risk**

7. The Proponent review Environment and Climate Change Canada's "Environment Assessment Best Practice Guide for Wildlife at Risk in Canada", available at the following link: [http://www.sararegistry.gc.ca/virtual\\_sara/files/policies/EA%20Best%20Practices%202004.pdf](http://www.sararegistry.gc.ca/virtual_sara/files/policies/EA%20Best%20Practices%202004.pdf). The guide provides information to the Proponent on what is required when Wildlife at Risk, including *Species at Risk*, are encountered or affected by the project.

### **Migratory Birds**

8. 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.
9. For further information on how to protect migratory birds, their nests and eggs when planning or carrying out project activities, consult Environment and Climate Change 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://publications.gc.ca/collections/collection\\_2013/ec/CW66-324-2013-eng.pdf](http://publications.gc.ca/collections/collection_2013/ec/CW66-324-2013-eng.pdf).

**10.** The Proponent should review Transport Canada's site on the new rules for flying drones in Canada at <https://www.tc.gc.ca/en/services/aviation/drone-safety/new-rules-drones.html>.

The foregoing constitutes the Board’s screening decision with respect to the Fisheries and Oceans Canada’s “Passive Acoustic Monitoring and UAV Assessment of the Impacts of Shipping and Development on High Arctic Beluga Whales and Narwhals”. The NIRB remains available for consultation with the Minister regarding this report as necessary.

M. Kaung Kahng

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

## APPENDIX A: QIKIQTANI INUIT ASSOCIATION COMMENTS



## COMMENT FORM FOR NIRB SCREENINGS

The Nunavut Impact Review Board (NIRB) has a mandate to protect the integrity of the ecosystem for the existing and future residents of Nunavut. To assess the environmental and socio-economic impacts of the project proposal, NIRB would like to hear your concerns, comments and suggestions about the following project proposal application:

<b>Project Proposal Title:</b>	<b>Passive Acoustic Monitoring and UAV Assessment of the Impacts of Shipping and Development on High Arctic Beluga Whales and Narwhals</b>		
<b>Proponent:</b>	<b>Fisheries and Oceans Canada</b>		
<b>Location:</b>	<b>Qikiqtani (North Baffin) Region</b>		
<b>Comments Due By:</b>	<b>May 18, 2022</b>	<b>NIRB #:</b>	<b>22YN021</b>

**Indicate your concerns about the project proposal below:**

<input type="checkbox"/> no concerns	<input type="checkbox"/> traditional uses of land
<input type="checkbox"/> water quality	<input checked="" type="checkbox"/> Inuit harvesting activities
<input type="checkbox"/> terrain	<input checked="" type="checkbox"/> community involvement and consultation
<input type="checkbox"/> air quality	<input type="checkbox"/> local development in the area
<input type="checkbox"/> wildlife and their habitat	<input type="checkbox"/> tourism in the area
<input checked="" type="checkbox"/> marine mammals and their habitat	<input type="checkbox"/> human health issues
<input type="checkbox"/> birds and their habitat	<input type="checkbox"/> other: _____
<input type="checkbox"/> fish and their habitat	_____
<input type="checkbox"/> heritage resources in area	_____

**Please describe the concerns indicated above:**

The Qikiqtani Inuit Association (QIA) represents and advocates for Inuit in the Qikiqtani region of Nunavut. QIA supports wildlife research projects that improve knowledge on species of socio-economic and cultural importance to Inuit. Such research should however be conducted in a manner that minimizes negative impacts on wildlife, the environment, and Inuit rights while also maximizing community involvement, training, employment, and consultation. QIA's questions and recommendations address these concerns and offer suggestions to ensure the proposed project minimizes negative impacts while maximizing benefits.

**Do you have any suggestions or recommendations for this application?**

The project proposes to collect biopsy (skin) samples from narwhal and beluga whales for genetic studies, and to deploy satellite tags to study movements, distribution and migratory patterns. The project proposes to satellite tag up to 10 whales, and up to 30 biopsies will be collected. Tags and biopsy darts will be remotely deployed using a crossbow or a CO2-powered rifle, with no capture and handling of animals proposed. The biopsy procedure proposed is well-established and has been used extensively in Canadian cetacean research. Most narwhal and beluga satellite-tagging in Canada to date, however, has involved the capture (using nets) and physical restraint of animals during the tagging process. Remote tagging is less invasive, and Inuit are largely supportive of attempts to reduce the invasive nature of wildlife research. Has the crossbow deployment method for satellite tagging been used on either of these species







hazardous materials, maximizing Inuit benefits, and consultation; and the GN's recommendations for the protection of archaeological sites.

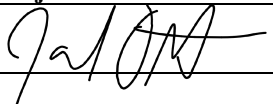
**Do you support the project proposal? Yes ☒ No ☐ Any additional comments?**

QIA supports the project proposal provided it is conducted in a manner that minimizes impacts to marine wildlife and Inuit land use.

Any landings on or use of Inuit Owned Lands will require the appropriate land use authorization from QIA.

Technical Comments provided by Dr. Jeff W. Higdon, and D. Bruce Stewart

**Name of person commenting:** Jared Ottenhof **of** Iqaluit  
**Position:** Director, Qikiqtani **Organization:** Qikiqtani Inuit Association  
Nunilirijikkut

**Signature:**  **Date:** May 20, 2022

## APPENDIX B: 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](http://www.sararegistry.gc.ca)) to get the current status of a species.

Updated: September 2019

Terrestrial Species at Risk <sup>2</sup>	COSEWIC Designation	Schedule of SARA	Government Organization with Primary Management Responsibility <sup>3</sup>
Migratory Birds			
Buff-breasted Sandpiper	Special Concern	Schedule 1	Environment and Climate Change Canada (ECCC)
Common Nighthawk	Threatened	Schedule 1	ECCC
Eskimo Curlew	Endangered	Schedule 1	ECCC
Harlequin Duck	Special Concern	Schedule 1	ECCC
Harris's Sparrow	Special Concern	Schedule 1	ECCC
Horned Grebe	Special Concern	Schedule 1	ECCC
Ivory Gull	Endangered	Schedule 1	ECCC
Olive-sided Flycatcher	Threatened	Schedule 1	ECCC
Peregrine Falcon	Special Concern	Schedule 1	ECCC
Red Knot Islandica Subspecies	Special Concern	Schedule 1	ECCC
Red-necked Phalarope	Special Concern	Schedule 1	ECCC
Ross's Gull	Threatened	Schedule 1	ECCC
Rusty Blackbird	Special Concern	Schedule 1	ECCC
Short-eared Owl	Special Concern	Schedule 1	ECCC
Vegetation			
Porsild's Bryum	Threatened	Schedule 1	Government of Nunavut (GN)
Arthropods			
Transverse Lady Beetle	Special Concern	No Schedule	GN
Terrestrial Wildlife			
Caribou (Dolphin and Union Population)	Endangered	Schedule 1	GN
Caribou (Barren-ground Population)	Threatened	No Schedule	GN
Caribou (Torngat Mountains Population)	Endangered	No Schedule	GN
Grizzly Bear (Western Population)	Special Concern	Schedule 1	ECCC
Peary Caribou	Endangered	Schedule 1	GN
Polar Bear	Special Concern	Schedule 1	ECCC
Wolverine	Special Concern	Schedule 1	GN
Marine Wildlife			
Atlantic Walrus (High Arctic Population)	Special Concern	No Schedule	Fisheries and Oceans Canada (DFO)
Atlantic Walrus (Central/Low Arctic Population)	Special Concern	No Schedule	DFO
Beluga Whale (Cumberland Sound Population)	Threatened	Schedule 1	DFO
Beluga Whale (Eastern Hudson Bay Population)	Endangered	No Schedule	DFO

<sup>2</sup> The Department of Fisheries and Oceans has responsibility for aquatic species.

<sup>3</sup> Environment and Climate Change Canada (ECCC) 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.

<b>Terrestrial Species at Risk<sup>2</sup></b>	<b>COSEWIC Designation</b>	<b>Schedule of SARA</b>	<b>Government Organization with Primary Management Responsibility<sup>3</sup></b>
Beluga Whale (Eastern High Arctic-Baffin Bay Population)	Special Concern	No Schedule	DFO
Beluga Whale (Western Hudson Bay Population)	Special Concern	No Schedule	DFO
<b>Fish</b>			
Atlantic Cod (Arctic Lakes Population)	Special Concern	No Schedule	DFO
Fourhorn Sculpin (Freshwater Form)	Data Deficient	Schedule 3	DFO
Lumpfish	Threatened	No Schedule	DFO
Thorny Skate	Special Concern	No Schedule	DFO

## APPENDIX C: ARCHAEOLOGICAL AND PALAEOLOGICAL 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 Indigenous and Northern Affairs 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:

	<b>Types of Development</b> (See Guidelines below)	<b>Function</b> (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 Overview Assessment and/or Inventory and Documentation and/or Mitigation
c)	Construction of linear disturbances, Extractive disturbances, Impounding disturbances and other land disturbance activities	Archaeological/Palaeontological Overview Assessment and/or Inventory and Documentation and/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*<sup>4</sup> to issue such permits.

<sup>4</sup>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 Indigenous and Northern Affairs 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 *Agreement between the Inuit of the Nunavut Settlement Area and Her Majesty the Queen in right of Canada (Nunavut 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*<sup>5</sup>, 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*<sup>6</sup>, 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 Agreement between the Inuit of the Nunavut Settlement Area and Her Majesty the Queen in right of Canada (Nunavut 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.*

## *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](http://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, and Heritage (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

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<sup>5</sup> s. 51(1)

<sup>6</sup> P.C. 2001-1111 14 June, 2001

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 *Agreement between the Inuit of the Nunavut Settlement Area and Her Majesty the Queen in right of Canada (Nunavut Agreement)*), and the Indigenous and Northern Affairs 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 Palaeontological Sites Regulations*.

### **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.