



## SCREENING DECISION REPORT NIRB FILE No.: 19EA019

Related to NIRB File No.: 07EN067, 14EN033  
NPC File No.: 149067

**June 14, 2019**

Following the Nunavut Impact Review Board's (NIRB or Board) assessment of all materials provided, the NIRB is recommending that a review of Blue Star Gold Corp.'s "Hood River Gold Project" 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

- 1) REGULATORY FRAMEWORK
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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 March 18, 2019 the NIRB received a referral to screen Blue Star Gold Corp.'s "Hood River Gold Project" project proposal from the Nunavut Planning Commission (NPC or Commission). The NPC noted that the project proposal is outside the area of an applicable regional land use plan and determined that the project proposal is a significant modification to the previously screened works and activities associated with NIRB File Nos. 07EN067 and 14EN033 because the change in location and size of the camp and the duration of time since the original activities were screened.

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 **19EA019**.

## PROJECT OVERVIEW & THE NIRB ASSESSMENT PROCESS

### 1. Information Requests

On March 18, 2019 the NIRB requested that the Proponent complete the online application form through the NIRB's public registry system and ensure, pursuant to s. 144(1) of the *NuPPAA*, that sufficient information is provided to determine the scope of the project activities being proposed and commence screening. On March 28, 2019 the NIRB followed up with the Proponent requesting an online application be provided to the Board in order to carry out the screening of the project proposal.

On April 12, 2019 the Proponent provided the requested information and following a preliminary completeness check of the proposal as submitted, the NIRB determined that the proposal did not contain the necessary information for the NIRB to carry out its screening. On April 16, 2019 and April 18, 2019 the NIRB requested that the Proponent provide the Board with the additional information in order to carry out the screening of the project proposal. On April 18, 2019 the NIRB received the required additional information and commenced the screening pursuant to Part 3 of the *NuPPAA*.

## 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/125461](http://www.nirb.ca/project/125461).

The proposed "Hood River Gold Project" is located within the Kitikmeot region, approximately 200 kilometres (km) southeast from Kugluktuk. The Proponent intends to conduct exploration related activities to assess previously identified gold targets and identify and explore new gold targets. The program is proposed to take place from June 2019 to July 2024.

As required under s. 86(1) of the *NuPPAA*, the Board accepts the scope of the "Hood River Gold Project" as set out by Blue Star Gold Corp. in the proposal. The scope of the project proposal includes the following undertakings, works, or activities:

- Conduct prospecting, airborne and ground-based geophysical surveys;
- Conduct on-land and on-ice drilling exploration activities;
- Establishment of a temporary seasonal camp and associated facilities to accommodate 60 personnel;
- Use of existing airstrip on adjacent property (Ulu property) or alternatively use of an adjacent lake to the camp for transportation of equipment and personnel, and resupply using a fixed wing aircraft or helicopter;
- Transportation of equipment and personnel to drilling sites using helicopter, all-terrain vehicle (ATV), watercraft and snow machines;
- Transportation, storage (at camp and fuel caches near drilling locations) and use of approximately 48,400 litres (L) diesel, 33,000 L aviation fuel, and 3,300 L of gasoline;
- Transportation, storage and use of chemicals and oil;
- Potential use of calcium chloride as a drilling additive;
- Potential environmental and heritage resource baseline studies to be conducted within the watershed;
- Use of water from surrounding waterbodies for domestic and drilling activities;
- Disposal of waste generated as follows:
  - Use of sump system for disposal of grey water and drilling waste water,
  - Incineration of combustible waste,
  - Incineration of sewage or removal to an offsite facility for disposal, and
  - Removal of hazardous and non-combustible wastes to an offsite facility for 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. Key Stages of the Screening Process

The following key stages were completed:

Date	Stage
March 18, 2019	Receipt of project proposal and positive conformity determination from the NPC
March 18, 2019 & March 28, 2019	Information requests
April 18, 2019	Proponent responded to information requests
April 18, 2019	Scoping pursuant to s. 86(1) of the <i>NuPPAA</i>
April 23, 2019	Public engagement and comment request
May 14, 2019	Receipt of public comments
May 16, 2019	Proponent provided with an opportunity to address comments/concerns raised by public
May 22, 2019	Proponent responded to comments/concerns raised by public
May 27, 2019	Ministerial extension requested from the Minister of Crown Indigenous Relations and Northern Affairs Canada

#### 5. Public Comments and Concerns

Notice regarding the NIRB's screening of this project proposal was distributed on April 23, 2019 to community organizations in Kugluktuk and Cambridge Bay 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 14, 2019 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 including if a Review is required any additional factors that should be considered as part of that process.

On or before May 14, 2019 the NIRB received comments from the following interested parties (see Summary of Comments and Concerns section below):

- **Government of Nunavut**
- **Crown-Indigenous Relations and Northern Affairs Canada**
- **Environment and Climate Change Canada**
- **Fisheries and Oceans Canada**

***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:

**Government of Nunavut (GN)**

- Suggests that missing information is necessary for the Board to conduct its screening. Recommended the following information be provided:
  - A complete Project description with necessary details related to the proposed geophysics surveys;
  - The Project's Zone of influence;
  - An assessment of potential cumulative effects;
  - Revision of the Wildlife Protection Plan that includes the detailed description of proposed mitigation measures and a monitoring program to ensure proposed mitigation is effective.
- Recommended that the Proponent co-ordinate the development of the environmental information with the Government of Nunavut's regional biologist and local wildlife conservation officers in dealing with their mitigation measures and response measures.
- Noted that the Proponent has filed a Class 2 permit application to conduct the archaeological assessment of the different components associated with the proposed exploration activities in the Hood River Property.
- Recommended that the applicant should avoid conducting activities in the vicinity (50 m buffer zone) of archaeological/historical sites.
- Recommended that 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 GN-Culture and Heritage Department.

**Crown-Indigenous Relations and Northern Affairs Canada (CIRNAC)**

- Recommended that the spill kit to be used at fuel transfer or refueling locations include: shovels, pumps, barrels, and drip pans in addition to the items currently listed in the Spill Response plan.
- Recommended project specific terms and conditions and to ensure the terms and conditions meets the discharge requirements of the Metal and Diamond Mining Effluent Regulations.
- Recommended the Proponent revisit the cumulative effects analysis in such a way that cumulative effects discussion, identification of negative and non-mitigatable impacts vs. negative and mitigatable in the project application, and the "Hood River Gold Project Effects Assessment" document are consistent.

**Fisheries and Oceans Canada (DFO)**

- Requested additional information to assess the Proponent's application pursuant to its mandate.
- Requested additional information regarding the location and volume of the lakes is required to properly assess potential impacts to fish and fish habitat.
- Requested the Proponent refer to DFO's 'Freshwater Intake End-of-Pipe Fish Screen Guideline' for further mitigation measures for intake structures.

## Environment and Climate Change Canada (ECCC)

- Recommended that the Proponent clarify if the “No Activity Buffers” will be adaptively managed on a case-by-case basis based on the distance at which nesting birds react to human disturbance.
- Recommended that the Proponent clarify if the incineration equipment chosen is specifically designed to handle sewage and provided a link to ECCC’s technical document for batch waste incineration for further information.

### *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.

## 6. Proponent’s Response to Public Comments and Concerns

The following is a summary of the Proponent’s response to concerns as received on May 22, 2019:

- To address concerns regarding cumulative effects, the Proponent indicated that due the robust mitigation measures proposed and the temporary, seasonal nature of the project activities, any cumulative effects that may arise are considered immeasurable and small, intermittent and short term.
- To address concerns regarding effects to wildlife, the Proponent stated that ground-based geophysical surveys typically involve a small crew walking overland in specified pattern, carrying backpack equipment. Airborne geophysical surveys may involve low level flights with a rotary or fixed wing aircraft or a drone, traversing a specific pattern. However, the Proponent noted that the potential effects of geophysical surveys are consistent with other aspects of the exploration program that involve air travel and overland travel, displacement from or avoidance of habitat, and unintentional interactions or disturbances. The Proponent further pointed out that geophysical surveys are currently authorized to occur in the area and under NIRB File No. 14EN033.
- In response to requests for an updated Wildlife Mitigation Plan, the Proponent noted that they have provided an adequate, robust Wildlife Protection Plan to specifically outline measures to mitigate effects to wildlife, replacing the existing, much less thorough yet approved Wildlife Mitigation and Monitoring Plan (under NIRB File No 14EN033). The Proponent further pointed out that the Hood River Gold Project is an existing exploration project and that exploration and camp use have occurred on the property in the past, and exploration is currently authorized to be undertaken. In addition, the Proponent indicated that their current Wildlife Protection Plan already addresses camp siting in relation to sensitive caribou habitats and do not believe a revision is needed at this time.
- To address concerns regarding the incineration of sewage, the Proponent has not yet acquired an incinerator for use; however, they agree to commit to acquiring an incinerator capable of handling sewage from the exploration camp.
- To address concerns regarding the volume of domestic water used, the Proponent has committed to providing the volume of domestic water supply once a camp location is selected to ensure that water withdrawal remains below 10% of available capacity.

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:

<b>Factor</b>	<b>Comment</b>
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 proposed area of exploration as identified by the Proponent is approximately 16,137 square kilometres (km<sup>2</sup>) and would include the establishment of a temporary exploration camp site and helicopter-assisted travel routes to proposed drilling sites.</li> <li>▪ The proposed activities may take place within habitat of far-ranging wildlife species such as migratory and non-migratory birds, terrestrial wildlife such as caribou (Barren-Ground), muskox, wolves, wolverine, arctic fox, arctic hare, and Species at Risk (Grizzly Bear, Wolverine, Peregrine Falcon, Short-eared Owl and Red-necked Phalarope). As such, project activities may potentially affect terrestrial animal migratory patterns.</li> </ul>
The ecosystemic sensitivity of that area.	<ul style="list-style-type: none"> <li>▪ The Proponent identified no specific areas of ecosystemic sensitivity within the physical footprint of the proposed project and further indicated that any negative effects caused by the project would be mitigable.</li> <li>▪ As noted above, the proposed project area may include several Species at Risk.</li> <li>▪ According to the Nunavut Planning Commission Community Values maps the Hood River region contains calving grounds for caribou and migration corridors for the Bathurst and Beverly Caribou herds.</li> </ul>

<b>Factor</b>	<b>Comment</b>
<p>The historical, cultural and archaeological significance of that area.</p>	<ul style="list-style-type: none"> <li>▪ According to the Nunavut Planning Commissions community values maps, the Hood River region contains traditional hunting grounds for caribou, muskox and Grizzly Bear as well as fishing grounds for Grayling and Lake Trout.</li> <li>▪ As noted in the proposed project, past archaeological studies indicated that one (1) site is located within the vicinity of the project and additional studies are planned for the upcoming season. The Proponent plans to avoid interaction with known archeological sites and should interaction occur, will consult with the territorial archaeologist for direction.</li> </ul>
<p>The size of the human and the animal populations likely to be affected by the impacts.</p>	<ul style="list-style-type: none"> <li>▪ Human populations are not likely to be affected, due to distance from the proposed project activities to the nearest community. However, traditional land-use activities are likely to be affected by components of the proposed project occurring near the outpost settlements of Umingmaktok, and Bathurst Inlet.</li> <li>▪ As identified above, these regions contain traditional hunting and fishing grounds and are vital habitat for several species identified. As a result, the proposed project may also potentially affect traditional harvesting activities by community members from Cambridge Bay and Kugluktuk using the area.</li> </ul>
<p>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.</p>	<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>▪ Based on past evidence from projects with a similar scope of activities, the potential adverse impacts are considered to be well-known, with potential for localized impacts to the biophysical environment that are mitigable with due care.</li> <li>▪ With adherence to the relevant regulatory requirements and application of the mitigation measures recommended by the</li> </ul>

Factor	Comment
	NIRB, no significant residual effects are expected to occur.
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 mitigation measures recommended by the NIRB have been designed with consideration for the potential for cumulative effects to result from the impacts of the project combined with other past, present and reasonably foreseeable projects.</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>No other relevant factors were identified.</li> </ul>

**Other past, present and reasonably foreseeable projects considered in this assessment:**

NIRB Number	Project Title	Project Type
<b><i>Proposed Developments – undergoing assessment</i></b>		
	The Beverly Caribou Herd Calving Ground Abundance Estimate	Research
17XN011	Grays Bay Road and Port	Infrastructure
<b><i>Present Projects – approved or in operation</i></b>		
05MN047	Doris North Mine	Mine ( <i>ongoing</i> )
12MN047	Phase 2 Hope Bay Belt Project	Mine ( <i>ongoing</i> )
16UN058	Jericho Mine Site Stabilization Project	Remediation ( <i>ongoing</i> )
17UN042	CAT-TRAIN: Canadian Arctic Tidal Transect Research and Infrastructure Network (2018-2020)	Infrastructure ( <i>annual</i> )
17YN002	Toward a Sustainable Fishery for Nunavumiut (TFSN)	Research ( <i>annual</i> )
18YN023	Movement and habitat use of anadromous Arctic Char ( <i>Salvelinus alpinus</i> ) and Dolly Varden ( <i>Salvelinus malma</i> ) near Kugluktuk, Nunavut	Research ( <i>annual</i> )
19RN005	Lupin Mine Winter Access	Winter Road ( <i>ongoing</i> )
<b><i>Past Projects</i></b>		
10YN014	Canadian Arctic Tidal Transect Research and Information Network- Ice Covered Ecosystem (CAT-TRAIN-ICE): Amendment to NRI#04 002 17R-M	Research
16YN054	Baseline Monitoring of Marine Productivity And Oceanography Spanning The Northwest Passage Using Ships Of Opportunity	Research
17AN031	Canada C3 led by the students on Ice Foundation	Access

<b>NIRB Number</b>	<b>Project</b>	<b>Project Title</b>	<b>Project Type</b>
17EN059		Arcadian Bay Project	Exploration
17YN018		Coppermine River Transect	Research
17YN027		Arctic-Boreal Vulnerability Experiment (ABoVE) Airborne Campaign	Research
17YN041		A Coastal, Pan-Canadian Collection of plants, microalgae and marine invertebrates for the Canadian Museum of Nature as part of Canada C3	Research
17YN043		Kathleen Lake Geoscience Project	Research
17YN060		Bathurst-Kiluhitquq Paleomagnetic Research Project	Research
17YN061		Kitikmeot Region Marine Science Study	Research
17YN067		2017-2018 Research Program for the Grays Bay Port and Road project	Research
18YN017		ATKA Expedition	Research
18YN031		Tree River Geoscience Project	Research
18YN040		Crocker Bay Study and NW Passage to Gjoa Haven	Research

#### 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.

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

- Potential negative impacts to terrestrial wildlife (including caribou), migratory and non-migratory birds, and their associated habitats due to increased noise disturbance generated from mineral exploration activities, including transportation of personnel, helicopter use, and temporary camp set-up. As discussed above in the assessment of factors relevant to this project proposal, the potential for impact(s) is applicable to the project footprint of the exploration area. Noise generated from aircraft and exploration activities could increase disturbance of terrestrial wildlife, migratory and non-migratory birds. Anthropogenic activities, especially those related to drilling and ground transportation, could induce additional environmental disturbance to terrestrial wildlife within and outside the project area. Due to the size of the exploration project, and the short and intermittent nature of the project activities, the potential negative impacts to affected terrestrial wildlife and birds would be expected to be minimal and temporary only. The Proponent has committed to complying with all relevant standard operating procedures and implementing all relevant guidelines to avoid harmful interference with terrestrial biota. Further, the Proponent has committed to implementing minimum flight altitudes, follow seasonal restrictions, and minimize noise during project activities to mitigate any potential negative impacts to wildlife in the area. The Proponent has submitted a Wildlife

Protection Plan which outlined various commitments and wildlife management protocols to be implemented to mitigate any potential negative impacts on wildlife species in the project area. The Proponent would also be required to follow all Acts and Regulations applicable to the project proposal (see Regulatory Requirements section) for the mitigation of potential adverse impacts resulting from project components. It is recommended that the potential negative impacts may be mitigated by measures such as requiring the Proponent to avoid nesting areas of migratory birds, avoid wildlife and ensure not to harass wildlife, and to ensure that project personnel are properly briefed on wildlife protocols, sensitivities, and management procedures put in place prior to undertaking mineral exploration activities. The following terms and conditions are recommended by the NIRB to mitigate the potential negative impacts of project activities on wildlife species, including migratory birds breeding near the area: 6, 10, 17 through 36.

- Potential negative impacts to surface water, and fish and fish habitat from exploration activities, including establishment of a temporary camp, water withdrawal for camp operations, drilling activities (both land and on-ice) with the deposition of drill cuttings, as well as possible accidents or malfunctions resulting in fuel or chemical spills. As discussed above in the assessment of factors relevant to this project proposal, the potential for impact(s) on fish and fish habitat are likely to be limited to the footprint of the proposed temporary camp, the locations for exploration drilling and fuel caches, and are considered to be medium in magnitude and reversible. The Proponent has committed to following Fisheries and Oceans Canada's regulations associated with the any works within water. Further, the Proponent has also committed to implementing a Spill Response Plan, and a Waste Management Plan for the project and to storing all fuel storage containers in secondary containment structures, to prevent the spread of any fuel spill incidents and to implement appropriate fuel spill precautions and safety measures. The Proponent would also be required to follow all Acts and Regulations applicable to the project proposal (see Regulatory Requirements section) for the mitigation of potential adverse impacts resulting from project components. The following terms and conditions are also recommended by the NIRB to mitigate the potential negative impacts of project activities on freshwater biota: 4, 5, 11 through 14, 16, 19, 37 through 39, and 41 through 46.
- Potential negative impacts to terrestrial vegetation, soil quality and ground stability from the mineral exploration activities, including transportation of personnel, camp set-up and use, fuel storage and drilling activities. Land vegetation being disturbed during drilling activities and camp set-up as well as operation activities could have adverse impacts on the terrestrial vegetation of the project area. Further, the activities proposed for the project, including establishment of temporary camp and fuel caches, and the exploration drilling activities, may result in degradation of permafrost which would negatively affect ground stability. In addition, buildup of waste from field operations on site may have adverse impacts to soil quality. However, the potential for impacts is limited to the footprint of drill sites, temporary camp area, and fuel caches, which are also temporary in nature. The Proponent has committed to implementing a Waste Management Plan and removing all materials brought to the site upon demobilization. The potential adverse impacts to vegetation, ground stability and soil quality are considered to be of low magnitude, short-term and reversible. It is recommended that potential adverse impacts to terrestrial vegetation, ground stability and soil quality be mitigated

by such measures as requiring the Proponent to not move any equipment or vehicles unless the ground surface is in a state capable of fully supporting the equipment or vehicles without rutting or gouging. The NIRB is recommending the following terms and conditions to mitigate the potential negative impacts of project activities: 10, 13, 15, 16, 38, 40, 42, 43, 47 through 49, and 51 through 53.

- Potential negative impacts to air quality from the transportation activities, mineral exploration operations, use of heavy equipment, and incineration of combustible wastes with potential release of heavy metals, dioxins and furans to the environment. The potential adverse impacts to air quality would be limited to within the project footprint with a low probability of extending beyond the geographic area. The potential adverse impacts to air quality are considered to be of low magnitude, short-term, and reversible. The NIRB is recommending terms and conditions 7 through 9 to mitigate the potential impacts of incinerator activities to air quality.
- Potential negative effects to public and traditional land use activities are possible due to mineral exploration activities, including transportation of personnel, camp set-up and use. As discussed above, these activities including noise generated from the activities could potentially affect the wildlife in the area which would have an indirect effect on the traditional hunting and fishing that occur in the region. Furthermore, the use of aircraft and mineral exploration activities could have a direct effect on community members who use established routes in the region. The Proponent has committed to working the community of Kugluktuk to ensure these routes are identified and that there is no obstruction to travellers or traditional hunting activities. The Board is recommending terms and conditions 54 and 55 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.

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

- Potential negative impacts to historical, cultural and archaeological sites from the proposed exploration activities. The Proponent has indicated that there is one (1) site of archeological significance associated with the project area and that they intend to complete more studies in the coming field season to identify any other potential sites. The Proponent has also committed to maintaining a 50-meter buffer around any discovered archeological sites. The Proponent is required to follow the *Nunavut Act* (as recommended in Regulatory Requirements section) and would be required to contact the Government of Nunavut – Department of Culture and Heritage if any historical sites are encountered. Terms and conditions 50 and 54 are recommended to ensure that available Inuit Qaujimaningit can inform project activities and reduce the potential for adverse impacts occurring to any historical sites.

#### **Significant public concern:**

- No public concerns were provided to the NIRB during the public comment period. Follow up consultation is expected to mitigate any potential for public concern resulting from project activities. Terms and conditions 54 and 55 are recommended to ensure that the affected communities and organizations are informed about the project proposal, and to provide the Proponent with an opportunity to pro-actively address or mitigate any concerns that may arise from the project activity findings. Further, the Board recommends term and condition 56 to

ensure to the extent possible that the Proponent considers hiring local people for the project activities and to access local services where possible.

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

- There are no technologically innovative methods being proposed for this project.

**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: 1-3.

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. Blue Star Gold Corp. (the Proponent) shall maintain a copy of the Project Terms and Conditions at the site of operation at all times.
2. The Proponent shall operate in accordance with all commitments stated in correspondence provided to the Nunavut Planning Commission (NPC File No.: 149067) the NIRB (Online Application Form, March 28, 2019; Additional Information, April 23, 2019).
3. The Proponent shall operate the site in accordance with all applicable Acts, Regulations and Guidelines.

**Water Use**

4. The Proponent shall not extract water from any fish-bearing waterbody 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 Nunavut Water Board.
5. The Proponent shall not use water, including constructing or disturbing any stream, lakebed or the banks of any definable water course unless otherwise authorized by the Nunavut Water Board.

**Waste Disposal/Incineration**

6. The Proponent shall keep all garbage and debris in bags placed in a covered metal container or equivalent until disposed of at an approved facility. All such wastes shall be kept inaccessible to wildlife at all times.

7. The Proponent shall incinerate all combustible wastes daily and remove the ash from incineration activities and non-combustible wastes from the project site to an approved facility for disposal.
8. The Proponent shall ensure that the incineration of combustible camp wastes comply with the *Canadian Wide Standards for Dioxins and Furans*, and the *Canadian Wide Standards for Mercury*.
9. The Proponent shall ensure that no waste oil/grease is incinerated on site.

### **Fuel and Chemical Storage**

10. The Proponent shall store all fuel and chemicals in such a manner that they are inaccessible to wildlife.
11. The Proponent shall locate all fuel and other hazardous materials a minimum of thirty-one (31) metres away from the high water mark of any water body and in such a manner as to prevent their release into the environment unless otherwise authorized by the Nunavut Water Board.
12. The Proponent shall ensure that re-fueling of all equipment occurs a minimum of thirty-one (31) metres away from the high water mark of any water body unless otherwise authorized by the Nunavut Water Board.
13. The Proponent shall use adequate secondary containment or a surface liner (e.g., self-supporting insta-berms and fold-a-tanks) when storing barreled fuel and chemicals at all locations.
14. The Proponent shall ensure that appropriate spill response equipment and clean-up materials (e.g., shovels, pumps, barrels, drip pans, and absorbents) are readily available during any transfer of fuel or hazardous substances, at all fuel storage sites, at all refuelling stations, at vehicle maintenance areas and at drill sites.
15. The Proponent shall remove and treat hydrocarbon contaminated soils on site or transport them to an approved disposal site for treatment.
16. The Proponent shall ensure that all personnel are properly trained in fuel and hazardous waste handling procedures, as well as spill response procedures. All spills of fuel or other deleterious materials of any amount must be reported immediately to the 24 hour Spill Line at (867) 920-8130.

### **Wildlife - General**

17. The Proponent shall ensure that there is no damage to wildlife habitat in conducting this operation.
18. The Proponent shall not harass wildlife. This includes persistently circling, chasing, hovering over pursuing or in any other way harass wildlife, or disturbing large groups of animals.
19. The Proponent shall not hunt or fish, unless proper Nunavut authorizations have been acquired.
20. 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**

21. The Proponent shall avoid conducting land clearing activities during the migratory bird season.

22. 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.
23. The Proponent shall minimize activities during periods when birds are particularly sensitive to disturbance such as migration, nesting and moulting.
24. The Proponent shall avoid the seaward site of seabird colonies and areas used by flocks of migrating waterfowl by three (3) kilometres.
25. The Proponent shall ensure its aircraft avoid excessive hovering or circling over areas where bird presence is likely.

### **Aircraft Flight Restrictions**

26. The Proponent shall not alter flight paths to approach wildlife, and shall avoid flying directly over animals.
27. The Proponent shall restrict aircraft/helicopter activity related to the project to a minimum flight altitude of 610 metres above ground level except during landing, take-off or if there is a specific requirement for low-level flying, which does not disturb wildlife or migratory birds.
28. 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.
29. The Proponent shall ensure that aircraft/helicopter do not, unless for emergency, touch-down in areas where wildlife are present.
30. 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 Muskox Disturbance**

31. The Proponent shall avoid interfering with any paths or crossings known to be frequented by caribou during periods of migration.
32. 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.
33. The Proponent shall not block or cause any diversion to caribou or muskox migration, and shall cease activities likely to interfere with migration such as airborne geophysics surveys, drilling or movement of equipment or personnel until such time as the caribou or muskox have passed.
34. The Proponent shall not construct or operate any camp, cache any fuel or conduct blasting within ten (10) kilometres, or conduct any drilling operation within five (5) kilometres of any designated caribou water crossings. The Proponent shall avoid interfering with any paths or crossings known to be frequented by caribou during periods of migration.

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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).

35. During the period of May 15 to July 15, the Proponent shall suspend all project operations, including low-level over flights, drilling, blasting/trenching, and use of snow mobiles and all-terrain vehicles outside the immediate vicinity of the camp. Should the results of localized monitoring satisfy the Land Use Inspector that project operations may resume without disturbing pregnant caribou cows or cows with young calves, the suspension may be lifted for the period specified.
36. Should pregnant caribou cows, cows with young calves, or groups of 50 or more caribou be observed within one (1) kilometre of project operations at any time, the Proponent shall suspend all operations in the vicinity, including low-level over flights, drilling, blasting/trenching, and use of snow mobiles and all-terrain vehicles outside the immediate vicinity of the camp, until caribou are no longer in the immediate area.

### **Drilling on Land**

37. The Proponent shall not conduct any land based drilling or mechanized clearing within thirty-one (31) metres of the normal high water mark of a water body unless otherwise authorized by the Nunavut Water Board.
38. The Proponent shall not allow any drilling wastes to spread to the surrounding lands or water bodies.
39. If an artesian flow is encountered, the Proponent shall ensure the drill hole is immediately plugged and permanently sealed.
40. The Proponent shall ensure that all drill areas are constructed to facilitate minimizing the environmental footprint of the project area. Drill areas should be kept orderly with garbage removed daily to an approved disposal site.
41. The Proponent shall ensure that all sump/depression capacities are sufficient to accommodate the volume of waste water and any fines that are produced. The sumps shall only be used for inert drilling fluids, and not any other materials or substances.
42. The Proponent shall not locate any sump within thirty-one (31) metres of the normal high water mark of any water body unless otherwise authorized by the Nunavut Water Board. Sumps and areas designated for waste disposal shall be sufficiently bermed or otherwise contained to ensure that substances do not enter a waterway.
43. The Proponent shall ensure all drill holes are backfilled or capped prior to the end of each field season. All sumps must be backfilled and restored to original or stable profile prior to the end of each field season.

### **Drilling on Ice**

44. If drilling is conducted on lake ice, the Proponent shall ensure that any return water is non-toxic, and will not result in an increase in total suspended solids in the immediate receiving waters above the Canadian Council of Ministers for the Environment (CCME) Guidelines for the Protection of Freshwater Aquatic Life.
45. The Proponent shall ensure that drill muds and additives are not used in connection with holes drilled through lake ice unless they are re-circulated or contained such that they do not enter the water, or are demonstrated to be non-toxic.
46. The Proponent shall ensure that all drill cuttings are removed from ice surfaces daily.

### **Temporary Camps and Land Use**

47. The Proponent shall ensure that all camps are located on gravel, sand or other durable land.
48. The Proponent shall not erect camps or store material on the surface ice of lakes or streams.
49. The Proponent shall ensure that the land use area is kept clean and tidy at all times.

### **Heritage Sites**

50. 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.

### **Restoration of Disturbed Areas**

51. The Proponent shall remove all garbage, fuel and equipment upon abandonment.
52. The Proponent shall complete all clean-up and restoration of the lands used prior to the end of each field season and/or upon abandonment of site.
53. The Proponent shall survey the full extent its mineral leases to identify sources of pre-existing waste and/or contamination prior to establishing its camp and supporting infrastructure. Progressive reclamation should be practiced to the extent possible.

### **Other**

54. 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.
55. The Proponent shall ensure that project activities do not interfere with Inuit wildlife harvesting or traditional land use activities.
56. 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:

### **Wildlife Mitigation and Monitoring Plan**

1. Prior to the start of project activities, the Proponent shall submit an updated Wildlife Mitigation and Monitoring Plan (WMMP) to the Nunavut Impact Review Board, Government of Nunavut (GN), Environment and Climate Change Canada (ECCC) and Crown-Indigenous relations and Northern Affairs Canada (CIRNAC). At a minimum, this plan should include proposed template for a wildlife log/record of observations and proposed mitigation measures for caribou, migratory birds, grizzly bear and other sensitive species that may be encountered within the project area. The Proponent is encouraged to consult with the Government of Nunavut's Regional Biologists during the revision of the WMMP, regarding project schedule and timelines so as to ensure adequate mitigation of potential wildlife impacts.

## 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 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. As per s. 137(4) of the *NuPPAA*, responsible authorities are required to submit a copy of each licence, permit or other authorization issued for the Project to the Nunavut Planning Commission and the NIRB. 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, film or other media 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: [http://www.enr.gov.nt.ca/sites/default/files/web\\_pdf\\_wd\\_bear\\_safety\\_brochure\\_1\\_may\\_2015.pdf](http://www.enr.gov.nt.ca/sites/default/files/web_pdf_wd_bear_safety_brochure_1_may_2015.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 Kugluktuk, phone: 867-982-7450).

### **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://www.ec.gc.ca/paom-itmb/>.

### **Incineration of Wastes**

10. The Proponent review the Canadian Council of Ministers of the Environment's "Guidance Document for Canadian Jurisdictions on Open-Air Burning", available at the following link: [http://www.ccme.ca/files/Resources/air/wood\\_burning/pn\\_1548\\_CCME%20Guidance%20Document%20on%20Open%20Air%20Burning%20FINAL.pdf](http://www.ccme.ca/files/Resources/air/wood_burning/pn_1548_CCME%20Guidance%20Document%20on%20Open%20Air%20Burning%20FINAL.pdf) as a guidance document for best practices associated with open-air burning.

### **Transport of Dangerous Goods and Waste Management**

11. Environment and Climate Change Canada recommends that all hazardous wastes, including waste oil, receive proper treatment and disposal at an approved facility.

12. The Proponent shall ensure that proper shipping documents (waste manifests, transportation of dangerous goods, etc.) accompany all movements of dangerous goods. Further, the Proponent shall ensure that the shipment of all dangerous goods is registered with the Government of Nunavut Department of Environment, Department of Environment Manager. Contact the Manager (867) 975-7748 to obtain a manifest if dangerous goods including hazardous wastes will be transported.

### **Caribou Management**

13. Territorial and federal government agencies in Nunavut should work together with Regional Inuit Associations, co-management boards and industry to develop an action plan to identify and mitigate potential cumulative effects of human land use activities, including mineral exploration, on barren-ground caribou. This assessment of cumulative effects should occur at a regional scale (i.e., larger than individual project areas).

### **Crown-Indigenous Relations and Northern Affairs Canada**

14. Crown-Indigenous Relations and Northern Affairs Canada (CIRNAC) impose mitigation measures, conditions and monitoring requirements pursuant to the Federal Land Use Permit, which require the Proponent to respect the sensitivities and importance of the area. These mitigation measures, conditions and monitoring requirements should be in regard to the location and area; type, location, capacity and operation of facilities; use, storage, handling and disposal of chemical or toxic material; wildlife and fisheries habitat; and petroleum fuel storage.
15. CIRNAC consider the importance of conducting regular Land Use Inspections, pursuant to the authority of the Federal Land Use Permit, while the project is in operation. The Land Use Inspections should be focused on ensuring the Proponent is in compliance with the conditions imposed through the Federal Land Use Permit.

### **Kitikmeot Inuit Association**

16. The Kitikmeot Inuit Association impose strict mitigation measures and/or conditions upon the Proponent pursuant to the Inuit Owned Lands License in regard to fuel and chemical storage, drilling, water conditions, ground disturbance and wildlife on Inuit owned land.

### **Nunavut Water Board**

17. The Nunavut Water Board impose mitigation measures, conditions and monitoring requirements pursuant to the Water Licence, which require the Proponent to respect the sensitivities and importance of water in the area. These mitigation measures, conditions and monitoring requirements should be in regard to use of water, snow and ice; waste disposal; access infrastructure and operation for camps; drilling operations; spill contingency planning; abandonment and restoration planning; and monitoring programs.

### **Crown Indigenous and Northern Affairs Canada – Water Resources Division**

18. INAC – Water Resources Division should consider the importance of conducting regular inspections, pursuant to the authority of the *Nunavut Waters and Nunavut Surface Rights Tribunal Act*, while the project is in operation. Inspectors should focus on ensuring the Proponent is in compliance with the conditions imposed through the Water Licence.

## REGULATORY REQUIREMENTS

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

### **Acts and Regulations**

1. The Proponent is advised that the *Canadian Environmental Protection Act* (<http://laws.justice.gc.ca/en/C-15.31/>) lists calcium chloride (CaCl) as a toxic substance. The Proponent should assess alternatives to the use of CaCl as a drill additive, including biodegradable and non-toxic additives.
2. The *Fisheries Act* (<http://laws-lois.justice.gc.ca/eng/acts/F-14/index.html>).
3. The *Nunavut Waters and Nunavut Surface Rights Tribunal Act* (<http://laws-lois.justice.gc.ca/eng/acts/n-28.8/>).
4. The *Migratory Birds Convention Act* and *Migratory Birds Regulations* (<http://laws-lois.justice.gc.ca/eng/acts/M-7.01/>).
5. 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.
6. The *Wildlife Act (Nunavut)* and its corresponding regulations (<http://www.canlii.org/en/nu/laws/stat/snu-2003-c-26/latest/snu-2003-c-26.html>).
7. 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**.
8. The *Transportation of Dangerous Goods Regulations* (<http://www.tc.gc.ca/eng/tdg/clear-tofc-211.htm>), *Transportation of Dangerous Goods Act* (<http://laws-lois.justice.gc.ca/eng/acts/t-19.01/>), and the *Canadian Environmental Protection Act* (<http://laws-lois.justice.gc.ca/eng/acts/C-15.31/>).

### **Other Applicable Guidelines**

9. Fisheries and Oceans Canada Protocol for Winter Water Withdrawal from Ice-covered Waterbodies in the Northwest Territories and Nunavut ([http://registry.mvlwb.ca/Documents/W2010C0005/W2010C0005%20-%20Land%20Use%20Permit%20Application%20-%20DFO%20Water%20Withdrawal%20Protocol%20-%20Aug%2025\\_10.pdf](http://registry.mvlwb.ca/Documents/W2010C0005/W2010C0005%20-%20Land%20Use%20Permit%20Application%20-%20DFO%20Water%20Withdrawal%20Protocol%20-%20Aug%2025_10.pdf)).
10. Environmental Guideline for the General Management of Hazardous Waste, Government of Nunavut, Revised October 2010 ([https://www.gov.nu.ca/sites/default/files/Guideline%20-%20General%20Management%20of%20Hazardous%20Waste%20%28revised%20Oct%202010%29\\_0.pdf](https://www.gov.nu.ca/sites/default/files/Guideline%20-%20General%20Management%20of%20Hazardous%20Waste%20%28revised%20Oct%202010%29_0.pdf)).



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

Updated: November 2018

<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>
<b>Migratory Birds</b>			
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	Special Concern	Schedule 1	ECCC
Red Knot Islandica Subspecies	Special Concern	Schedule 1	ECCC
Red-necked Phalarope	Special Concern	No Schedule	ECCC
Ross's Gull	Threatened	Schedule 1	ECCC
Rusty Blackbird	Special Concern	Schedule 1	ECCC
Short-eared Owl	Special Concern	Schedule 1	ECCC
<b>Vegetation</b>			
Porsild's Bryum	Threatened	Schedule 1	Government of Nunavut (GN)
<b>Arthropods</b>			
Transverse Lady Beetle	Special Concern	No Schedule	GN
<b>Terrestrial Wildlife</b>			
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	GN
Peary Caribou	Threatened	Schedule 1	GN
Polar Bear	Special Concern	Schedule 1	GN
Wolverine	Special Concern	Schedule 1	GN
<b>Marine Wildlife</b>			
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
Beluga Whale (Eastern High Arctic-Baffin Bay Population)	Special Concern	No Schedule	DFO

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

3 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 (Western Hudson Bay Population)	Special Concern	No Schedule	DFO
Fish			
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 B: 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 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*<sup>4</sup> to issue such permits.

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<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 the federal government. Its role in mitigating impacts of developments on heritage resources is as

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

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

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.