



PARAGRAPH 35(2)(b) FISHERIES ACT AUTHORIZATION

Authorization issued to

Government of Nunavut (*hereafter referred to as the "Proponent"*)

Attention to: Paul Mulak

Government of Nunavut
Community and Government Services
P.O. Box 1000 Station 200
Iqaluit, Nunavut
X0A 0H0

Location of Proposed Project

Nearest community (city, town, village): City of Iqaluit
Municipality, district, township, county: Qikiqtani region (South Baffin)
Province: Nunavut
Name of watercourse, waterbody: Frobisher Bay Watershed
Longitude and latitude:
 Deep Sea Port: 63° 43.320'N, 68° 31.233'W
 Municipal Breakwater Expansion: 63° 44.334'N, 68° 30.793'W
 Causeway Improvements: 63° 43.687'N, 68° 31.585'W
 Disposal at Sea Site: 63° 39.666'N, 68° 28.667'W

Description of Proposed Project

The proposed project of which the work, undertaking or activity authorized is a part involves:

The development of a new Deep Sea Port (the DSP) and improvements to the municipal breakwater and existing causeway (*hereafter referred to as the Small Craft Harbour, SCH*) in Koojesse Inlet.

For the DSP, the permanent components include the construction of a deep sea wharf structure, a wharf causeway, a sealift laydown area, an auxiliary sealift ramp, a new fuel receiving manifold on the wharf structure, a new access road segment connecting Akilli Road to the DSP, and a snowmobile roadway.

Construction activities for the DSP include:

- Blasting.
- Installation of sheet piling.
- Placement of rock/fill.
- Dredging and disposal of dredged material at sea.
- Construction of access road with culverts, between laydown area and termination of Akilli Road.

For the SCH, the permanent components include improvements to the existing breakwater, construction of a new breakwater, and improvements to the existing causeway. Construction activities for the SCH include:

- Placement of rock/fill.

- Dredging.
- Installation of floating docks.

Description of Authorized work(s), undertaking(s) or activity(ies) likely to result in serious harm to fish

The work(s), undertaking(s), or activity(ies) associated with the proposed project described above, that are likely to result in serious harm to fish, are:

- For the DSP, the construction of fixed wharf, wharf causeway, sealift ramp, laydown area, access road, and snowmobile roadway.
- For the SCH, the construction of breakwaters, boat ramps, staging lanes, and a causeway turnaround.

The serious harm to fish likely to result from the proposed work(s), undertaking(s), or activity(ies), and covered by this authorization includes

- For the DSP, infilling works that will result in the destruction of 37,540 m² and the permanent alteration of 16,230 m² of fish habitat.
- For the SCH, infilling works that will result in the destruction of 2,020 m² and the permanent alteration of 4,930 m² of fish habitat.

Conditions of Authorization

The above described work, undertaking or activity that is likely to result in serious harm to fish must be carried on in accordance with the following conditions.

1. Conditions that relate to the period during which the work, undertaking or activity that will result in serious harm to fish can be carried on

The work, undertaking or activity that results in serious harm to fish is authorized to be carried on during the following period:

From the date of issuance to December 1st, 2020.

If the Proponent cannot complete the work, undertaking or activity during this period, Fisheries and Oceans Canada (DFO) must be notified at least 30 days in advance of the expiration of the above time period. DFO may, where appropriate, provide written notice that the period to carry on the work, undertaking or activity has been extended.

The periods during which other conditions of this authorization must be complied with are provided in their respective sections below. DFO may, where appropriate, provide written notice that these periods have been extended, in order to correspond to the extension of the period to carry on a work, undertaking, or activity.

2. Conditions that relate to measures and standards to avoid and mitigate serious harm to fish

2.1 Sediment and erosion control: Sediment and erosion control measures must be in place and shall be upgraded and maintained, such that release of sediment is avoided at the location of the authorized work, undertaking, or activity, with the exception of sea disposal of the dredged material.

2.1.1 Rock or fill materials used for in-water construction shall be free of fines.

- 2.2 List of measures and standards to avoid and mitigate serious harm to fish: Described below and as set out in the Proponent's Iqaluit Marine Infrastructure – Deep Sea Port and Small Craft Harbour, Fisheries and Oceans Canada – Fisheries Act Authorization Supplemental Report for Application, Section 6, dated March 19, 2018 or any subsequent versions (hereafter referred to as the "Iqaluit Application").
- 2.2.1 Heavy equipment shall access the intertidal areas during construction only when intertidal area is dry.
 - 2.2.2 All blasting activities shall be conducted following DFO's *Guidelines for the Use of Explosives In or Near Canadian Fisheries Waters*.
 - 2.2.3 In-water construction activities shall be undertaken as outlined in the Iqaluit Application to minimize the potential for stress related behaviour or death of fishes and marine mammals.
 - 2.2.3.1 Marine mammal exclusion zones around construction activities shall be established and monitored as outlined in the Iqaluit Application.
 - 2.2.3.2 Underwater pressure and noise levels shall not exceed the thresholds of 30 kPa at 10 m and 160 dB re 1µPa, respectively, when conducting vibratory pile driving.
 - 2.2.3.3 If construction is to occur during the iced-season, in-air sound levels shall not exceed the in-air acoustic threshold of 100 dB re 20µPa when pinnipeds are observed on the ice during construction activities.
 - 2.2.4 Project-related vessels shall be operated as outlined in the Iqaluit Application to minimize the potential for negative interactions with marine mammals.
- 2.3 Contingency measures: Described below, and as set out in the Iqaluit Application, shall be put in place if monitoring required in condition 3 below indicates that the measures and standards to avoid and mitigate serious harm to fish are not successful.
- 2.3.1 Works shall cease if a marine mammal enters an exclusion zone and shall not recommence until 30 minutes after the marine mammal was last observed or 30 minutes after the marine mammal is seen leaving the exclusion zone.
 - 2.3.2 If dead fishes or marine mammals are observed, works shall be suspended as outlined in the Iqaluit Application and DFO shall be notified within 48 hours. No work shall be recommenced until approved by DFO.
 - 2.3.3 If underwater noise levels exceed the threshold (160 dB re 1µPa), additional mitigation measures, such as the installation of bubble curtains and/or expansion of marine mammal exclusion zone, shall be implemented and DFO shall be notified.
 - 2.3.4 Work shall be suspended if pinnipeds are exposed to in-air sound levels above the threshold (100 dB re 20µPa) and DFO shall be notified. No work shall be recommenced until approved by DFO.
- 2.4 Dates by which these measures and standards shall be implemented: Measures and standards to avoid and mitigate serious harm to fish shall be implemented prior to the commencement of construction.
3. **Conditions that relate to monitoring and reporting of measures and standards to avoid and mitigate serious harm to fish**
- 3.1 Monitoring of avoidance and mitigation measures: The Proponent shall monitor the implementation of avoidance and mitigation measures referred to in section 2 of this authorization and provide an annual report to DFO, by **January 31, 2019, 2020, and 2021**, and summarizing whether the measures and standards to avoid and mitigate serious harm to fish were conducted according to the conditions of this authorization. This shall be done, by:
- 3.1.1 Demonstration of effective implementation and functioning: Providing dated photographs and monitoring reports to demonstrate effective implementation and functioning of mitigation measures and standards described above to limit the serious harm to fish to what is covered by this authorization.

- 3.1.2 Contingency measures: Providing details of any contingency measures that were followed, to prevent impacts greater than those covered by this authorization in the event that mitigation measures did not function as described.
- 3.2 Other monitoring and reporting conditions: Not applicable.
4. **Conditions that relate to the offsetting of the serious harm to fish likely to result from the authorized work, undertaking or activity**
 - 4.1 Letter of credit: Not applicable – Territorial Government.
 - 4.2 Scale and description of offsetting measures: Offsetting measures shall be carried out in accordance with the measures set out in the Iqaluit Application, Section 7.
 - 4.2.1 Installation of rock (500-1100 mm in diameter) at the DSP and the SCH to provide a minimum of 6,460 m² and 7,020 m² of enhanced fish habitat respectively, as identified in Figures 7-1, 7-2 and 7-3.
 - 4.2.2 Undertaking of a research study for a minimum of 3 years as complementary measures to increase scientific knowledge of the dietary and habitat use of Arctic Char in Koojesse Inlet. The research plan shall be finalized, to the satisfaction of DFO and with support from Inuit organizations, no later than September 30, 2018.
 - 4.3 Offsetting criteria to assess the implementation and effectiveness of the offsetting measures: All fish habitat offsetting measures shall be completed and functioning according to the criteria below and as set out in the Iqaluit Application, including:
 - 4.3.1 The enhanced fish habitat (rock) has been installed as per the design specifications.
 - 4.3.2 Higher densities of amphipods are found in areas of enhanced habitat post-construction than in the original habitat type pre-construction.
 - 4.3.3 Presence of Arctic Char in intertidal and subtidal areas of Koojesse Inlet.
 - 4.4 Contingency measures: If the results of monitoring as required in condition 5 indicate that the offsetting measures are not completed by the date specified and/or are not functioning according to the above criteria in 4.3, the Proponent shall give written notice to DFO and shall implement the contingency measures and associated monitoring measures, as contained within the approved offsetting plan (referenced in section 4.2), to ensure the implementation of the offsetting measures is completed and/or functioning as required by this authorization.
 - 4.4.1 Scale and description of contingency measures:
 - 4.4.1.1 Should any of the offsetting criteria outlined in 4.3 not be met, then additional offsetting should be developed in conjunction with DFO.
 - 4.4.2 Monitoring measures to ensure offsetting contingency is completed and/or functioning as required: Additional field monitoring shall be completed to confirm targets outlined in 4.3 be met in a reasonable timeframe.
 - 4.5 The Proponent shall not carry on any work, undertaking or activity that will adversely disturb or impact the offsetting measures.
 - 4.6 Other conditions related to offsetting: Not applicable.
5. **Conditions that relate to monitoring and reporting of implementation of offsetting measures (described above in section 4):**
 - 5.1 Schedule(s) and criteria: The Proponent shall conduct monitoring of the implementation of offsetting measures according to the approved timeline and criteria in the Iqaluit Application, Section 8:
 - 5.1.1 List of timeline(s) and monitoring and reporting criteria:
 - 5.1.1.1 Monitoring of offsetting shall be conducted over five years as outlined in the Iqaluit Application.

5.1.1.2 In addition to the outlined criteria in the Iqaluit Application, a digital photographic record of pre-construction, during construction, and post-construction conditions using the same vantage points and direction to show that the approved works have been completed in accordance with the Iqaluit Application.

5.2 List of reports to be provided to DFO: The Proponent shall report to DFO on whether the offsetting measures were conducted according to the conditions of this authorization by providing the following:

5.2.1 Post-construction evaluation and monitoring reports to be submitted for each monitoring year, on or before the following dates: **January 31, 2022, 2024, and 2026.**

5.3 Other monitoring and reporting conditions for offsetting: Not Applicable.

Authorization Limitations and Application Conditions

The Proponent is solely responsible for plans and specifications relating to this authorization and for all design, safety and workmanship aspects of all the works associated with this authorization.

The holder of this authorization is hereby authorized under the authority of Paragraph 35(2)(b) of the *Fisheries Act*, R.S.C., 1985, c.F. 14 to carry on the work(s), undertaking(s) and/or activity(ies) that are likely to result in serious harm to fish as described herein. This authorization does not purport to release the applicant from any obligation to obtain permission from or to comply with the requirements of any other regulatory agencies.

This authorization does not permit the deposit of a deleterious substance in water frequented by fish. Subsection 36(3) of the *Fisheries Act* prohibits the deposit of any deleterious substances into waters frequented by fish unless authorized by regulations made by Governor in Council.

This authorization does not permit the killing, harming, harassment, capture or taking of individuals of any aquatic species listed under the *Species at Risk Act* (SARA) (s. 32 of the SARA), or the damage or destruction of residence of individuals of such species (s. 33 of the SARA) or the destruction of the critical habitat of any such species (s. 58 of the SARA).

At the date of issuance of this authorization, no individuals of aquatic species listed under the *Species at Risk Act* (SARA) were identified in the vicinity of the authorized works, undertakings or activities.

The failure to comply with any condition of this authorization constitutes an offence under Paragraph 40(3)(a) of the *Fisheries Act* and may result in charges being laid under the *Fisheries Act*. This authorization must be held on site and work crews must be made familiar with the conditions attached.

This authorization cannot be transferred or assigned to another party. If the work(s), undertaking(s) or activity(ies) authorized to be conducted pursuant to this authorization are expected to be sold or transferred, or other circumstances arise that are expected to result in a new Proponent taking over the work(s), undertaking(s) or activity(ies), the Proponent named in this authorization shall advise DFO in advance.

Date of Issuance: **MAR 29 2018**

Approved by:



Dale Nicholson
A/Regional Director General
Central and Arctic Region
Fisheries and Oceans Canada

