



PARAGRAPH 35(2)(b) *FISHERIES ACT* AUTHORIZATION

Emergency Circumstances

Authorization issued to

City of Iqaluit (*hereafter referred to as the "Proponent"*)

Attention to: Amy Elgersma
A/Chief Administrative Officer
Building 901 Box 460
Iqaluit, Nunavut X0A 0H0

Location of Proposed Project

| | |
|---|---|
| Nearest community (city, town, village): | Iqaluit |
| Municipality, district, township, county: | Baffin Island, Frobisher Bay |
| Province: | Nunavut |
| Name of watercourse, waterbody: | Niaqunguk River (Apex River), Geraldine Lake, Unnamed Lake |
| Longitude and latitude, UTM Coordinates: | Niaqunguk River (Apex River)- 19V 525623 7070575 Geraldine Lake- 19 V 524506 7070217 Unnamed Lake 19 V 527497 7072283 |

Description of Proposed Project

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

Lake Geraldine supplies Iqaluit with water for domestic use. Due to low water the lake is likely unable to supply water to the community through the winter of 2018-2019, without being supplemented. The Government of Nunavut Department of Health Chief Medical Officer declared a pending health emergency and directed Iqaluit to ensure that adequate water is available.

Iqaluit is proposing to take water from the Niaqunguk River (Apex River), an 'Unnamed Lake' in the Apex River drainage, and possibly, other lakes to bring Lake Geraldine to its full water supply level prior to the winter of 2018-2019. Initially, two pumps would remove up to 8200 m³/day of water from the Niaqunguk River (Apex River). The maximum, pumping rate would be 0.095 m³/s for the Niaqunguk River (Apex River). An 'Unnamed Lake' in the Niaqunguk River (Apex River) watershed would become a potential additional water source as soon as equipment is available and pumping rates will be discussed with DFO prior to water taking.

Water taking that can conform to the following criteria is considered low risk and will not likely result in Serious Harm: water taking from the Niaqunguk River (Apex River) at 10% of the instantaneous flow when the natural flow is at or above 30% of the mean annual discharge (MAD). To date, the mean annual discharge at the withdrawal location is 0.717 m³/s and 30 % of the mean annual discharge is 0.215 m³/s.

These values are scaled to reflect that the water taking location in the Upper Apex drains 60% of the drainage area measures at the survey location.

Water withdrawals exceeding the low risk criteria (as stated above) shall be considered as potential serious harm to fish and fish habitat. Water taking beyond the low risk criteria may impact fish and fish habitat and as a result reporting requirements are listed below in Section 3 of this Authorization to determine the scale and extent of the impacts. Monitoring and reporting in Section 3 is triggered if 1) water is taken when natural flows are below 30% of the MAD, or if 2) >10% of instantaneous flow is taken.

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:

- Water withdrawal of up to 500,000 m³ from the Niaqunguk River (Apex River), and other waterbodies as required, from August 14 to October 30, 2018.
- Small lakes immediately north of Lake Geraldine may provide additional potential water sources and pumping rates may be negotiated for the other water sources as data becomes available.

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

- Potential death of fish from water taking.
- Potential permanent alteration of habitat as a result of de-watering; this could include a temporary loss of overwintering habitat, loss of nearshore and riverine habitats that support spawning, rearing, cover, and migration corridors.

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: Date of Issuance

To: October 31, 2018

If the Proponent cannot complete the work, undertaking or activity during this period, Fisheries and Oceans Canada (DFO) must be notified 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 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.
- 2.2 List of measures and standards to avoid and mitigate serious harm to fish:
 - 2.2.1 All pumps used to extract water shall be screened according to the DFO (1995) 'Freshwater Intake End-of-Pipe Fish Screen Guideline';
 - 2.2.2 All additional mitigations found in Appendix B: "Mitigations for Apex Supplementary Pumping Program" of the 3AM-IQA1626 Application for Amendment – Supporting Submissions, August 7, 2018, Revision 2 shall be followed.
- 2.3 Contingency measures: 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. Additional measures to avoid and mitigate serious harm shall be developed and submitted to DFO.

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 report to DFO, by **December 31, 2018** and indicate 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 reports, including dated photographs, 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 Water withdrawals exceeding the low risk criteria shall be monitored daily and as outline below:
 - 3.1.2.1 Daily inspections of water withdrawal impact zones shall be completed to assess impacts on fish and fish habitat. Inspections shall include but not be limited to pools or habitats at risk of becoming de-watered and isolated, fish stranded or at risk of becoming stranded, and regular assessments of fish rescue requirements.
 - 3.1.2.2 Stranded fish or fish at risk of becoming stranded shall be safely captured, placed in oxygenated tubs and relocated downstream to a safe release area.
 - 3.1.2.3 The Proponent shall conduct metered monitoring of water withdrawal at pump locations and describe withdrawals in comparison with flows recorded at the historic gauging station. Monitoring shall be conducted daily and reported on a **regular basis** to DFO. A summary report of the water withdrawal shall be submitted to DFO by **December 31, 2018**.
 - 3.1.2.4 The Proponent shall monitor cross-sections in the Apex River to assess the potential physical effects of pumping on fish and fish habitat. A detailed Fish Habitat Monitoring Plan, including site locations, methodology and monitoring frequency, will be prepared for DFO review and approval by **August 17, 2018**.
 - 3.1.2.5 All rescued fish shall be counted, recorded and reported. All dead fish shall be counted, recorded, and reported. The location of all rescued and dead fish will be recorded in UTM. A detailed Fish Mortality Monitoring Plan, including site locations, methodology and monitoring frequency, will be prepared for DFO review and approval by **August 17, 2018**.

3.1.3 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.

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: Once an offsetting plan is deemed appropriate and approved by DFO (see Condition 4.2 below), a letter of credit shall be provided to DFO to cover the costs of implementing the offsetting measures required to be implemented under this authorization, including the associated monitoring and reporting measures included in section 5, in instances where the Proponent fails to implement these required measures.

4.2 Scale and description of offsetting measures: Due to the emergency nature of this project, an offsetting plan is not required at this time. A detailed offsetting plan for serious harm occurring during the emergency measures authorization period; including methodology, monitoring and contingency offsetting measures; shall be submitted to the Fisheries Protection Program by **February 15, 2019**.

4.3 Offsetting criteria to assess the implementation and effectiveness of the offsetting measures: Criteria to determine the effectiveness of offsetting shall be described in the offsetting plan and reviewed once the offsetting plan has been submitted.

4.4 Contingency measures: Not applicable at this time.

4.5 The Proponent shall not plan or implement any work, undertaking or activity that will adversely disturb or impact 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): Not applicable at this time due to the emergency nature of the project. An offsetting monitoring plan shall be provided with the offsetting proposal as per 4.2.

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: August 16, 2018

Approved by:

A handwritten signature in blue ink, appearing to read 'Scott Gilbert', with a long horizontal flourish extending to the right.

Scott Gilbert
A/Regional Director General
Central and Arctic
Fisheries and Oceans Canada