



Fish and Fish Habitat Protection Program  
Arctic Region  
301 – 5204 50th Ave. (Franklin)  
Yellowknife, Northwest Territories  
X1A 1E2

Programme de protection du poisson et de son habitat  
Région de l'Arctique  
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Yellowknife, Territoires du Nord-Ouest  
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June 30, 2026

*Your file*      *Votre référence*  
3AM-IQA1626

**Subject:      Water Licence, Type A, City of Iqaluit; Renewal and Amendment Application**

To whom it may concern,

On May 28, 2026, the Nunavut Water Board (NWB) invited parties to review and submit technical review comments for the City of Iqaluit's Water Licence, Type A, City of Iqaluit; Renewal and Amendment Application: 3AM-IQA1626. This submission outlines Fisheries and Oceans Canada (DFO) Fish and Fish Habitat Protection Program's (FFHPP) technical comments based on DFO's departmental mandate under the *Fisheries Act*, specifically the management and protection of fish and their habitat in Canadian waters.

As noted in our earlier correspondence, DFO received a Request for Review from the City of Iqaluit, which is currently under assessment. Any issues that cannot be fully resolved through NWB's process can continue to be addressed through DFO's regulatory review. If harmful impacts to fish or fish habitat cannot be addressed, the City of Iqaluit may require to apply for a *Fisheries Act* Authorization.

**Comment DFO-01: Use of Explosives (NWB-DFO-02)**

As part of their response to DFO's first round of Information Requests, the City of Iqaluit committed to limiting water overpressures to 50 kPa at the location of a live fish, consistent with DFO guidance. DFO recommends modelling to demonstrate blasting thresholds are met as well as proposed mitigation measures (e.g., timing windows, use of blast mats, isolation) and any monitoring plans to verify that impacts are avoided or minimized. DFO recommends those requests be included in the project's Preliminary Blast Assessment, however, any issues that cannot be fully resolved through the Board's process can continue to be addressed through DFO's regulatory review.

## **Comment DFO-02: Water Withdrawal from the Apex River**

The City of Iqaluit proposes to withdraw from the Apex River less than 10% of instantaneous discharge when flow is between 0.143 m<sup>3</sup>/s and 0.156 m<sup>3</sup>/s (between 30% and 33% of the Mean Annual Discharge (MAD)), or up to 20% instantaneous discharge when flow exceeds 0.156 m<sup>3</sup>/s (>33% MAD).

Although DFO's *Framework for Assessing the Ecological Flow Requirements to Support Fisheries in Canada* indicates that cumulative flow alterations of less than 10% of the instantaneous flow relative to the natural flow regime are generally associated with a low probability of detectable impacts to fisheries-supporting ecosystems, the proposed pumping protocol would exceed this screening threshold during periods when Apex River discharge exceeds 0.156 m<sup>3</sup>/s (>33% MAD), allowing withdrawals of up to 20% of the instantaneous discharge. The Apex River provides important spawning, migration, and residence habitat for Arctic Char; therefore, reductions in available flow may affect fish and fish habitat through mechanisms such as habitat loss or reduced fish passage.

Stantec's *2023 Analysis of Fisheries and Hydrologic Information of Apex River* (Attachment 33) concluded that the proposed pumping protocol is unlikely to result in adverse effects on fish and fish habitat in the Apex River. This assessment was determined through hydraulic and habitat modelling informed by baseline field surveys.

DFO notes that uncertainty remains regarding the accuracy of the modelling results, as no field monitoring was conducted during pumping operations to verify model predictions under withdrawal conditions. In addition, the proposal does not include a monitoring program to verify the predicted effects of water withdrawals on fish and fish habitat, nor does it identify contingency measures should monitoring indicate adverse effects.

DFO recommends that the proponent:

- Implement field monitoring during withdrawal periods to demonstrate that thresholds are not exceeded, confirm hydraulic conditions are as expected, and identify adverse effects to fish or fish habitat (e.g., fish stranding, barriers to migration, reduction of wetted area).
- Update hydraulic modelling to assess the effects of reduced flows on depth, velocity, and wetted area in the Apex River and evaluate whether changes may create barriers to fish migration or result in loss of fish habitat.
- Establish contingency measures (e.g., reduction or cessation of withdrawal rates) that will be implemented if monitoring detects adverse effects to fish or fish habitat.

### **Comment DFO-03: Water Withdrawal from Lake Qiqitalik**

The City of Iqaluit proposes to withdraw, through the open-water season, 1.1 million m<sup>3</sup>/year of water from Lake Qiqitalik, which is a fish-bearing lake (i.e., inhabits Arctic Char). This represents 20% of the lake's volume.

Water withdrawal may affect fish and fish habitat through reductions in water levels, changes in downstream flow conditions, and loss or alteration of littoral habitat. In addition, water withdrawal activities can cause direct fish mortality through stranding, entrainment, or impingement. Littoral areas provide important spawning, rearing, feeding, and refuge habitat for fish, and reductions in water levels may decrease the availability or suitability of these habitats, resulting in habitat dewatering or fish stranding. Water level reductions may also influence outflow conditions at the lake outlet by reducing discharge and altering channel depth and velocity. These changes could affect fish movement between Lake Qiqitalik and downstream habitats and may reduce the availability of connected aquatic habitat.

No information was provided by the City of Iqaluit on potential effects to littoral and downstream habitat or seasonal habitat availability during open water periods. DFO recommends that the proponent:

- Demonstrate that proposed maximum withdrawal rates from Lake Qiqitalik will not adversely affect outlet flow conditions, or in barriers to fish migration.
- Provide details on potential changes in habitat caused by water withdrawal over operational seasons, including loss of nearshore lake areas and changes to depth. This should include a review of annual recharge capacity and whether ongoing withdrawals over multiple years could result in lake levels falling below the threshold used in the assessment.
- Implement monitoring of water withdrawal activities at Lake Qiqitalik shoreline and outlet to confirm that withdrawal does not result in alterations or loss of habitat or outflow conditions. Monitoring should focus on shoreline exposure, fish stranding observations, water levels, annual recharge patterns, and outlet depth/velocity during periods of active withdrawal, and be used to verify that modelled predictions accurately reflect site conditions.
- Establish contingency measures (e.g., reduction or cessation of withdrawal rates) that will be implemented if monitoring detects adverse effects to fish or fish habitat.

In closing, DFO further notes that any determination of harmful impacts to fish and fish habitat would be addressed through the DFO regulatory process, including a review of a Proponent submitted Request for Review form and the potential application for authorization under the *Fisheries Act* to Harmfully Alter, Disrupt, or Destroy fish habitat.

DFO looks forward to continuing the assessment of the proposal through both NWB and DFO's regulatory process.

Yours sincerely,

A handwritten signature in black ink that reads "NATALIE GRISHABER". The signature is written in a cursive style with some capital letters.

Natalie Grishaber  
Biologist  
Fish and Fish Habitat Protection Program  
Fisheries and Oceans Canada