



Fisheries and Oceans  
Canada

Pêches et Océans  
Canada

**Eastern Arctic Area**

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October 3, 2009

DFO-FHM File: 09-HCAA-CA7-00003  
NIRB: 09UN052  
NWB:1BW-DUV

Alan Kathan  
DFO - Small Craft Harbours  
501 University Crescent  
Winnipeg, Manitoba  
R3T 2N6

via email: Alan.Kathan@dfo-mpo.gc.ca

Dear Mr. Kathan

**SUBJECT:** Authorization for the harmful alteration, disruption or destruction of fish habitat pursuant to subsection 35(2) of the *Fisheries Act*

The harmful alteration, disruption or destruction of fish habitat arising from the construction of Marshalling Area "A" and installation of culverts for crossing the Duval River, in the Hamlet of Pangnirtung, in Nunavut is hereby authorized pursuant to subsection 35(2) of the *Fisheries Act*. This Authorization shall be conditional upon implementation of measures specified in the attached document.

The environmental impacts of this undertaking were reviewed by the Nunavut Impact Review Board (NIRB) in accordance with the *Nunavut Land Claims Agreement (NLCA)*. On July 24, 2009, NIRB issued a screening decision concluding that the project is not likely to cause significant adverse environmental effects, provided that the project specific terms and conditions are implemented.

Failure to comply with any of the conditions specified on the attached Authorization may result in a contravention of section 35 of the *Fisheries Act*.

**NOTE:** None of the foregoing should be taken to imply Authorization of this undertaking in accordance with any section of the *Fisheries Act* **other** than section 35. Also note that Authorization under the *Fisheries Act* does not release the proponent from the requirements of any other federal, territorial or municipal legislation.

Please contact Gary Cooper at (867) 979-8027 or by fax at (867) 979-8039 should you have any questions or require additional information.

Sincerely,

A handwritten signature in cursive script that reads "Eric Kan".

Eric Kan  
Area Director  
Eastern Arctic Area  
Fisheries and Oceans Canada

Copy: Nunavut Impact Review Board  
Phyllis Beaulieu – Nunavut Water Board



**AUTHORIZATION FOR WORKS OR UNDERTAKINGS AFFECTING FISH HABITAT**

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**Authorization issued to:**

DFO - Small Craft Harbours  
501 University Crescent  
Winnipeg, Manitoba  
R3T 2N6

Telephone: (204) 984-0629

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**Location of Project**

Marshalling Area "A" of the Pangnirtung Harbour project is located in the Pangnirtung Fjord and the culvert crossing is located in the Duval River, both in the Hamlet of Pangnirtung, on Baffin Island, Nunavut.

(Latitude 66°08'40", Longitude 065°42'55")

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**Valid Authorization Period**

The valid authorization period for the harmful alteration, disruption or destruction of fish habitat associated with the construction of Marshalling Area "A" and culvert installation is:

From	To
Date of Issuance	December 31, 2010

The valid authorization periods for the other conditions of the authorization are as set out below.

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**Description of Works or Undertakings (Type of work, schedule, etc.)**

The harmful alteration, disruption or destruction of fish habitat hereby authorized is the destruction of *9191 square metres* of fish habitat due to *infilling* for the construction of Marshalling Area "A" and the installation of corrugated steel pipe culverts for crossing the Duval River.

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**Conditions of Authorization**

1. The conditions of this Authorization notwithstanding, should the above works or undertaking, due to weather conditions, different soil or other natural conditions, or for any other reason, appear, in the opinion of the Department of Fisheries and Oceans ("DFO") likely to cause greater impacts than the parties previously contemplated, then DFO may direct DFO – Small Craft Harbours (the "Proponent"), and its agents, and contractors, to suspend or alter works and activities associated with the project, to avoid or mitigate adverse impacts to fisheries resources. DFO may also direct the Proponent and its agents, and contractors, to carry out at the Proponent's expense any works or activities deemed necessary by DFO to avoid or mitigate further adverse impacts to fisheries resources. In circumstances where DFO is of the view that greater impacts may occur than were contemplated by the parties DFO may also modify or rescind this authorization. If the authorization is to be changed the Proponent will be given an opportunity to discuss any proposed modifications or rescission.
  2. Conditions that relate to the **proponent plan**:
    - 2.1. The Proponent confirms that all plans and specifications relating to this Authorization have been duly prepared and reviewed by appropriate professionals working on behalf the Proponent. The Proponent acknowledges that
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(s)he is solely responsible for all design, safety and workmanship aspects of all the works associated with this Authorization.

2.2. The construction must comply with those criteria as identified within this Authorization. Harmful alteration, disruption or destruction of fish habitat other than that specifically identified within this Authorization is not permitted.

2.3. Works will be conducted following the practices outlined in the following reports:

2.3.1. Application for Authorization for Works or Undertakings Affecting Fish Habitat, signed by Rick Kiriluk for John Stecyk (DFO – Small Craft Harbours), dated June 22, 2009.

2.3.2. Application for Nunavut Water Board Water License, signed by Rick Kiriluk for John Stecyk (DFO – Small Craft Harbours), dated September 18, 2009.

2.3.3. Nunavut Impact Review Board Screening Decision Report, (NIRB File No. 09UN052), signed by Lucassie Arragutainaq (Nunavut Impact Review Board), dated July 24, 2009.

2.3.4. Fish Habitat Compensation Plan (Draft), prepared by Alan Kathan (DFO – Small Craft Harbours), dated September 10, 2009, received by email on September 11, 2009.

2.3.4.1. Revised Berm Profile for Mashalling Area “A”, Drawing Number 0913451001SK001, by Golder Associates, dated September 9, 2009.

2.3.5. Engineering Drawings entitled, “Pangnirtung, NU - Improvements to Small Craft Harbour, Phase 1 – 2009 Construction – Shallow Harbour Improvements”, Issued for Permit Application Only, by Golder Associates, dated August 4, 2008.

2.3.5.1. Site Plan, Sheet Number 1, Drawing Number 0913451001A001.

2.3.5.2. Grading Plan, Sheet Number 2, Drawing Number 0913451001A002.

2.3.5.3. Details and Sections, Sheet Number 3, Drawing Number 0913451001A003.

2.3.5.4. Proposed Haul Road and Crossing Plan, Sheet Number 4, Drawing Number 0913451001A004.

3. Conditions that relate to the **mitigation** of potential harmful alteration, disruption or destruction of fish habitat. The following measures shall be implemented:

3.1. General Mitigation:

3.1.1. Any in-water activities shall be timed to prevent disruption during sensitive life stages of the fish populations in Pangnirtung Fjord.

3.1.2. A qualified biologist or environmental inspector shall be on site during all in-water construction, compensation and restoration works to ensure implementation of the designs as intended in the proponent plan and conditions of this Authorization.

3.1.3. All materials and equipment used for the purpose of site preparation and project completion shall be operated and stored in a manner that prevents any deleterious substance (e.g. petroleum products, debris, etc.) from entering the water.

3.1.4. Any stockpiled materials shall be stored and stabilized above the ordinary high water mark of any water

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body.

- 3.1.5. Vehicle and equipment re-fuelling and maintenance shall be conducted above the ordinary high water mark of any water body.
  - 3.1.6. Any part of equipment entering the water shall be free of fluid leaks and externally cleaned/degreased to prevent any deleterious substance from entering the water.
  - 3.1.7. An emergency spill kit shall be kept on site in case of fluid leaks or spills from machinery.
  - 3.1.8. Sediment and erosion control measures shall be implemented prior to work, and maintained during the work phases, to mitigate impacts to fish habitat
  - 3.1.9. All disturbed areas shall be stabilized upon completion of work and restored to a pre-disturbed state or better.
  - 3.1.10. Sediment and erosion control measures shall be left in place and maintained until all disturbed areas have been stabilized.
  - 3.1.11. Only clean material free of fine particulate matter shall be placed in the water.
  - 3.2. Additional Mitigation that relates to the construction of the Duval River crossing:
    - 3.2.1. The gradient of the culvert crossing on the Duval River shall match the gradient of the natural channel at the crossing site.
    - 3.2.2. The culvert shall be positioned such that the inlet and outlet are aligned with the existing stream channel.
    - 3.2.3. The Proponent shall ensure that in installing the appropriately-sized approved culvert, efforts are made to minimize the extent and footprint of the culvert and infilling works as much as practical. The infilling shall not extend any further than outlined in the drawings submitted to the DFO-Eastern Arctic Area as per the **proponent plan**.
  - 4. Conditions that relate to the **compensation** for the loss of *9191 square metres* of fish habitat.
    - 4.1. A cobble apron shall be created at the toe of Marshalling Area "A" as outlined in the DFO – Small Craft Harbour Fish Habitat Compensation Plan (Draft) listed above in condition 2.3.4 and 2.3.4.1, to create approximately *1400 square meters* of habitat to be used by fish for cover and feeding.
      - 4.1.1. The fish habitat compensatory works listed in condition 4.1. shall be completed by December 31, 2010.
      - 4.1.2. The Proponent shall incorporate the fish habitat compensatory works listed in condition 4.1. into the Habitat Compensation Plan listed in condition 4.2 and provide the same information required in that plan for the above mentioned works, including an accounting of the habitat losses and gains that result from the construction of the Marshalling Area "A" and the compensation works at the berm toe.
      - 4.1.3. As built drawings shall be used to verify the amount of habitat created from the construction of the fish habitat compensatory works listed in condition 4.1., and these drawings shall be included in the Habitat Compensation Plan identified in 4.2.
    - 4.2. The Proponent shall prepare a draft comprehensive Habitat Compensation Plan to address all habitat impacts associated with the Pangnirtung Harbour project, including a detailed description of the fish habitat compensation features to be developed, habitat loss:gain accounting, the expected function of the fish habitat compensation features, the location of the fish habitat compensation sites, detailed plans, construction methods, timelines for construction, and a monitoring program.
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- 4.2.1. The draft comprehensive Habitat Compensation Plan shall be of sufficient detail to be used for community consultation.
  - 4.2.2. The Proponent shall incorporate input received during community consultation on the draft comprehensive Habitat Compensation Plan and revisions required by DFO, into the draft comprehensive Habitat Compensation Plan.
  - 4.2.3. The draft comprehensive Habitat Compensation Plan shall be submitted for DFO – Eastern Arctic Area review and approval by **June 15, 2010** as also outlined in the DFO – Small Craft Harbour Fish Habitat Compensation Plan (Draft) listed above in condition 2.3.4.
  - 4.2.4. The Proponent shall implement the Habitat Compensation Plan as approved by DFO.
  - 4.3. In addition the Proponent shall prepare and submit for DFO – Eastern Arctic Area review and approval by **June 15, 2010**, a construction plan for the removal and restoration of the Duval River culvert crossing site to pre-construction condition by restoring the natural hydrology, topography and riparian vegetation.
  - 4.4. If at any time the Proponent becomes aware that the compensatory habitat is not completed and/or functioning as described in the approved Habitat Compensation Plan, it shall carry out any works which are necessary to ensure the compensatory habitat is completed and/or functioning as described in the approved Habitat Compensation Plan.
  - 4.5. After the compensatory habitat has been created the Proponent shall not carry on any work or undertaking that will adversely disturb or impact the compensatory habitat.
  5. Conditions that relate to the **monitoring** of the proponent plan, the mitigation and the compensation, the “Monitoring Program”.
    - 5.1. The Proponent shall undertake a **Construction Monitoring Program** and will report to DFO – Eastern Arctic Area on whether the works were conducted within the schedule of the proponent plan and whether the mitigation measures outlined in the proponent plan and this Authorization were followed, by:
      - 5.1.1. Providing dated photographs of the Marshalling Area “A” and Duval River Crossing construction.
      - 5.1.2. Providing dated photographs of the sediment control works and details of how they functioned to mitigate impacts to fish habitat.
      - 5.1.3. Providing details of suspended sediment monitoring outside of the sediment control berm to assess the effectiveness of the berm to mitigate sediment beyond the construction zone.
      - 5.1.4. Providing details of any contingency measures that were followed in the event that mitigation measures did not function as described in the Proponent plans.
      - 5.1.5. A written report summarizing the above monitoring results shall be submitted to the Iqaluit, NU office of the Department of Fisheries & Oceans – Fish Habitat Management, Eastern Arctic Area by **December 31** for each year of the monitoring program (**2009 and 2010**).
    - 5.2. As listed as a requirement of condition 4.2, a detailed **Compensation Monitoring Program** shall be developed by the Proponent as part of the draft comprehensive Habitat Compensation Plan, and submitted by **June 15, 2010** to DFO – Eastern Arctic Area for review and approval. The detailed Compensation Monitoring Program shall include, but not be limited to, the following:
      - 5.2.1. The Proponent shall report to DFO – Eastern Arctic Area on an annual basis for three (3) years post construction (**September 30, 2011, 2012 and 2013**), that the compensation works were conducted according to, and within the schedule of, the approved comprehensive Habitat Compensation Plan.
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- 5.2.2. Providing dated photographs of the completed habitat compensation project.
- 5.2.3. Providing details of how the compensatory habitat was functioning after completion and the criteria used to determine the success of the compensatory habitat.
- 5.2.4. Providing a description of the contingency measures that were followed if, during the Compensation Monitoring Program, it was determined that the compensatory habitat was not functioning as described in the approved Habitat Compensation Plan.
6. Any deviation from the approved plans, the construction schedule, mitigation, and/or monitoring measures stated above must be discussed with, and approved in writing by the Iqaluit, NU office of the Department of Fisheries and Oceans, Fish Habitat Management, Eastern Arctic Area.
7. All mitigation and monitoring measures shall be implemented to the satisfaction of the Iqaluit, NU office of the Department of Fisheries and Oceans, Habitat Management, Eastern Arctic Area.
8. Written notification of the commencement of works or undertakings shall be provided to DFO – Eastern Arctic Area by email at [gary.cooper@dfo-mpo.gc.ca](mailto:gary.cooper@dfo-mpo.gc.ca) **ten days** prior to the initiation of those works or undertakings.
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The holder of this authorization is hereby authorized under the authority of section 35(2) of the Fisheries Act, R.S.C., 1985, c.F. 14, to carry out the work or undertaking described herein. This authorization is valid only with respect to fish habitat and for no other purposes. It 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.

Failure to comply with any condition of this authorization may result in charges being laid under the Fisheries Act.

This authorization form should be held on site and work crews should be made familiar with the conditions attached.

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Date of Issuance: \_\_\_\_\_

Approved by: \_\_\_\_\_

Robert Lambe

Title: Regional Director General

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