



March 12, 2008

Mackenzie Valley Environmental Impact Review Board
c/o Patrick Duxbury
200 Scotia Centre
Box 938, 5102-50th Ave
Yellowknife, NT
X1A 2N7

Dear Mr. Duxbury:

**RE: DFO Comments on the Draft Terms of Reference and Work plan
Taltson Hydroelectric Expansion Project
EA0708-007**

As requested in the Mackenzie Valley Environmental Impact Review Board's (MVEIRB) request for comments dated 20 February, 2008, Fisheries and Oceans Canada (DFO) provides the following comments on the draft Terms of Reference (TOR) and work plan for the MVEIRB environmental assessment of the proposed Taltson Hydroelectric Expansion Project.

General comments:

Considering the comments from the Lutsel K'e scoping session were not included in the draft TOR and work plan (February, 2008), DFO requests the opportunity to comment on any changes to these documents as a result of any further scoping sessions.

Specific comments on the Workplan:

Under Section 3 Roles and Responsibilities, DFO recommends that a section be included to describe the role of government in the environmental assessment process.

Specific comments on the Terms of Reference:

Section 4.1.2 Water fluctuations in the Taltson River watershed

DFO suggests the following changes:

- 2nd point An analysis of the geographic extent of any hydrological effects, including under maximum ice thickness, as well as a water balance for all affected water bodies.

- 3rd point A detailed assessment of impacts on aquatic life *that considers the timing and levels of change in flows and changes to water quality as it relates to fish.*
- 5th point Comparison of projected post-expansion flow conditions to the baseline aquatic habitat study to determine the likely areas of habitat impact, as well as identification of areas to be assessed for their level of importance to the fish community, including overwintering habitat.
- 6th point Identification of possible impacts to fish migration predicted as a result of flow regulation and control structures, including under maximum ice thickness.
- 8th point Effects that ~~in-stream~~ in-water works, such as the construction of the Nonacho control structure, will have on water quality and aquatic habitat.

New point Analysis of contaminants in sediments and fish tissue in the Taltson River from Nonacho Lake to Great Slave Lake and how these are likely to change under the proposed operating regime..

4.1.3 Ecological changes to Trudel Creek

DFO suggests the following changes:

New point An assessment of the impact to fish communities and habitat in Trudel Creek, including a prediction of the quantity and quality of fish habitat to be lost due to decreased flows.

- 5th point The impacts of sudden extreme flow events in Trudel Creek in regards to aquatic biota, furbearers, erosion potential for channel banks and substrate, vegetation;

5.1 Introduction to Subjects of Note

DFO suggests the following changes:

New Biophysical Subject of Note:

- Turbine and conveyance canal operation

5.?? Turbine and conveyance canal operation

The developer proposes to install two turbines into a water conveyance structure (North Gorge canal) as well as a small turbine on the Nonacho Lake control structure. The operation of a conveyance canal provides new downstream fish passage to the lower portion of the Taltson watershed, where little to no connection existed previously. The passage of fish through the conveyance canal and turbines can result in death or physical harm to fish. The developer should present the following in the DAR:

- An assessment of the impact on fish populations associated with allowing upstream fish population to join downstream populations;
- An assessment of the impact on fish and fish passage through the conveyance canal and turbines;
- Identification of mitigation measure to minimize impacts to fish and fish passage through the conveyance canal and turbines.

5.2.3 Access

DFO suggests the following changes:

New point Identification and assessment of impact of all water crossings, including mitigation measures to avoid or reduce impacts to the water body and biota.

DFO appreciates the opportunity to review and provide comments on the draft Terms of Reference. If you have any questions, please feel free to contact Murray Somers at (867) 669-4944, by fax (867)669-4940, or email murray.somers@dfo-mpo.gc.ca.

Sincerely,



Habitat Management Team Leader
Fisheries and Oceans Canada - Western Arctic Area

c.c.: Murray Somers (DFO – Fish Habitat Biologist)
Shelley Jepps (DFO – Area Habitat Biologist)
Beth Pechter (DFO – Environmental Assessment Analyst)