



PARAGRAPH 35(2)(b) FISHERIES ACT AUTHORIZATION

Authorization issued to:

British Columbia Hydro and Power Authority (*hereafter referred to as the "Proponent"*)

Attention: Brent Mossop, Fisheries and Aquatic Lead, Site C Clean Energy Project

Four Bentall Centre
1100-1055 Dunsmuir Street
PO BOX 49260
Vancouver, BC V7X 1V5

Location of Proposed Project

Nearest community (city, town, village): Fort St. John
Municipality, district, township, county: Peace River Regional District
Province: British Columbia
Name of watercourse, waterbody: Peace River
Longitude and latitude: 56° 11'33" N 120° 53' 38" W

Description of Proposed Project

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

- site preparation works, undertakings and activities associated with the Site C Clean Energy Project - a proposed large scale hydroelectric dam and generating station near Fort St. John, BC.

A detailed description of the project and associated work(s), undertaking(s) or activity(ies) is provided in the document titled "DFO – Application for Authorization Site Preparation – Site C Clean Energy Project British Columbia Hydro and Power Authority" dated February 23, 2015.

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:

- construction of a road along the north bank of the Peace River (referred to as River Road) resulting in infilling in the Peace River;
- construction of a bridge approach along on the north bank of the Peace River adjacent to River Road associated with the Peace River Construction Bridge resulting in infilling in the Peace River;
- construction of a road across a channel on the south bank of the Peace River and the construction of berms at the upstream end of the channel (referred to as South Bank Channel Infilling and Road Crossing) resulting in infilling of the south bank channel and isolation of the site from the waters of the Peace River; and
- construction of a material stockpile area and causeways associated with the Mid-stream Island Channel Contouring resulting in infilling in the Peace River and isolation of an area from the waters of the Peace River.

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

- River Road – Permanent alteration & Destruction of Fish Habitat
 - ~2.4 km long road with ~8.72 ha permanent instream footprint (includes ~43 m long culvert crossing).
Infilling of the north bank of the Peace River to construct River Road will result in the permanent removal of potential spawning habitat for mountain whitefish and a benthic invertebrate fish food supply area. Given the permanent nature and magnitude of infill, this work, undertaking and activity is expected to result in a negative localized effect on fish habitat.
- Temporary Bridge Crossing on the Peace River
 - Bridge Approach – Permanent Alteration + Destruction. A ~240 m long infill, with ~1 .08 ha permanent instream footprint (~0.7 ha instream footprint of total ~1.78 ha instream footprint will be temporary).
The infill associated with the bridge approach will result in the permanent removal of potential spawning for mountain whitefish and a benthic invertebrate fish food supply area. Given the permanent nature and magnitude of infill, this work, undertaking and activity is expected to result in a negative localized effect on potential spawning habitat.
- South Bank Channel Infilling and Road Crossing
 - Habitat loss due to road infill of ~0.64 ha instream (includes a ~56 m long culvert) – Permanent Alteration + Destruction.
Loss of side channel when inlet to side channel is closed at upstream end (~6.51 ha instream) within footprint of future dam/generating station site – Permanent Alteration + Destruction.
 - the infill and road in the side channel and isolation of a portion of a side channel from Peace River waters will result in the loss of a large area of side channel habitat that cannot be mitigated. Given the permanent nature and magnitude of infill and road and isolated area, this work, undertaking and activity is expected to result in a negative localized effect on side channel fish habitat.
- Mid-stream Island Channel Contouring
 - Creation of material stockpile, isolation of area between causeways and portion of the two causeways which will form part of an area to be infilled as part of main civil works (~9.20 ha total instream footprint) – Permanent Alteration + Destruction
Infilling of and isolation of an area from the waters of the Peace River result in the permanent removal of potential spawning habitat for mountain whitefish and a benthic invertebrate fish food supply area. Given the permanent nature and magnitude of infill, this work, undertaking and activity is expected to result in a negative localized effect on fish habitat.

Conditions of Authorization

The above described work(s), undertaking(s) or activity(ies) that are 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: **December 31, 2016**

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 Measures and standards to avoid and mitigate serious harm to fish are to be implemented prior, during or after commencement of the proposed works, undertakings or activities. Notwithstanding the foregoing, examples of such measures and standards related to physical effects on fish and fish habitat are described in the following documents:

- “DFO – Application for Authorization Site Preparation – Site C Clean Energy Project British Columbia Hydro and Power Authority” dated February 23, 2015 including, but not limited to, “Section 5.0 Standard Mitigation Measures” of the aforementioned document; and
- The Construction Environmental Management Plan, Site C Clean Energy Project, Final Plan Revision 1 dated Jun 15, 2015 and subsequent approved updates (CEMP) including, but not limited to, the following section of the CEMP: Fisheries and Aquatic Habitat Management (CEMP Section 5.5).

2.2 Contingency measures as described in the documents titled “DFO – Application for Authorization Site Preparation – Site C Clean Energy Project British Columbia Hydro and Power Authority” dated February 23, 2015, the letter to B. Naito, DFO, from B. Mossop, British Columbia Hydro and Power Authority dated April 22, 2015 regarding “Response to clarifications requested by DFO on Application for Authorization”, and but not limited to the CEMP, and/or as otherwise specified by DFO 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.

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 November 30, 2016 unless otherwise specified by DFO, 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 dated photographs and inspection 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 measures and standards described in condition 2.1 did not function to avoid and mitigate serious harm to fish.

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 required

4.2 Scale and description of offsetting measures: Offsetting measures are to involve the creation of rock spurs at River Road, channel modifications at Upper Site 109L and channel modifications at Side Channel Site 108R which have been designed to:

- increase the quantity and quality of available, permanently wetted habitat to support primary and secondary production as food production for fish and provide rearing, feeding, overwintering, and potential spawning habitats for fish;
- reduce fish stranding; and
- increase the complexity and variability of fish habitat to support a variety of life stages for local fish populations.

The offsetting measures shall be completed by December 31, 2019 and carried out in accordance with the measures set out in the following:

“Section 9.0 Offsetting Plan” of the document titled “DFO – Application for Authorization Site Preparation – Site C Clean Energy Project British Columbia Hydro and Power Authority” dated February 23, 2015;

The letter to B. Naito of DFO, from B. Mossop of the British Columbia Hydro and Power Authority dated June 18, 2015 with the subject “Update to design of offset area Upper Site 109L” and attachments; and

The report titled “Site C Clean Energy Project Site Preparation: Environmental Analysis of Physical Fish Habitat Offsets” dated Aug 5, 2015,

The e-mail to A. Bonamis of DFO, from B. Mossop of the British Columbia Hydro and Power Authority dated September 10, 2015 with the subject “RE: Site Preparation Works - Date of completion of offsetting”;

and/or as otherwise specified by DFO.

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 following criteria:

- The offsetting measures are to be implemented as designed;
- The offsetting measures are to maintain their design and purpose over time; and
- The offsetting measures are to be biologically productive (i.e. support ongoing aquatic productivity).

4.4 Contingency measures: If the results of monitoring as required in condition 5 indicate that the offsetting measures are not completed by December 31, 2019, 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 (as referenced in section 4.2), to ensure the implementation of the offsetting measures is completed and/or functioning as required by this authorization.

4.5 The Proponent shall not carry on any work, undertaking or activity that will adversely disturb or impact the offsetting measures.

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 timeline and criteria in the offsetting plan as described in the document titled "DFO – Application for Authorization Site Preparation – Site C Clean Energy Project British Columbia Hydro and Power Authority" dated February 23, 2015 unless otherwise specified by DFO:

5.1.1 List of timeline(s) and monitoring and reporting criteria:

- Monitoring shall be conducted as described in "Section 9.3 Effectiveness Monitoring Program" of the document titled "DFO – Application for Authorization Site Preparation – Site C Clean Energy Project British Columbia Hydro and Power Authority" dated February 23, 2015 unless otherwise specified by DFO.
- The effectiveness criteria for offsetting measures shall be as described in "Section 9.4 Offset Effectiveness Criteria" of the document titled "DFO – Application for Authorization Site Preparation – Site C Clean Energy Project British Columbia Hydro and Power Authority" dated February 23, 2015 unless otherwise specified by DFO.
- Data analysis of the results of monitoring shall be as described in "Section 9.5 Data Analysis" of the document titled "DFO – Application for Authorization Site Preparation – Site C Clean Energy Project British Columbia Hydro and Power Authority" dated February 23, 2015 unless otherwise specified by DFO.
- Written reports on the results of monitoring shall be as described in "Section 9.6 Technical Reporting" of the document titled "DFO – Application for Authorization Site Preparation – Site C Clean Energy Project British Columbia Hydro and Power Authority" dated February 23, 2015 unless otherwise specified by DFO. Written reports are to be provided to DFO by March 1 of the year following collection of the monitoring data unless otherwise specified by DFO.

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: SEP 30 2015

Approved by: 

Rebecca Reid
Regional Director General
Pacific Region
Fisheries and Oceans Canada