



File Number: 9000407

Date: September 6<sup>th</sup> 2018

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**Applicant:** Michael McArthur (British Columbia Hydro and Power Authority)

**Project:** CUL-02

**Proposed Timing for Work:** You requested an instream works of September 1<sup>st</sup> 2018 to June 30<sup>th</sup> 2019

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I have reviewed your Application, submitted on July 27<sup>th</sup> 2018 under the *Water Sustainability Act* of British Columbia, in connection with your proposed changes in and about a stream (Unnamed wetland).

As a Habitat Officer under the *Water Sustainability Act*, I am charged with establishing any requirements needed to protect fish, fish habitat, or water quality. In order to ensure the protection of aquatic habitat, I am requiring that the proposed changes in and about a stream be made in accordance with the following terms and conditions.

Works will be undertaken as described in “Site C Clean Energy Project Activity Description for the Dam Site Area Culvert Extension, Laydown Area 30” submitted as part of the application.

**44. (2) With respect to;**

(a) the timing window during which the change may be made, would normally be between July 15 and August 1 to accommodate both spring and fall spawning fish or July 15 and April 15 for spring spawning fish species that may be present.

- **As a Habitat Officer I authorize your instream works; permitting works from September 7<sup>th</sup> 2018 to June 30<sup>th</sup> 2019 with conditions.**
- Minimize the amount of time the work site is in a disturbed state by completing work as quickly as possible, while considering worker safety and minimizing environmental risk

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- Notwithstanding the above, if any one of the following conditions is met, the reduced risk timing window is not applicable: 1) If the stream channel is naturally dry (no flow) or frozen to the bottom at the worksite and the instream activity will not adversely impact fish habitat (e.g. result in the introduction of sediment into fish habitat). 2) If construction of a winter crossing is proposed and such works does not adversely impact the stream channel (including stream banks), fish habitat or fish passage.

**(b) the minimum instream flow or the minimum flow of water that must remain in the stream while the change is being made,**

- The natural rate of water flow must be maintained upstream and downstream of the worksite during all phases of instream activity.

**(c) the removal of material from the stream or stream channel in connection with the change,**

- The removal of material must not lead to stream channel instability or increase the risk of sedimentation into the watercourse.
- Any spoil materials must be placed in a location which ensures that sediment or debris does not enter the watercourse.

**(d) the addition of substance, sediment, debris or material to the stream or stream channel in connection with the change,**

- Instream activities must be conducted in the dry and the worksite must be isolated from water flowing in the stream channel.
- Riprap must be clean and free of sediment producing material.
- All equipment must be located and operated in the dry.
- Equipment used in close proximity to the wetted perimeter must be free of deleterious material (e.g. hydrocarbons) and in good mechanical condition (e.g. no fuel or hydraulic leaks).
- Measures must be taken to ensure that no harmful material (e.g. fuel and other hydrocarbons, soil, road fill, or sediment), which could adversely impact water quality, fish and other aquatic life, and/or fish habitat, can enter the wetted perimeter as a result of the project activities.

- Erosion and sediment control structures are to be available onsite and utilized as necessary.
- Do not work in weather conditions likely to contribute to sediment production to the stream.

**(e) the salvage or protection of fish or wildlife while the change is being made or after the change has been made,**

- If dewatering of the worksite is necessary, fish salvage must occur on a fish-bearing stream prior to commencing works. A fish salvage permit must be obtained <http://www.env.gov.bc.ca/pasb/>
- Measures must be taken to ensure that equipment (e.g. water pumps) does not harm aquatic life.
- Do not disturb wildlife and/or their residences (e.g. beaver lodges) within the project area.

**(f) the protection of natural materials and vegetation that contribute to habitat or stream channel stability,**

- Minimize disturbance to natural materials (e.g. embedded logs) and vegetation that contribute to habitat or stream channel stability.
- Establish natural vegetation as part of the erosion control, including willow staking, and other plantings in the riparian area.

**(g) the restoration of the worksite after the change has been made,**

- Grade disturbed areas to a stable angle after work is completed and revegetate these areas to prevent surface erosion.
- Protect disturbed soil areas on the banks and areas adjacent to the stream from surface erosion.
- Restore all in-channel or active floodplain habitats that have been disturbed to a condition that is enhanced from their original state.
- Remove any remaining sediment and erosion control measures.
- Complete post-construction multi-year monitoring to ensure your revegetation meets full survival.

**(h) the requirement to obtain an approval from the federal Department of Fisheries and Oceans in connection with the change.**

- Proponents are responsible for complying with the federal *Fisheries Act*. No serious harm to fish is authorized by this document, where serious harm is the death of fish or any permanent alteration to, or destruction of, fish habitat.
- Fisheries and Oceans Canada (DFO) Habitat technologists may authorize a net loss of fish habitat, where a mitigation/compensation package can be negotiated between DFO and the proponent.
- Proponents are responsible for determining whether the federal Department of Fisheries and Oceans (DFO) must be consulted with and whether an authorization from DFO is required prior to making the change.

This document does not supersede the requirements of the *Water Sustainability Act* and Regulations, Federal *Fisheries Act* or any other related legislation. The proponent is obligated to comply with all applicable federal, provincial or municipal enactments. For more information on the *Water Sustainability Act*, Section 11 Change Approval and Authorization for “Changes In and About a Stream” can be found at:

<http://www2.gov.bc.ca/gov/content/environment/air-land-water/water/water-licensing-rights/working-around-water>

**Retain a copy of this document on site during the works.**

If you have any questions or concerns, I can be reached at 250-614-7484.

Regards,

Duncan McColl

**Duncan M<sup>c</sup>Coll** M.Sc. R.P.Bio.

Ecosystems Biologist - Omineca Region

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