Province of British Columbia
Water Sustainability Act

CONDITIONAL WATER LICENCE

The holder of a Crown Land Tenure, to which this licence is appurtenant, is hereby authorized to divert and use water as follows:

a) The stream on which the rights are granted is Chickwat Creek.

b) The point of diversion is denoted by PD80728 at an elevation of 438 masl, located as shown on the attached plan.

c) The date from which this licence shall have precedence is April 8, 2016.

d) The purpose for which this licence is issued is Power (general), which is to be generated with the Chickwat Creek Generating System.

e) The maximum quantity of water which may be diverted and used under this licence is 1.47 cubic metres per second, subject to the following:
   1. When diverting water under this licence and Licence C131287, the maximum quantity of water diverted at PD80728 shall not exceed 7.1 cubic metres per second
   2. The licensee shall maintain in Chickwat Creek, measured immediately downstream of the point of diversion, or at a location as specified in the OPPR:
      a) a minimum flow as per Schedule "A"; or
      b) a minimum flow as ordered under clause (o).

f) The period of the year during which the water may be used is January 1 to December 31.

g) The land upon which the water is to be used and to which the licence is appurtenant is the land on which the powerhouse of the Chickwat Creek Generating System is situated, described as that parcel or tract of land tenured under the Land Act, held under Lands File No. 2409412.

h) The works authorized for the Chickwat Creek Generating System are:
   1. An intake (dam);
   2. a power penstock;
   3. access roads;
   4. a powerhouse, tailrace and switch yard;
   5. 25 kV transmission line from powerhouse to the Narrows Inlet Substation; and
   6. 138 kV transmission line to the Sechelt Peninsula near Ruby Lake Substation;

which shall be located approximately as shown on the attached plan.

i) The construction of the said works shall be completed and the water shall be beneficially used prior to December 31, 2018. Thereafter, the licensee shall continue to make regular beneficial use of the water in the manner authorized herein.

j) Before commencing construction of the works authorized under clause (h) of this licence, the licensee must to the satisfaction of the Engineer under the *Water Sustainability Act* (the "Engineer") or the Water Manager:

1. Retain a Professional Engineer registered in the Province of British Columbia (the "Independent Engineer") who will provide services to the Engineer for the regulation of construction of the works;
2. Retain a person with professional qualifications (the "Environmental Monitor") who will monitor environmental impacts from the construction of works;
3. Submit, the following:
   plans that show the general arrangement of the works;
   a) criteria for the design of the works;
   b) criteria for the operation of the works;
   c) a schedule for the construction of the works; and
   d) a Construction Environmental Management Plan (CEMP) for the management and mitigation of construction impacts;
   e) an Interim Operational Environmental Management Plan (OEMP);
   f) Terms of Reference for a Hydraulic Connectivity Study, describing the methodology to be used;
   g) Terms of Reference for the Macroinvertebrates Connectivity Study as per Narrow Inlet Hydro Environmental Certificate E13-04, Schedule B, Condition 25, describing the methodology to be used;
   h) the proposed Dam Failure Consequences Classification for the Chickwat Creek intake.
4. Obtain Leave to Commence Construction (LTCC) in writing from the Water Manager.

k) Before undertaking construction of any component of works for which LTCC issued under clause (j) (4), the licensee must:

1. Ensure that the design drawings for the works to be constructed are signed and sealed by a Professional Engineer registered in the Province of British Columbia (the "Design Engineer");
2. Ensure that a Professional Engineer registered in the Province of British Columbia (the "Construction Engineer") supervises the construction of the works; and
3. Obtain letter from the Independent Engineer that the actual construction of that component work may proceed.

l) Before commencing the diversion and use of water for commissioning of the works authorized under clause (h) of this licence, the licensee must:

1. Submit a functional Operating Parameters and Procedures Report (OPPR) for acceptance by the Water Manager for the operation of the works;
2. Submit an updated Fish Adaptive Management Plan for acceptance by the Water Manager;
3. Submit a Ramping Study for acceptance by the Water Manager;
4. Submit the baseline analysis for the Macroinvertebrates Connectivity Study, and the monitoring plan to be used during the operations of the project;
5. Submit an Operational Environmental Monitoring plan (OEMP) for acceptance by the Water Manager; and
6. Obtain Leave to Commence Diversion (LTCD) and the use of water, in writing, from the Water Manager.

m) The licensee must:

1. Design an OEMP to determine the nature of any impacts on fish, macroinvertebrates, and fish habitat, which includes data to allow for statistically supportable quantification of impact to baseline conditions over time to the satisfaction of the Water Manager;
2. Implement the program to the satisfaction of the Water Manager;
3. Continue the program for 5 years following the commencement of operation of the works or to the satisfaction of the Water Manager;
4. Submit annual reports summarizing the results of the monitoring program to the Water Manager, within 30 working days of the date of precedence (April 8) specified in clause (c).

n) Before commencing operation of the works authorized under clause (h), the licensee must:

1. Submit a report for acceptance by the Water Manager on the operational parameters and procedures (OPPR) for the operation of the works;
2. Submit and implement an Operational Environmental Monitoring Plan (OEMP) to the satisfaction of the Water Manager;
3. Provide an update from the Dam Safety Officer, or Engineer under the *Water Sustainability Act*, on the status of their review;
4. Submit the field verification report from the Hydraulic Connectivity Study for acceptance by the Water Manager; and
5. Submit the field verification report from the Macroinvertebrates Connectivity Study for acceptance by the Water Manager; and
6. Obtain Leave to Commence Operations (LTCO) of the Chickwat Creek Generating System, in writing from the Water Manager.

o) The diversion of water authorized under this licence may be restricted or prohibited at any time by an Order in writing of an Engineer under the *Water Sustainability Act*, or the Water Manager, for the regulation of the diversion, rate of the diversion, and use of the water as may be required for the preservation of fish, wildlife, macroinvertebrates, or navigation.

p) The dam authorized under clause (h) is subject to the Dam Safety Regulation and shall be designed, constructed and maintained to the satisfaction of a Dam Safety Officer, or an Engineer under the *Water Sustainability Act* and in accordance with the Canadian Dam Association Guidelines.

q) Final construction drawings, Operations, Maintenance and Surveillance Manual and Dam Emergency Plan must be submitted to the Dam Safety Officer, or Engineer under the *Water Sustainability Act*, as soon as practicable and, in any event, no later than 60 days after completion of the construction of the dam.

r) Based on the results of the Macroinvertebrate Connectivity Study, the Water Manager may require the licensee to:
   1. Develop and execute a monitoring plan or specifically to evaluate the potential influence of connectivity changes on invertebrate habitat; or
   2. Develop and implement a Macroinvertebrate Adaptive Management Plan to address seasonal effects of flows on macroinvertebrate habitat.

s) Based on the results of the Hydraulic Connectivity Study, the Water Manager may require the licensee to:
   1. Develop and execute a monitoring plan, in addition to those specified in the Operational Environmental Monitoring Program, specifically to evaluate the potential influence of connectivity changes on fish migration and invertebrate drift; and
   2. Implement pulse flows if the magnitude and frequency of connectivity changes are predicted to result in likely adverse ecological effects (such as reduction in fish migration and invertebrate drift) than as history have been present.

t) The licencee must prepare a Fish Adaptive Management Plan that is to be used for the regulation of the minimum flow requirement, for acceptance by the Water Manager:
   1. This Fish Adaptive Management Plan must be implemented at the time of the first diversion of water for the production of power.
   2. The minimum flow requirement specified in clause (e) and listed on Schedule A, column (1) is to be supplemented by Schedule A, Column (2), if required by the Fish Adaptive Management Plan;
   3. The analysis of the monitoring data for assessing the metrics for the Abundance Action Threshold of the Fish Adaptive Management Plan, must be prepared for a January 1st implementation of a minimum flow requirement;
   4. The Water Manager must be informed of the minimum flow requirement to be implemented, and provided a copy of the supporting analysis.

u) The licensee must submit a Compensation Plan to compensate for the project impacts to the satisfaction of the Water Manager, and part of this plan may be required to be implemented prior to the Leave to Commence Diversion (LTCD) being issued.

v) The drawings of record that show the works as they were constructed, must be stored and archived, and shall be provided for review when directed by the Water Manager.

w) The project development term of this licence expires ten years from the date of issuance of this licence.

x) The project operational term of this licence is a period of 40 years from the expiry date of the project development term, or the commencement of power production, whichever occurs first.

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