



Province of British Columbia

Water Act

FINAL WATER LICENCE

British Columbia Hydro and Power Authority is hereby authorized to store and use water as follows:

- (a) The stream on which the rights are granted is Coquitlam River.
- (b) The site of the dam which creates the Coquitlam Lake Reservoir is PD42777, located as shown on the attached plan.
- (c) The date from which this licence shall have precedence is October 14, 1928.
- (d) The purpose for which this licence is issued is storage. The storage purpose supports the power purpose at the Coquitlam-Buntzen Generating System as authorized under Final Water Licence 119709.
- (e) Conditions for the storage of water under this licence are as follows:
 - i) The water may be stored in the reservoir between elevations of 132.00 metres, the minimum operating elevation, and 154.86 metres, the full supply level, measured at the dam using Geodetic Survey of Canada (GSC) datum. The volume of water stored between the minimum operating elevation and the full supply level is estimated to be 247.50 million cubic metres; and
 - ii) Surcharging the reservoir above the full supply level, drafting the reservoir to the full supply level and drafting the reservoir below the minimum operating elevation shall be done in accordance with the Operation, Maintenance and Surveillance Manual.
- (f) Water may be collected into storage, held in storage, and used throughout the whole year.
- (g) This licence is appurtenant to the undertaking as set out in Final Water Licence 119709.
- (h) The works authorized are a dam on the Coquitlam River (PD42777), which are located as shown on the attached plan.
- (i) This licence is issued in substitution of Final Water Licences 8430 and 8432.

Glen Davidson, P.Eng.
Deputy Comptroller of Water Rights

File: 0084341

Final Water Licence: 119710



Province of British Columbia

Water Act

Order Section 88

File Nos.: 0241200, 0241202, and 0084341

WHEREAS, British Columbia Hydro and Power Authority (BC Hydro) is the operator of the Coquitlam-Buntzen Power Development, in respect of which it holds Final Water Licences 119711, 119709, and 119710;

WHEREAS, the works authorized by Final Water Licences 119711, 119709, and 119710 include a dam on the Coquitlam River (PD42777), with low level outlets and two fish-water release valves, and an intake on Coquitlam Lake (PD42776);

WHEREAS, the operation of the works can also benefit the viability of fish and fish habitat in the Coquitlam River and they have been regulated to provide fish benefits under an order dated December 16, 1998;

WHEREAS, BC Hydro has engaged in public consultation to determine values for system parameters and to develop operating procedures that may provide fisheries benefits as described above;

WHEREAS the licensee has submitted a Water Use Plan, which recommends changes to the operations of Coquitlam-Buntzen Power Development which are intended to provide specific benefits to fish and fish habitat;

WHEREAS, I have accepted the Water Use Plan for the Coquitlam-Buntzen Power Development, dated April 7, 2005; and

WHEREAS, BC Hydro has proposed a monitoring program to determine if operating the works in accordance with the operating parameters and procedures in the Coquitlam-Buntzen Water Use Plan will provide the expected benefits;

I HEREBY ORDER THAT:

1. The order dated December 16, 1998 is revoked.
2. From May 15 to September 30 during daylight hours the minimum operating level of Buntzen Lake Reservoir shall be 122.2 metres.
3. From the date of issue of this order through December 31, 2006 the licensee must operate the Coquitlam-Buntzen Power Development in accordance with Schedule A.
4. In lieu of ordering parameters and procedures which would result in more power values being foregone, the licensee must alter the water-release facilities of the Coquitlam Dam (PD42777) in accordance with Schedule B.

5. From January 1, 2007 until directed to do otherwise the licensee must operate the Coquitlam-Buntzen power development in accordance with Schedule C.
6. With respect to the rate of change of flow released from the Coquitlam Dam the licensee must adhere to the procedures as set out in Schedule D.
7. The maximum operating elevation of Coquitlam Lake Reservoir between October 1 and March 31 is 153.86 metres, at all other times the maximum operating elevation is 154.86 metres:
 - a. When the reservoir exceeds the maximum operating elevation water will be discharged from the power tunnel and through the low level outlets in order to control the reservoir to the maximum operating elevation;
 - b. If the flow in the Coquitlam River at the location of Water Survey of Canada Gauge 08MH002 exceeds 140 cubic metres per second the licensee shall reduce the flow from the low level outlets, to zero if necessary, in an attempt to limit the peak flow to 140 cubic meters per second at 08MH002. The two fish-water release valves may remain open at all times during this procedure.
8. To determine the effectiveness of the regulation of the works in accordance with 3, 5 and 6 above the licensee must undertake a monitoring program as set out in Schedule E.
9. With respect to the maintenance and provision of records the licensee must:
 - a. keep records of:
 - i. Coquitlam Lake Reservoir elevation;
 - ii. Buntzen Lake Reservoir elevation;
 - iii. Coquitlam Dam instream flow release; and
 - iv. Discharge through the tunnel to Buntzen Lake Reservoir.
 - b. Provide a written report to the Comptroller of Water Rights on or before February 1 of each year summarizing the records from the previous calendar year; and
 - c. Provide on request of the Comptroller of Water Rights records collected under 9.a.
10. The licensee may operate the works in an alternate manner in the event of an emergency, a dam safety requirement, or an extreme hydrological event.
11. All emergency operations or other deviations from operations ordered above must be reported to the Comptroller of Water Rights in a timely manner.

Dated at Victoria BC this 21st day of April, 2005



Glen Davidson, P.Eng.
Deputy Comptroller of Water Rights



File: 76975-35 / Coquitlam
0241200, 0241202, 0084341

Licenses
FWL 119711
119709
119710

March 8, 2006

Mr. Cam Matheson
Manager, Generation Operations
BC Hydro
13th Floor, 6911 Southpoint Drive
Burnaby, BC V3N 4X8

Dear Mr. Matheson:

Re: Coquitlam-Buntzen Water Use Plan Implementation Order Amendment

A Section 88 order was issued April 21, 2005 to implement the Coquitlam Buntzen Water Use Plan.

Clause 8 of this order, directed the licensee to undertake monitoring as outlined in Schedule E of the order. As per Schedule E, the licensee has submitted terms of reference for the monitoring studies. Upon review of these terms of reference, it has become apparent that the study on "Habitat Suitability Criteria" is a research study, and therefore, not a monitoring study required by a Water Use Plan.

Therefore, I rescind that portion of Schedule E clause (2) which refers to the Habitat Suitability Criteria. This amendment is effective March 13, 2005.

Yours truly,

Glen Davidson, P.Eng.
Deputy Comptroller of Water Rights

Enclosures

pc: Graeme Matthews, BC Hydro
Ken Woo, Fisheries and Oceans Canada
Ted Down, Ministry of Water, Land and Air Protection
Livia Meret, Ministry of Attorney General

Ministry of
Environment

Water Stewardship Division
Management & Standards Branch
Water Use Planning

Mailing Address:
PO Box 9340 Stn Prov Govt
Victoria BC V8W 9M1
Telephone: (250) 387-6341
Facsimile: (250) 953-5124

Location:
3rd Floor
1175 Douglas Street
Victoria BC V8W 2E1



ORDER

Section 88 *Water Act*

IN THE MATTER OF Water Licence F119710, held by British Columbia Hydro & Power Authority (BC Hydro), which authorizes the storage of water for power purpose behind the Coquitlam Lake Dam and identified by Provincial Dam Number D410003-00.

WHEREAS BC Hydro plans to seismically upgrade and replace the Low-Level Outlet Gates 1 and 2 in the Intake Tower at Coquitlam Lake Dam to withstand the maximum design earthquake.

WHEREAS BC Hydro has submitted a Low-Level Outlet Project plan in a letter dated May 12, 2011 requesting approval to alter the Coquitlam Lake Dam.

WHEREAS BC Hydro has submitted the following drawings showing the details of the proposed work:

- Low Level Outlet Gate 1 & 2 Proposed General Arrangement of Slide Gates, Dwg. No. 413L-M14-0001
- Low Level Operating Gate 1 & 2 Preliminary Design, Dwg. No. 413L-M14-0002

WHEREAS BC Hydro has stated; there are no risks to the safety of the dam associated with taking the gates out of service as spill capacity is provided via the free overflow spillway and no changes to reservoir operation are planned during the project.

WHEREAS the Dam Safety Section has reviewed the letter and accepted the Low Level Outlet Replacement plan as being satisfactory.

NOW THEREFORE, I, Glen Davidson, Comptroller of Water Rights, hereby order pursuant to Section 88 of the *Water Act* of British Columbia, and pursuant to the Dam Safety Regulation, BC Reg. 44/2000, OIC 131/2000 that BC Hydro has authorization to proceed with the Low Level Outlet Replacement at the Coquitlam Lake Dam subject to the following:

- Any updates to your Operation, Maintenance and Surveillance manual for Coquitlam Dam should be submitted to your Dam Safety Officer on completion of upgrades.

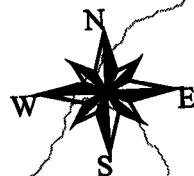
Dated at Victoria, British Columbia this 13th day of **June, 2011**.



Glen Davidson, P.Eng.
Comptroller of Water Rights



**BRITISH
COLUMBIA**



**NEW WESTMINSTER
COQUITLAM
NEW WESTMINSTER**

Signature:

Date:

Scale:

1:85,000

WR 5793

F.L. 119710 for F.L. 8430, F.L.8432
File 0084341