



# Province of British Columbia

## *Water Act*

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### FINAL WATER LICENCE

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

- (a) The streams on which the rights are granted are Coquitlam Lake and Buntzen Lake.
- (b) The points of diversion and re-diversion are PD42777, PD42776, PD42819 and PD42820, 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 power, which is to be generated at Lake Buntzen 1 and Lake Buntzen 2 Powerhouses.
- (e) Conditions for the diversion and use of water under this licence are as follows:
  - i) The maximum quantity of water which may be diverted at PD42776 is 1240.5 million cubic metres per year at a maximum rate of 44 cubic metres per second; and
  - ii) The combined maximum quantity of water which may be diverted at PD42819 and PD42820 is 87.8 cubic metres per second.
- (f) The water may be diverted and used throughout the whole year.
- (g) This licence is appurtenant to the undertaking of the British Columbia Hydro and Power Authority to generate and supply power from Lake Buntzen Powerhouses one and two situated on Section 10, Township 5, Range 7 West of the 7<sup>th</sup> Meridian New Westminster District.
- (h) The works authorized at the Coquitlam-Buntzen Generating System are a dam on the Coquitlam River (PD42777), intake on Coquitlam Lake (PD42776), tunnel, dam at the outlet of Buntzen Lake (PD42819), Power intakes (PD42819 and PD42820), penstocks and Lake Buntzen 1 and Lake Buntzen 2 Powerhouses which are located as shown on the attached plan.
- (i) This licence is issued in substitution of Final Water Licences 17613, 17614, and 17616.

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

File: 0241200

Final Water Licence: 119709



# Province of British Columbia

## *Water Act*

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### 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



# Province of British Columbia

## *Water Act*

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### Order Section 34

File No.: 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 Licence 119709 for power purpose;

WHEREAS, the Greater Vancouver Water District requires a supply of water from Coquitlam Lake for waterworks purpose in excess of that authorized for its use under Final Water Licences 12110, 12111, and 16717;

WHEREAS, BC Hydro has been supplying water to the Greater Vancouver Water District under the authority of an order dated March 3, 1988;

WHEREAS, issuing Final Water Licence 119709 in substitution of Final Water Licence 17616 has made the March 3, 1988 order invalid and BC Hydro has applied for authority to continue to supply water to the Greater Vancouver Water District;

WHEREAS, all of the water considered to be available from the Coquitlam Lake watershed is fully allocated to existing water licences held by BC Hydro and the Greater Vancouver Water District;

WHEREAS, it is my opinion that no other supply of water is currently available at reasonable cost to the Greater Vancouver Water District; and

I hereby authorize BC Hydro to supply a maximum of 134,452 acre-feet of water a year (to the Greater Vancouver Water District, for its waterworks requirements., provided that the maximum rate of diversion, including that necessary to satisfy Final Water Licences 12110, 12111, and 16717, shall not exceed 482 cubic feet per second. The terms under which this supply shall take place are set out in an agreement between the parties dated the 31<sup>st</sup> day of December 1987.

Dated at Victoria BC this 21<sup>st</sup> 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



**Province of British Columbia**  
***Water Act***

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**ORDER**

**Section 88**

of the

***Water Act of British Columbia***

**IN THE MATTER OF** Water Licence F119709, held by the British Columbia Power Authority (herein referred to as BC Hydro), which authorizes the use of the water behind Ruskin Dam.

**WHEREAS** BC Hydro plans to reconstruct the upper spillway at Buntzen Dam as part of the spillway channel improvements capital project at Buntzen Dam.

**WHEREAS** BC Hydro has submitted a letter entitled Buntzen Dam – Upper Spillway Reconstruction, dated August 8, 2007, outlining the proposed work at Buntzen Dam.

**WHEREAS** BC Hydro has submitted the following plan:

Drawing No. 419-C21-U19, and

**WHEREAS** the Dam Safety Section has reviewed and accepted the plans as being satisfactory.

**NOW THEREFORE**, I, Pieter J. Bekker, Deputy 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 proposed Upper Spillway Reconstruction at Buntzen Dam.

Dated at Victoria, British Columbia this 31<sup>st</sup> day of August, 2007.



Pieter J. Bekker  
Deputy Comptroller of Water Rights

**Province of British Columbia**  
***Water Act***

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**ORDER**

**Section 88**

of the

***Water Act of British Columbia***

**IN THE MATTER OF** Water Licence F119709, held by the British Columbia Power Authority (herein referred to as BC Hydro), which authorizes Buntzen Dam identified by Provincial Dam Number D420000-00, and the use of water behind the dam.

**WHEREAS** BC Hydro plans to reconstruct the lower spillway at Buntzen Dam as part of spill management for the lower spillway flume project below Buntzen Dam.

**WHEREAS** BC Hydro has submitted the following documentation, prepared by a professional engineer registered in BC, to the Comptroller of Water Rights, Victoria:

- A letter entitled Buntzen Dam – Upper Spillway Temporary Barrier, dated July 13, 2009, outlining the proposed work at Buntzen Dam.
- Drawing No. 419-C01-U7, and drawing entitled Buntzen Lake Dam, Upper Spillway Temporary Barrier Plan and Section.

**WHEREAS** the Dam Safety Section has reviewed and accepted the plans as being satisfactory.

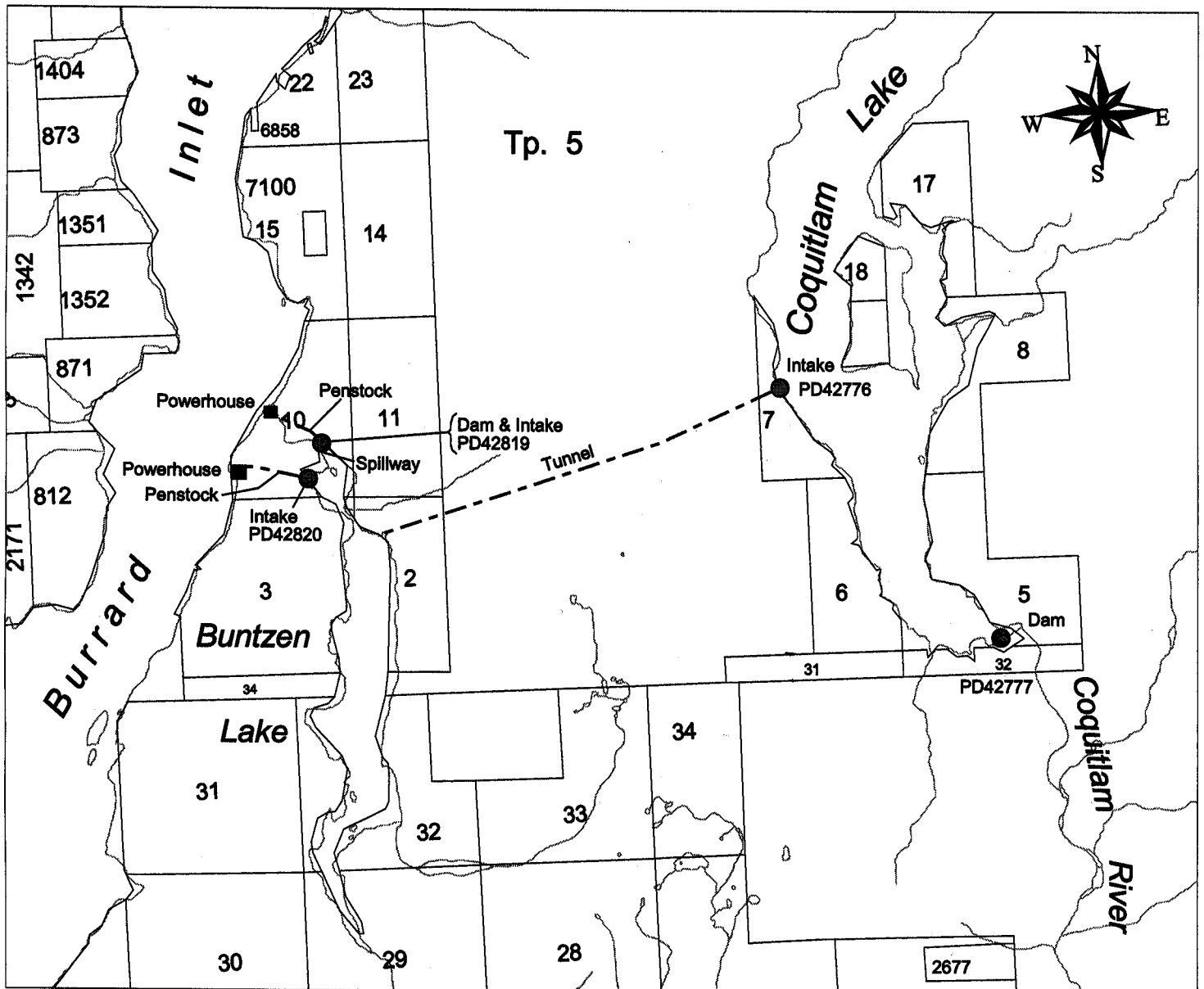
**NOW THEREFORE**, I, Pieter Bekker, Deputy Comptroller of Water Rights, hereby order pursuant to Section 88 of the *Water Act* of British Columbia, and pursuant to the Dam Safety Regulation, BC Reg. 44/2000, OIC 131/2000, that BC Hydro has authorization to proceed with the proposed installation of the Temporary Barrier in the upper Buntzen Spillway, subject to the following condition:

- An Interim Dam Safety Risk Management Plan will be developed by BC Hydro, as per the above mentioned letter of July 13, 2009, to ensure that the temporary barrier will not increase the risk of overtopping the dam. The Interim Dam Safety Risk Management Plan will be submitted to the Dam Safety Officer for review, acceptance and placement in Appendix C of the Buntzen Dam Operation, Maintenance and Surveillance Manual.

Dated at Victoria, British Columbia this 30<sup>th</sup> day of July, 2009.



Pieter J. Bekker  
Deputy Comptroller of Water Rights



WATER DISTRICT:  
PRECINCT:  
LAND DISTRICT:

NEW WESTMINSTER  
COQUITLAM  
NEW WESTMINSTER

Signature: 

Date: April 21, 2005

**LEGEND:**

Scale:

1:57,000

Points of Diversion & Rediversion: ●

Map Number:

WR 5793

F.L. 119709 for F.L. 17613, F.L. 17614, F.L. 17616

File 0241200