



Province of British Columbia

Water Act

FINAL WATER LICENCE

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

- a) The stream on which the rights are granted is Clowhom River, and the reservoir is Clowhom Lake.
- b) The site of the dam, which creates the Clowhom Lake Reservoir, is PD45298 located as shown on the attached plan.
- c) The date from which this licence shall have precedence is May 15, 1956.
- d) The purpose for which this licence is issued is storage. Storage purpose supports the power purpose at the Clowhom Generating Station, authorized under Final Water Licence 120562 and Conditional Water Licence 119822.
- e) The volume of water that may be stored is as described below:
 - a) The water may be stored in the reservoir between elevations of 42.00 metres, the minimum operating level for power generation, and 53.34 metres, the full supply level, measured at the dam. The volume of water authorized to be stored between the minimum operating level and the full supply level under this licence is estimated to be 80.783 million cubic metres.
 - b) Surcharging the reservoir above full supply level and 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 Final Water Licence 120562 and Conditional Water Licence 119822.
- h) The works authorized are a dam, and gated and emergency spillways, which are located as shown on the attached plan. Auxiliary works required for the operation of the Clowhom dam are also included.
- i) This licence is issued in substitution of Conditional Water Licence 23906.

Pieter J. Bekker
Deputy Comptroller of Water Rights

File: 182525

Date Issued: *April 20/05* Final Licence: 120565



Province of British Columbia

Water Act

Order Section 88

File Nos.: 0182525 & 2002750

WHEREAS British Columbia Hydro and Power Authority (BC Hydro) is the operator of the Clowhom River Power Development, in respect of which it holds Final Water Licences 120562 and 120565 and Conditional Water Licence 119822;

WHEREAS, the works authorized by Final Water Licences 120562 and 120565 and Conditional Water Licence 119822 at the Clowhom River Power Development include: a dam, power intake, penstock, powerhouse, surge tank, and gated and emergency spillways;

WHEREAS, the operation of the works can also benefit the viability of fish and fish habitat and ecological values and recreation opportunities with respect to Clowhom Lake Reservoir;

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

WHEREAS the licensee has submitted a Water Use Plan, which recommends changes to the operations of Clowhom River Power Development which are intended to provide specific benefits to fish and fish habitat, ecological values and recreation; and

WHEREAS, I have accepted the Water Use Plan for the Clowhom River 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 Clowhom River Water Use Plan will provide the above listed expected benefits;

I HEREBY ORDER THAT:

1. The licensee must operate the Clowhom River Power Development such that the normal minimum operating elevation of the Clowhom Lake Reservoir is 49.0 metres.
2. The licensee must evaluate the effectiveness of operating in accordance with 1 above by undertaking a monitoring program as set out in Schedule A.
3. With respect to the maintenance and provision of records the licensee must:
 - a. Keep records of:
 - i. Clowhom Lake Reservoir elevation
 - ii. Clowhom turbine discharge
 - iii. Total discharge from Clowhom Dam;
 - 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 3.a.
4. The licensee may draft Clowhom Lake Reservoir below 49.00 metres for planned maintenance or in the event of an emergency, dam safety requirement, or an extreme hydrological event.
5. All emergency operations or other deviations from operations ordered under 1 above be reported to the Comptroller of Water Rights in a timely manner.

Dated at Victoria BC this 20th day of April, 2005

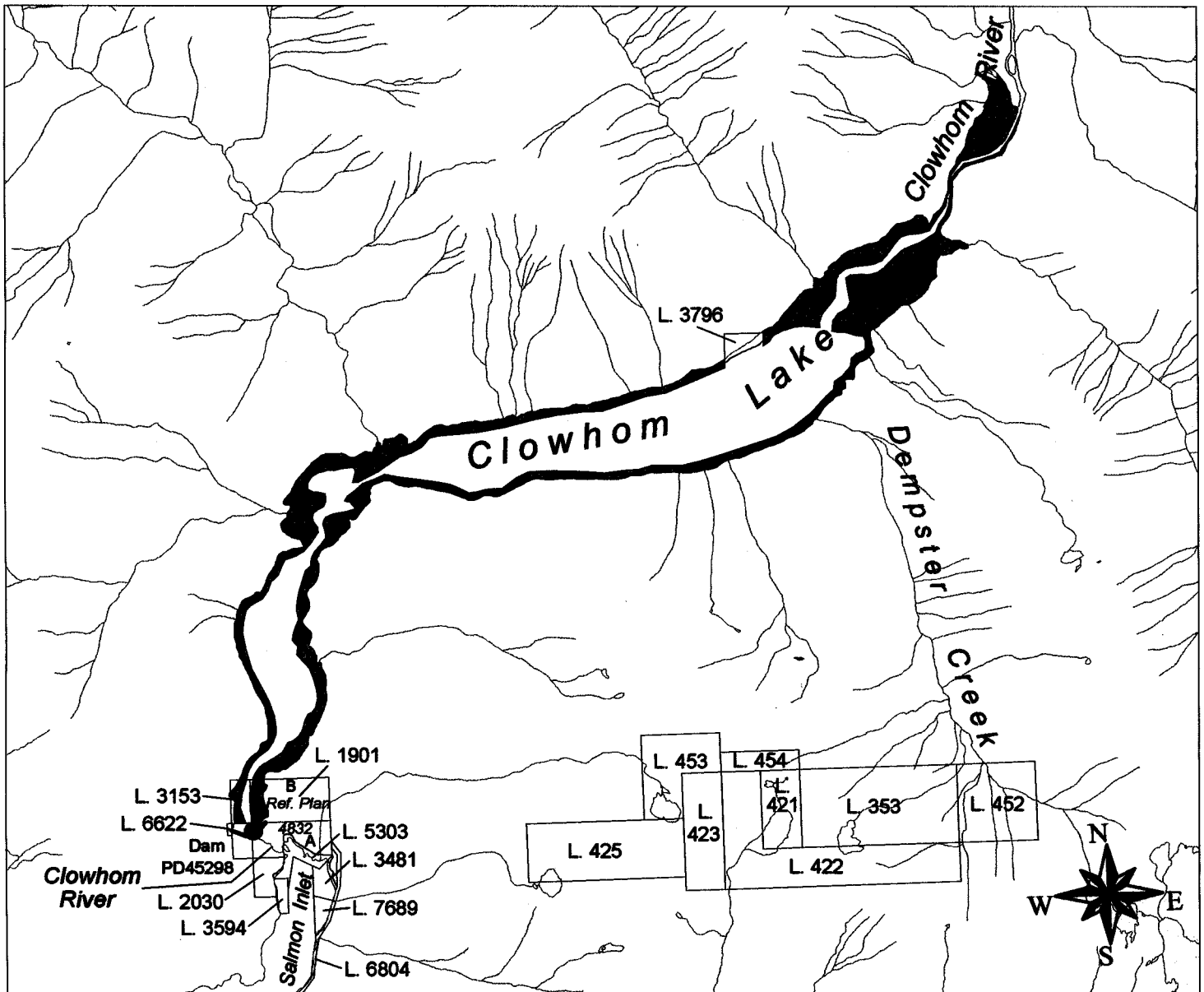


Pieter J. Bekker
Deputy Comptroller of Water Rights

SCHEDULE A MONITORING PROGRAMS

- 1) BC Hydro shall, within four months of the issuance of this order, develop terms of reference for a monitoring program with a proposed budget, schedule of work, and reporting with the following objectives:
 - a) Effects of reservoir operations on wildlife. This program shall consist of an annual survey program carried out over twenty years, undertaken to evaluate potential reservoir operational impacts to aquatic wildlife at the confluence of the Clowhom River and Clowhom Lake reservoir.
 - b) Role of littoral zone in governing the productive capacity of the reservoir. This program shall be carried out over twenty years, undertaken to evaluate the productivity of Clowhom reservoir based of the following parameters:
 - Fish abundance collected annually by creel survey
 - Fish survey data collected biennially for the first 6 years and then every 5 years for the remainder of the twenty year period,
 - Juvenile habitat use survey to be collected once, in the first year of implementation.
 - c) Validity of the Effective Littoral Zone Performance Measure. This program shall last four years in duration commencing in the first year of implementation and be designed to evaluate changes in littoral zone productivity as predicted by the performance measure in response to reservoir operations.
- 2) BC Hydro shall, within four months of the issuance of this order, develop terms of reference for a monitoring program with a proposed budget, schedule of work, and reporting requirements for the assessment of location and operating levels that may affect archaeological resources. The program will consist of two phases:
 - a) Inventory and impact assessment of key archaeological resources within Clowhom Reservoir above 49.00 metres, to be implemented in the first year of the issuance of this order; and
 - b) Monitoring program to assess archaeological resources which are located below 49.00 metres when the reservoir is drawn below 49.00 metres.
- 3) Following review and acceptance in writing of the terms of reference, prepared in accordance with 1 and 2 above, by the Comptroller of Water Rights, the licensee shall undertake the aforementioned monitoring programs as directed.
- 4) BC Hydro shall submit reports as set out in the terms of reference which summarize the data collected in accordance with the programs initiated under 1 and 2 above and address the following topics:

- a) How effective were the ordered parameters and procedures in providing the expected benefits.
- b) A summary of deviations from the parameters and procedures, reasons for and the responses to those deviations.
- c) Recommendations for future changes to the parameters and procedures.



WATER DISTRICT:
PRECINCT:
LAND DISTRICT:

VANCOUVER
JERVIS
NEW WESTMINSTER

Signature: T. B. Behr
Date: April 20, 2005

LEGEND:

Scale: 1:64,000
Point of Diversion: ●
Map Number: WR 92G.073.1.2
Permit over Crown Land

F.L. 120565 for C.L. 23906
File 0182525
P.C.L. 25239