

WATER ACT

CONDITIONAL WATER LICENCE

British Columbia Hydro and Power Authority of 970 Burrard Street, Vancouver, British Columbia, V6Z 1Y3, is hereby authorized to divert, use and store water as follows:

- (a) The source of the water-supply is Columbia River and the reservoir is the Columbia River Valley and such areas adjacent thereto as may be flooded by the works authorized under Clause (h) hereof.
- (b) The point of diversion and storage is located approximately as shown on the attached plan.
- (c) The date from which this licence shall have precedence is the 16th February, 1976.
- (d) The purpose for which the water is to be used are power and storage.
- (e) The maximum quantity of water which may be diverted is 90,000 cubic feet per second and live storage authorized is 1,500,000 acre-feet per annum and such additional quantity as the Engineer may from time to time determine should be allowed for losses.
- (f) The period of the year during which the water may be used and stored is the whole year.
- (g) This licence is appurtenant to the undertaking of the Licensee.
- (h) The works authorized to be constructed are dam, power plant, reservoir and auxiliary works, including access roads thereto.
- (i) The construction of the said works shall be completed and the water beneficially used on or before the 31st day of December, 1990, or such other date as the Comptroller of Water Rights may order.
- (j) Construction of the works authorized under Clause (h) hereof shall not be commenced until plans of same have been approved in writing by the Comptroller of Water Rights.
- (k) The reservoir area shall be cleared to such extent and in such manner as may be directed by the Comptroller of Water Rights.
- (l) The level of water retained by the dam shall at all times be subject to the direction of the Comptroller of Water Rights and shall not exceed elevation 1850 feet until remedial work with respect to the Downie Slide has been completed to the satisfaction of the Comptroller.
- (m) The Licensee shall release water at such times and in such quantities as may be directed by the Comptroller of Water Rights.
- (n) The location of construction camps, work areas, site offices, borrow pits and similar works shall be subject to the approval of the Comptroller of Water Rights.
- (o) The Licensee shall cause to be constructed in the vicinity of the reservoir, recreational facilities as directed by the Comptroller of Water Rights.

- (p) Programmes for the protection, or enhancement, of fish and wildlife habitat and for the mitigation of losses of habitat, and studies related thereto shall be carried out by the Licensee as directed by the Comptroller of Water Rights.
- (q) The Licensee shall employ, within three months of issuance of this Licence, one fisheries biologist and one wildlife biologist to assist in drafting environmental guidelines for construction activities to monitor fisheries and wildlife aspects of the project and to gather additional information as required during construction and for such periods as the Comptroller of Water Rights deems necessary. These biologists shall maintain liaison with staff of the Licensee or its contractors and with Government agencies as required.
- (r) The Licensee shall prepare environmental guidelines for all construction-related activities, for the approval of the Comptroller of Water Rights, and shall, in the course of such activities, adhere to environmental guidelines as directed by the Comptroller of Water Rights.
- (s) The Licensee shall carry out programmes for the mitigation of adverse impacts on the local community as directed by the Comptroller of Water Rights in accordance with annual budgets prepared in consultation with appropriate local public agencies and approved by the Comptroller of Water Rights.
- (t) The Comptroller of Water Rights shall submit to a Claims Officer, appointed by him from time to time, any claim for loss or damage arising out of the construction, maintenance, use or operation of the Licensee's works, and such Claims Officer shall have jurisdiction to consider and settle such claim, provided the amount involved for any matter does not exceed in the aggregate the sum of \$10,000.00. Any person suffering such loss or damage may apply to the Claims Officer for settlement of his claim whereupon the Claims Officer shall hear and determine the claim and the Licensee shall pay to every claimant any sum decided from time to time by the Claims Officer to fully compensate the claimant for damage or loss up to but not exceeding \$10,000.00 for a claim resulting from the construction, maintenance, use or operation of the Licensee's works. The procedure for making such claims and governing the hearings by the Claims Officer shall be as specified by the Comptroller from time to time. The decision of the Claims Officer shall be final and there shall be no appeal therefrom. The Licensee shall reimburse the Minister of Finance for the remuneration and expenses of the Claims Officer appointed pursuant hereto.
- (u) Any claimant having a claim recoverable at law against the Licensee for an amount exceeding \$10,000.00, may elect either to commence legal proceedings against the Licensee for recovery of the same, or may notify the Licensee in writing that he wishes to submit his claim for arbitration pursuant to the Arbitration Act of British Columbia and the Licensee as a condition of this Licence shall submit to such arbitration. The arbitration shall be governed by the provisions of the Arbitration Act of the Province of British Columbia, except as may be otherwise specified by the Comptroller from time to time.
- (v) The Licensee shall give security in such amount and under such terms as the Comptroller of Water Rights may from time to time direct to ensure compliance with clauses (o), (p), (s) and (u) of this Licence.
- (w) The rights granted under this Licence shall be deemed to be subsequent in precedence to any rights granted under any licence or licences which may be issued at any time for the consumptive use of water.
- (x) The Licensee shall reimburse the Minister of Finance for the costs and expenses of the PROJECT CO-ORDINATING COMMITTEE, to be appointed by the Comptroller of Water Rights, for the purpose of considering and making

recommendations to the Comptroller in respect of the orders and approvals to be given by him with respect to those matters set out in clauses (k), (l), (n), (o), (p), (r), (s) and (v) of this Licence.

The members of the Project Co-ordinating Committee shall be representative of those Ministries and Agencies of the Province concerned with the matters to be dealt with by the Committee, and the Chairman shall be appointed by the Comptroller of Water Rights.

It shall be the responsibility of the Licensee, and the biologists appointed under clause (q) of the Licence, to attend at the invitation of the Committee, and to report to and consult with the Committee on matters before it.

The Comptroller of Water Rights shall, prior to the giving of approvals or the issuance of orders under the several clauses of this Licence referred to in this clause, give reasonable public notice of the receipt by him of recommendations from the Committee, and shall give reasonable public notice of any approval or order arising therefrom.

- (y) The Licensee shall reimburse the Minister of Finance for the costs and expenses of a COMMUNITY IMPACT COMMITTEE to be appointed by the Comptroller of Water Rights for the purpose of monitoring the consultations carried out in accordance with clause (s) of this Licence, and of assisting the Licensee and the appropriate local public agencies on matters arising in the course of those consultations, and the Committee shall make recommendations to the Comptroller of Water Rights in respect of the approvals to be given and orders to be issued by him thereunder.

The members of the Community Impact Committee shall be representative of those Ministries and Agencies of the Province concerned with the matters to be dealt with by the Committee, and the Chairman shall be appointed by the Comptroller of Water Rights.

It shall be the responsibility of the Licensee and representatives of appropriate local public agencies to attend at the invitation of the Committee and to report to and consult with the Committee on matters coming before it.

The Comptroller of Water Rights shall, prior to the giving of approvals or the issuance of orders under clause (s) of this Licence, give reasonable public notice of the receipt by him of recommendations from the Committee, and shall give reasonable public notice of any approval or order arising therefrom.

- (z) The Licensee shall provide or assist in the provision of such facilities over or around the Revelstoke Dam as the Comptroller may require, and operate or assist in the operation of such facilities wholly, or to such an extent, as the Comptroller shall, from time to time, direct for the transfer of logs or log bundles from the Revelstoke reservoir, and if the Comptroller so directs, into the Columbia River downstream of the Revelstoke Dam.



H. D. DeBeck
Comptroller of Water Rights

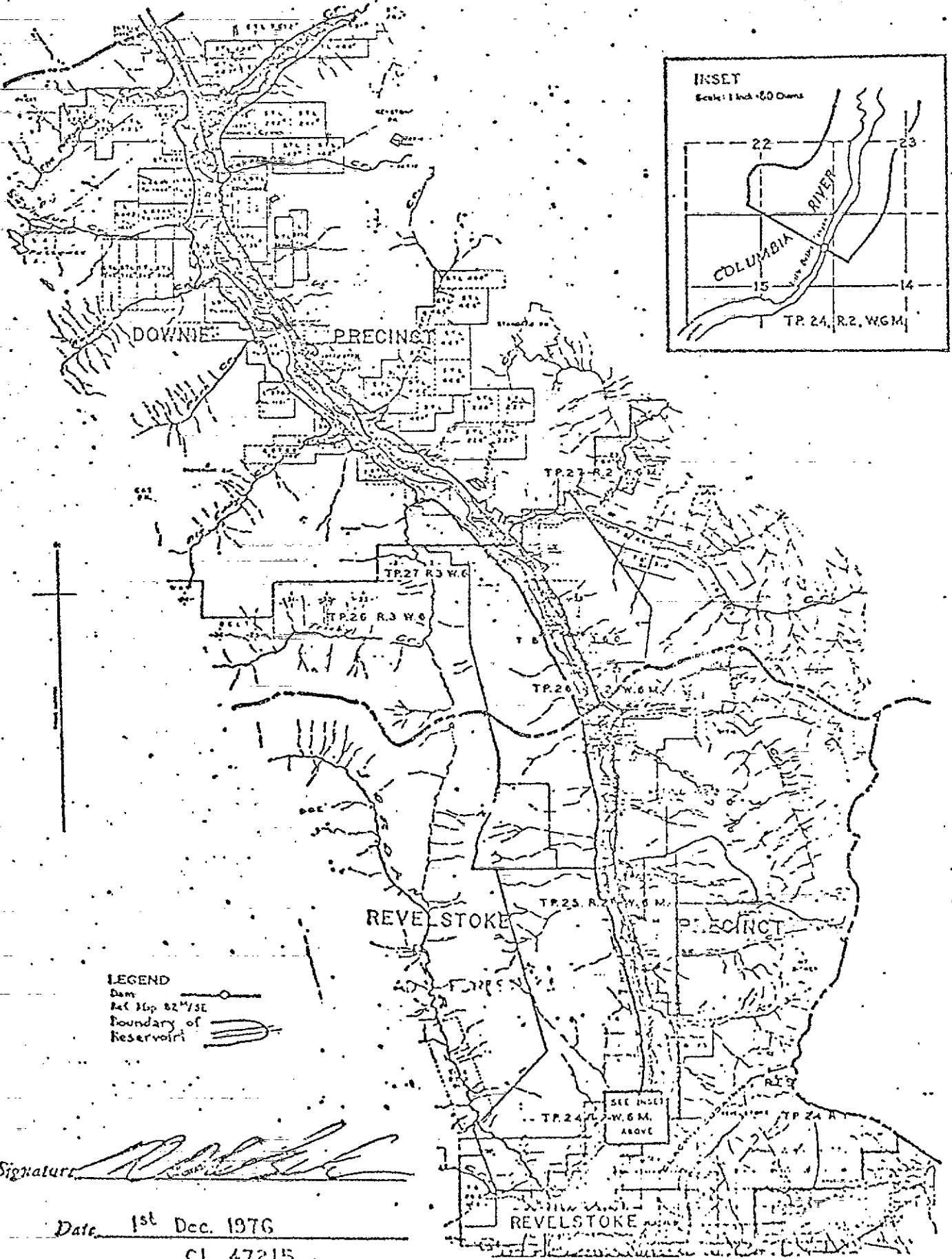
File No: 0330118 Date: December 1st, 1976 Conditional Licence: 47215

Re-issued in consolidated form 14th August, 1978 incorporating the amendments ordered in the Decisions dated September 12, 1977 and June 23rd, 1978, by the Appeal Tribunal appointed in accordance with Section 38 of the Water Act.

REVELSTOKE WATER DISTRICT
KOOTENAY DISTRICT

Scale: 4 Miles to 1 Inch

For continuation see below to right



LEGEND
 Dam ————
 Sec 36p 36 M²/SE
 Boundary of Reservoir

Signature: _____

Date: 1st Dec. 1976
 CL. 47215
 File 0330118

SUBSECTION 3.7 - LIMITS ON FILLING AND DRAWDOWN

The normal full pool level for the Revelstoke Reservoir will be El. 573.0 m (1880 ft), but the reservoir could be surcharged up to El. 574.5 m (1885 ft), if additional flood control storage is needed. It is expected that perhaps 0.5 m of storage may be used for routing severe floods, keeping in mind that 1.5 m was required for routing the spillway design flood. With the top of the spillway gates (in the closed position) 0.6 m above the normal full pool level of El. 573.0 m, it is possible that reservoir level could enter the surcharge zone to a limited extent before spill is initiated.

During most of the year the reservoir will be operated within a 1.5 m range just below the full pool level. However, prior to the freshet it may be drawn down as much as 4.6 m to El. 568.4 m (El. 1865 ft). In the unlikely event of a prolonged loss of several major transmission lines or other such system emergency condition, the reservoir could be drawn down to El. 557.8 m (El. 1830 ft) to meet system load requirements.

These drawdown limitations follow from statements made by B.C. Hydro at the Revelstoke hearings regarding operation of the reservoir. There are no restrictions on the rate of filling or drawdown imposed by stability requirements for the reservoir slopes or the embankment.

WATER ACT

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- (n) The location of construction camps, work areas, site offices, borrow pits and similar works shall be subject to the approval of the Comptroller of Water Rights.
- (o) The Licensee shall cause to be constructed in the vicinity of the reservoir recreational facilities as directed by the Comptroller of Water Rights after consultation with the Licensee and the Deputy Minister of Recreation and Conservation.

- (p) Programmes for the protection, or enhancement, of fish and wildlife habitat and for the mitigation of losses of habitat and studies related thereto shall be carried out as directed by the Comptroller of Water Rights after consultation with the Licensee and the Deputy Minister of Recreation and Conservation.
- (q) The Licensee shall employ, within three months of issuance of this licence, one fisheries biologist and one wildlife biologist to assist in drafting environmental guidelines for construction activities, to monitor fisheries and wildlife aspects of the project and to gather additional information as required during construction and for such period as the Comptroller of Water Rights deems necessary. These biologists shall maintain liaison with staff of the Licensee or its contractors and with government agencies as required.
- (r) The Licensee shall prepare environmental guidelines for all construction-related activities, for approval of the Comptroller of Water Rights in consultation with the Deputy Minister of Recreation and Conservation, the Director of Pollution Control and other appropriate regulatory agencies.
- (s) The Licensee shall have approved by the Comptroller of Water Rights annual budgets prepared in consultation with appropriate local public agencies for the mitigation of adverse impacts on the local community.
- (t) The Licensee shall reimburse the Minister of Finance for the salary and expenses of an Engineer to be appointed pursuant to the Water Act and to be known as the Claims Officer.
- (u) The Licensee shall pay any sum determined by the Claims Officer to be owing to any claimant under Section 18 of the Water Act.
- (v) The Licensee shall give security in such amount and under such terms as the Comptroller of Water Rights may from time to time direct to ensure compliance with clauses (o), (p), (s) and (u) of this licence.
- (w) The rights granted under this licence shall be deemed to be subsequent in precedence to any rights granted under any licence or licences which may be issued at any time for the consumptive use of water.



H. D. DeBeck
Comptroller of Water Rights

File No. 0330118 Date issued: December 1st, 1976 Conditional Licence: 47215

ENTERED ON	
Ref.	82M/SE
Map No.	
By	RK

December 1st, 1976

Re: Application for Water Licence by British Columbia Hydro and Power Authority to Authorize the Construction of the Revelstoke Dam Project

Enclosed is a copy of the Notice of Decision and the Water Licence which I have issued today authorizing the construction and operation of a dam on the Columbia River near Revelstoke. This is a project which has been known as the "Revelstoke 1880 Project".

At the Hearing, concern was mainly directed at three aspects of the project, namely:

- (1) The safety of the project particularly in view of the very large slide area on the valley slopes in the vicinity of Downie Creek.
- (2) The possibility of adverse effects on fish and wildlife habitat and productivity and on the environment in general.
- (3) The possibility of adverse effects on the community and the economy in the area in both the short and long terms.

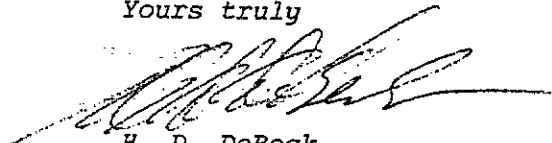
I found the evidence of the Downie Slide panel impressive and consider that there is every reason to believe that the Downie Slide can be stabilized to a safe condition. However, it was very clear from the evidence that the remedial measures proposed were still in the conceptual stage and had not yet been designed. Although it is recognized that the lack of specific design plans is unavoidable at this stage of project planning, it is also necessary to recognize the possibility, however small, that the required degree of stabilization might not have been achieved by the date of completion of the project. I have therefore made it a condition of the licence that the level of water retained by the dam shall not exceed elevation 1850 feet until remedial work with respect to the Downie Slide has been completed to satisfaction of the Comptroller of Water Rights. This means that the water level will be restricted to 30 feet below the design full pool until satisfactory stabilization measures have been constructed and are operating effectively. I am satisfied that, with the water at this level, the dam will be safe against any slide-induced effects. Since the power output will only be reduced by about 7% with this restriction, the economic viability of the project will not be lost in spite of the reduced benefits, and the project could operate under this restriction indefinitely if deemed necessary.

In addition, in order to improve the safety factor of the project, I am advising the Licensee, by a copy of this letter, that approval of the plans of the proposed works will not be given unless the top elevation of earth dam has been raised at least five feet above the level proposed at the Hearing. The freeboard on the dam as proposed was in accordance with conservative standard engineering practice and was the same as the freeboard on the two major dams in the Province, on the Peace River and at Mica. I wish to emphasize that this required increase in the safety factor does not reflect any view on my part that the dam, as proposed, would have been any less safe than any other dam in the Province. In my judgment, however, the location of this dam immediately upstream from a major community requires that every aspect of the design should be particularly conservative and the increase in the height of the dam above the level proposed is one way in which this conservatism can be expressed.

With regard to the effect of the Revelstoke dam on fish and wildlife, the planning for measures to mitigate losses is not far enough advanced to permit the election of the best options nor to permit the assignment of a dollar value to the cost. I have, therefore, included provisions in the licence to retain my decision-making power in this regard. The same situation exists in the case of adverse impacts on the community where the needs and possibilities for mitigative measures are even more complex. Again, provisions have been made in the licence to retain my jurisdiction with regard to such measures. In the field of community impacts, a number of matters were raised which are outside my jurisdiction since they involve the funds and services of other Ministries of the Provincial Government. Mr. David Kettle, of the Secretariat of the Environment and Land Use Committee will be reporting directly to the Minister of the Environment on these matters, many of which may require decisions by the Cabinet.

There was considerable discussion at the Hearing about the forecast rate of electrical load growth in the Province and the resulting need for additional generating plants. I believe the evidence is convincing that the Revelstoke Project is required and is economically attractive for B.C. Hydro and the Province with the proposed in-service date. My decision, however, does not require acceptance of the forecast of B.C. Hydro because I believe that ideally authorization by water licence for a project should be sought and obtained well in advance of the intended date for the commencement of construction. The licence issued permits the dam to be constructed when proposed but it does not require adherence to the original schedule.

Yours truly



H. D. DeBeck
Comptroller of Water Rights

Enclosures

ORDER

WATER ACT


File No. 0330118

In the matter of Conditional Water Licence No.47215, which authorizes the diversion and storage of water from the Columbia River for power purposes.

Pursuant to clauses (r) and (x) of the said licence, having considered the recommendation of the Project Co-ordinating Committee dated 7 May, 1980, with regard to the provision of environmental guidelines for transmission line construction and maintenance in the Dolan Creek watershed;

It is hereby ordered that the construction and maintenance of any hydro-electric transmission line within the boundaries of the Dolan Creek watershed be carried out in accordance with the environmental guidelines set out in Appendix "A" of this Order.

Dated at Victoria, British Columbia, this 7th day of June, 1980.



H. D. DeBeck,
Comptroller of Water Rights.

ENVIRONMENTAL GUIDELINES FOR TRANSMISSIONLINE CONSTRUCTION AND MAINTENANCEDOLAN CREEK WATERSHED1. Introduction.

The guidelines presented in the memorandum have been prepared on the assumption that an alternative water supply will be provided for the periods during which the transmission line will be constructed, and that Dolan Creek will supply Big Eddy with water after completion of construction.

Dolan Creek watershed must be harvested in a manner which will maintain and protect water quality and yield.

Notwithstanding any other clause or condition in these guidelines, or guidelines or conditions of any other agency including the Forest Service, the timber licensee must be conversant with and abide by the Water Act, particularly Sections 2, 37 and 41.

2. Guidelines During Logging, Clearing, and Construction of Transmission Line.a. General

Contract documents for all proposed work within the watershed shall be submitted to the Big Eddy Water Works District's engineers for review prior to commencement of work.

Access shall be restricted to personnel engaged in the work.

All refuse and waste generated by the construction shall be collected and removed from the watershed daily. No servicing of vehicles and equipment shall be carried out within the watershed except for small hand tools. Extreme caution shall be taken to avoid spills of fuel and oil. All spills that occur shall be cleaned up immediately. Contaminated soil shall be removed from the watershed.

Portable self-contained privies shall be placed in areas which men are working, and the use of these at all times shall be strictly observed.

No chemicals shall be permitted to be used within the watershed for pest or vegetation control. Fertilizers approved by the Big Eddy Water Works District may be selectively used to promote reestablishment of vegetation on erodible surfaces.

No materials and equipment shall be left within the watershed on completion of construction except:

- a. Transmission towers and conductors and fittings,
- b. Native, well-compacted backfill; clean, well-graded granular fill and rock fill,
- c. Concrete and steel reinforcement,

d. Fences and gates,

e. Other material and equipment which has been approved by the Big Eddy Water Works District's engineers.

b. Logging and Yarding

The objective is to conduct logging in a manner to minimize the effect on the quality and quantity of water.

No logging shall be permitted between April 1 and December 1. Logging operations shall only be permitted at times when the snow-pack is determined by the Forest Officer of the Ministry of Forests to be sufficient to adequately protect the site from excessive ground disturbance. It is anticipated that such snow-pack will be at least 0.8 m. in depth.

The location of all streams within areas planned for logging shall be marked on the ground before logging commences. Skid trails shall be constructed on the snow-pack with a minimum of disturbance to the ground surface. Landing sites shall be located in well drained areas at least 100 m. from streams and gulleys. The marking of all streams and the flagging of skid trails, roads and log landings within areas planned for logging shall be the responsibility of the Forest Officer.

Machinery shall be limited to small tracked vehicles of 105 hp and under, and rubber tired skidders. All trees over 3 m. in height will be felled. All felled trees over 150 mm. in diameter will be skidded to the landing in tree lengths prior to the removal of the branches. No machine shall be operated within 40 m. of Dolan Creek except at approved stream crossings.

Treatment after logging shall not include broadcast burning.

If logging is carried out before an alternative water supply to Dolan Creek has been provided, it is recommended that logging activities should be monitored by the Forest Officer on a continuous basis.

c. Clearing

Only rubber tired vehicle access will be permitted in order to bring in crews and their hand equipment.

Trees and brush shall be felled using hand equipment only. Excepted from felling are:

1. Conifers less than 2 m. high,
2. Fruit, nut and ornamental trees and bushes,
3. Low growing vegetation which will normally grow no higher at maturity than approximately 5 m.
4. Any trees or bush specifically marked for retention.

5. At the upper and lower crossings of the Dolan Creek watershed no clearing shall be done within a horizontal distance of 40 m. on either side of Dolan Creek except for individual tall trees which are judged tall enough to cause, within 5 years growth, an unsafe condition due to insufficient clearance from the conductors.

The branches shall be trimmed from all felled and dead and down timber which is 150 m. in diameter or greater. The trimmed tree trunks shall lie flat on the ground in a secure position so that they will not slide or roll downhill.

Slash shall be hand piled and burned at locations designated or approved by the Forest Officer.

d. Road Construction and Maintenance

The objective is to construct and maintain roads without causing unnecessary silting of streams.

Roads to be located, where possible, on natural benches and ridge tops, avoiding unstable areas and floodplains.

Construct cuts and fills at a stable angle of repose, where possible. Prompt revegetation of cut banks and fill slopes will be required in unstable areas.

End haul is required where "sidecast" would reach natural stream boundary. Rip-rap or install retaining walls where needed to increase the stability of cuts and fills.

Cross-drains equivalent to a culvert diameter of 0.5 m. shall be placed at all drainage channels and gulleys. An energy dissipator shall be placed at the downstream end of all drains and a ditch block placed at the upstream end on continuous grades. Muddy water shall be discharged onto the forest floor to allow sediments to be removed before the water reaches natural streams.

Culverts used for stream crossings on permanent roads shall be corrugated metal with a minimum diameter of 0.5 m. and of adequate length. Minimum cover shall be 0.3 m. or one-half the diameter of the culvert.

All culverts shall be designed to carry the design flood with HW/D not greater than one at the inlet. Where a culvert is sized for: (a) a design flood in excess of 200 c.f.s., or (b) a fill above the stream bed in excess of 3 m. at the upstream side of the road, the design and installation shall be specified and controlled by a Professional Engineer. An Approval under the Water Act is also required.

Bridges, including abutments, which are used for permanent roads should be constructed clear of the highwater mark. If this is not possible, an Approval under the Water Act may be required. Temporary seasonal bridges may be exempt. Earth covered bridges are not permitted.

The drainage systems must be restored on roads that will not be maintained.

The toe of road embankments shall be located the following distance away from the highwater mark of streams:

<u>Slope, Road to Stream (%)</u>	<u>Horizontal Distance (meters)</u>
0 - 10	15 m.
10 - 20	30 m.
20 - 30	40 m.
30 - 40	50 m.
40 - 50	65 m.
50 +	75 m.

The maximum spacing for cross-drains should not exceed the distances set out in the following table. (Also refer to Erosion Hazard Chart - Appendix I). These drains should be located, where possible, in natural drainage courses as outlined in paragraph 5 of this section.

<u>Road Grade</u>	<u>Severe Hard</u>	<u>Moderate or Slight Hazard</u>
0 - 3%	225 m.	225 m.
3 - 5%	150 m.	225 m.
5 - 8%	90 m.	150 m.
8% +	60 m.	90 m.

Limit grade of roadside ditch to 10% in severe hazard areas by constructing energy dissipators. (Refer to Erosion Hazard Chart.)

Material removed from ditches and culverts during maintenance shall not be deposited in drainage courses.

Stream crossings shall be located a minimum distance of 300 m. above licenced intakes or as specified by the Engineer for the Revelstoke Water District.

No heavy machinery shall be allowed to operate within 100 m., or as specified, of any licenced water storage structure. No water storage structure shall be used as a roadway or for any other purpose.

Road construction shall not be carried out during wet weather.

Road drains shall discharge to areas where sediment can settle out before reaching streams.

A single temporary road in the right-of-way of a minimum width and causing minimum disturbance to the ground shall be permitted on the south slope, except that no road shall be constructed and no vehicle access shall be permitted between the closest towers to Dolan Creek.

Road access to the transmission line to the west of the Dolan Creek watershed shall not pass within the watershed.

Link fences 2 m. high with barbed wire on top shall be constructed across the cleared right-of-way at the watershed boundaries. Gates shall be kept locked. Fences shall be provided with signs: 'Community water supply - keep out!'. All suspected bike or hike trails into the area shall be effectively barred. Fences will be limited to those areas where topography will not prevent access.

e. Foundation Installation and Tower Erection

Excavated material containing silt and fines shall be protected from erosion. Settling ponds shall be required for silty water pumped from excavation. Concrete shall be batched outside the watershed.

f. Conductor Installation

Installation of straw lines by helicopter shall be required.

3. Guidelines After Construction.

British Columbia Hydro and Power Authority shall notify Big Eddy Water Works District when men will have to enter the watershed for maintenance or repairs. Such maintenance and repairs shall be in accordance with the guidelines during construction.

Fences and gates shall be periodically inspected and maintained in good condition. Gates shall be kept locked. All suspected bike and hike trails shall be effectively barred.

These guidelines were approved by the Revelstoke Project Co-ordinating Committee on April 24, 1980.

EROSION HAZARD CHART

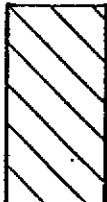
TEXTURE	MATERIAL	SLOPE %																
		5	10	15	20	25	30	35	40	45	50	55	60	65	70			
COARSE	SANDY GRAVELS, GRAVELLY SANDS, GRAVELS																	
MODERATELY COARSE	SAND, LOAMY SAND, SANDY LOAM, FINE SANDY LOAM, GRAVELLY SANDY LOAM, GRAVELLY LOAMY SAND																	
MODERATELY FINE	LOAM, SILT LOAM, SILT, SANDY CLAY LOAM, CLAY LOAM, SILTY CLAY LOAM																	
FINE	SANDY CLAY, CLAY, SILTY CLAY, HEAVY CLAY																	

EROSION HAZARD :

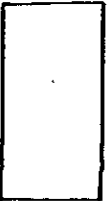
SEVERE



MODERATE



SLIGHT





ORDER
WATER ACT

FILE NO. 0330118

In the matter of Conditional Water Licence 47215, which authorizes the diversion and storage of water from the Columbia River for power purposes.

Pursuant to clauses (k) and (x) of the said licence, having reviewed the Reservoir Clearing Specifications recommended by the Project Co-ordinating Committee and submissions received thereto.

I hereby direct that the reservoir shall be cleared to such extent and in such manner as set out in Appendix "A", hereto attached.

This Order is given on the condition that the right is reserved to make further orders with respect to reservoir clearing in the light of future experience on the project.

Dated at Victoria, B. C., this 25th day of May, 1978.

H. D. DeBeck,
Comptroller of Water Rights.

APPENDIX "A"

REVELSTOKE PROJECT

CLEARING SPECIFICATIONS

1. Clearing

1.1 No standing tree tops shall protrude above an elevation of 1825 feet above sea level.

1.2 Subject to 1.1, above, and 1.5, below, treatment of specific horizons within the reservoir area shall be as follows:

1.21 Above 1880 - clearing shall be undertaken only on areas specified by the District Forester where sloughing or other environmental damage resulting from flooding is likely to occur.

1.22 Elevation 1850 - 1880 - where economically feasible, total clearing and disposal of debris will be undertaken in this zone during the initial clearing phase. Stump height shall not exceed 12 inches measured on the uphill side.

If the Downie Slide is not stabilized, and the reservoir is not flooded to elevation 1880, British Columbia Hydro will be responsible for all costs incurred to rehabilitate this zone to the satisfaction of the District Forester.

1.23 Elevation 1825 - 1850 - all merchantable trees shall be felled and, where feasible, removed from the area. All residual trees and woody material, exclusive of stumps, shall be disposed of where terrain permits the use of mechanical equipment. As per Clause 1.1 above, all trees below elevation 1825, both merchantable and non-merchantable, whose tops protrude above elevation 1825 shall be removed. Above elevation 1825 stump height shall not exceed 12 inches measured on the uphill side.

1.24 Below elevation 1825 - all merchantable trees shall be felled and removed from the area; non-merchantable timber shall be permitted to remain in place.

All residual dead and down trees and woody material that would float after flooding shall be disposed of where terrain permits the use of mechanical equipment.

1.3 Hazard abatement methods shall be at the direction of the District Forester.

1.4 On those areas above elevation 1865, having a side slope less than 35% and which are designated by the Ministry of Recreation and Conservation for recreation sites, all stumps shall be removed and the ground landscaped to a uniform slope.

1.5 On those areas designated by Fish and Wildlife Branch as necessary for fish and wildlife habitat during the reservoir preparation stage, no clearing operations will be undertaken prior to December 31, 1980; in no case, will total acreage of such areas exceed 10% of the total land and water area to be flooded by the Revelstoke 1880 Project.

1.6 British Columbia Hydro shall arrange for removal of floating debris to permit navigation on the main stem of the reservoir within one year of filling to operating levels and shall remove and dispose of all floating and standing water-killed timber arising from the clearing operation within a period of five years subsequent to filling, to the satisfaction of the Comptroller of Water Rights. Upon completion of the above debris disposal programme, the responsibility of British Columbia Hydro for collection and disposal of debris on the reservoir surface shall cease.

2. Road and Ferry Landing Construction

2.1 Existing logging roads presently used for the extraction of Crown timber above elevation 1880 which will be inundated by the Revelstoke 1880 Project reservoir shall be replaced to the following specifications: main haul roads shall be built to at least Forest Service Class 5 standard as per specifications F. S. 649; connections to branch roads shall be replaced to existing standards of width and alignment. Prior to reconstruction, the District Forester shall designate which are main haul and which are branch roads.

2.2 Access to timbered areas on the west side of the reservoir shall be provided by replacement of existing roads and/or by construction of ferry landings on both sides of the reservoir together with such connecting roads as may be required between said ferry landings and existing log haul roads or the highway, all to be built to standards, alignment and gradient acceptable to the District Forester and to British Columbia Hydro and Power Authority.

2.3 All funding for investigation and construction of works in Clauses 2.1 and 2.2 shall be the responsibility of British Columbia Hydro and Power Authority.

3. In the event of a dispute between the District Forester and British Columbia Hydro and Power Authority as to intent or interpretation of these specifications, the matter shall be referred to the Comptroller of Water Rights and his decision shall be final and binding.



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MINISTRY OF ENVIRONMENT
WATER STEWARDSHIP DIVISION
VICTORIA, BRITISH COLUMBIA

ORDER

***WATER ACT* – Section 18(1) (b)**

File No. 76940-70/REVEL (Original File 0330118)

IN THE MATTER of Conditional Water Licence 47215, which authorizes the diversion and storage of water from the Columbia River for power purpose:

Being satisfied that no person's rights will be injuriously affected, I hereby rescind the Order issued 28th day of June, 1991, and amend clause (i) of the said licence to read:

- (i) The construction of the said works shall be completed and the water beneficially used on or before the 31st day of December 2027.

DATED at Victoria, British Columbia, this 16th day of October, 2007.

James S. Mattison, P.Eng.
Comptroller of Water Rights

**ORDER
WATER ACT
Sections 88**

File No: 0330118

WHEREAS British Columbia Hydro and Power Authority (“BC Hydro”) is the holder of Conditional Water Licence 47215 which authorises the storage of water in Revelstoke Lake Reservoir; and

WHEREAS the full supply level of Revelstoke Lake Reservoir is 573.02 m; and

WHEREAS in the process of installing and testing Unit 5 in the Revelstoke power plant, Units 1 to 4 may be forced out of service resulting in a shutdown of discharge from the power plant; and

WHEREAS a curtailment of discharge may lead to a temporary surcharging of Revelstoke Lake Reservoir; and

WHEREAS BC Hydro has requested the Comptroller of Water Rights issue an Order to allow the reservoir to temporarily surcharge to 573.33 m in case of further Unit shutdowns while work on Unit 5 progresses, so that inflows may be managed in a manner that avoids spilling.

I HEREBY ORDER THAT:

BC Hydro may surcharge the Revelstoke Lake Reservoir between the date of this Order and December 15, 2010, under the condition that it follows the dam safety requirements as outlined in the Revelstoke Dam Operation, Maintenance and Surveillance Manual for Dam Safety.

DATED at Victoria, British Columbia, this 28th day of October 2010.



Glen Davidson, P.Eng.
Comptroller of Water Rights