

APPLICATION OF THE CRESTON VALLEY WILDLIFE  
MANAGEMENT AREA TO THE HONOURABLE THE  
INTERNATIONAL JOINT COMMISSION FOR AN  
ORDER AMENDING THE ORDER OF APPROVAL OF  
THE COMMISSION DATED THE 12TH DAY OF OCTOBER,  
1950, AS AMENDED BY THE ORDER OF APPROVAL  
OF THE COMMISSION DATED THE 3RD OF APRIL,  
1956.

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THE APPLICATION RELATES TO THE REGULATION  
OF WATER LEVELS WITHIN DUCK LAKE FOR THE  
PURPOSES OF CRESTON VALLEY WILDLIFE  
MANAGEMENT AREA. DUCK LAKE IS SITUATE  
BETWEEN THE INTERNATIONAL BOUNDARY LINE AND  
KOOTENAY LAKE, NEAR SIRDAR, IN THE COUNTY  
OF KOOTENAY, PROVINCE OF BRITISH COLUMBIA,  
IN CANADA.

TO THE HONOURABLE CHAIRMEN AND MEMBERS OF

THE INTERNATIONAL JOINT COMMISSION

The Applicants respectfully submit the following  
Application:-

I

Creston Valley Wildlife Management Area, as the name indicates, is a Management Area situate on the Kootenay River flats in the neighbourhood of Creston between the International Boundary and the South end of Kootenay Lake. The Wildlife Management Area comprises approximately 16,000 acres. The area is to be managed by a Management Authority established by the passage of an Act of the B.C. Legislature. The purposes, objectives and powers of the Authority are determined under this Provincial Statute cited as The Creston Valley Wildlife Management Area (Statutes of British Columbia (1968) 16-17 Elizabeth 2, Chapter 14). We are attaching to this application a copy of the Statute. The description of the lands

involved in the Management Area are fully set out as a Schedule to the Act. A copy of the Schedule is similarly attached to this Application and may be seen at the end of the Statute.

## II

Subsequent to the passage of the Statute and by a recent Order-in-Council two appointments have been made to the Management Authority. The appointments made to date are as follows, Dr. James Hatter, Director of the Fish and Wildlife Branch of the Department of Recreation and Conservation, Province of British Columbia, Victoria, B.C., Dr. J.S. Tener, Director of the Canadian Wildlife Service, Department of Indian Affairs and Northern Development, Ottawa. Both of these appointments have been made in accordance with Section 17 of the Act. In addition to these appointments an area manager has been appointed. He is Dwight D. Moore. Mr. Moore has had delegated to him the authority to develop and manage the marshes and lands within the Wildlife area. Mr. Moore is a resident at Creston and

works under the terms of a contract between himself and the Management Authority.

### III

Under the terms of an Agreement dated the 13th day of February, 1969, and approved by Provincial Order-in-Council No. 808, Her Majesty the Queen in the right of the Province of British Columbia as represented by the Department of Recreation and Conservation purchased and had conveyed to it the lands and improvements, being dykes and pumping installations, on land known and described as Lot 15811, Kootenay District, and all that portion of Lot 15818, Kootenay District, shown outlined in red on Explanatory Plan certified correct by W.A. Taylor, B.C.L.S., on the 1st day of November, 1968. A copy of the plan is attached to this Application.

### IV

In addition to the dyking works and pumps the same Agreement assigned from the Duck Lake Dyking District Conditional Water Licence No. 29212. This

Assignment has been processed by the Department of Water Rights and a copy of this licence is similarly attached to this Application. This water licence entitles the holder to store water on Duck Lake for the purposes of land improvement.

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Description of proposed works.

1. As the Commission knows, Duck Lake lies to the North of the International Boundary, being approximately 15 miles North of the International Boundary. The lake itself is to the East of both East and West branches of the Kootenay River. Duck Lake drains into the Kootenay River system through facilities owned and controlled by the applicant. The outlet facilities of the applicant are controlled under the terms of the Orders of Approval of the International Joint Commission dated the 12th of October, 1950 and the 3rd day of April, 1956.

2. The applicant proposes to construct a dyke to divide Duck Lake into two areas. The details of the proposal have been prepared by International Power and Engineering Consultants Ltd. on instructions from the Management Authority. A copy of their report is attached to this submission. A Summary of this report will be repeated within the terms of this application.
3. Of the two areas that Duck Lake will be divided into, the Southerly part, being approximately 850 acres, will form a water fowl nesting area with a controlled water elevation of 1,744 feet. The Northerly part, being approximately 3,150 acres, will remain a flood control reservoir with a maximum water elevation in most years of 1,745.0 feet.
4. The dyke will be built with a crest elevation of 1748.0 from a point on the West bank of Duck Lake near latitude  $49^{\circ} 13'$ , longitude  $116^{\circ} 38'$ , to a point near the mouth of Duck Creek approximately 1,000 feet

Southwest from latitude  $49^{\circ} 13'$  longitude  $116^{\circ} 36'$ , thence South approximately 1,500 feet to join the present cross dyke of the Duck Lake Dyking District. The main dyke will be constructed on a curve of 6,000 foot radius, and will have a 12 foot crest width, side slopes 1 vertical to 3 horizontal, with the North face protected by a 2 foot thickness of selected gravel and boulders. The dyke will be topped with a 6 inch layer of gravel to form a roadway.

5. To control water levels in the nesting area South of the proposed dyke, a pump and drain will be installed in the dyke near the East end. A re-circulation drain will be installed near the West end of the dyke. The pump will have a capacity of 11,200 U.S. g.p.m. and will discharge in either direction as required, through a 42 inch diameter drain with invert at elevation 1740.0. The re-circulation drain will be a 42 inch diameter with an invert elevation of 1740.5.

6. To control water levels in the Northerly portion of the lake, two additional pumps will be installed adjacent to the two existing pumps formerly owned by the Duck Lake Dyking District and now owned by the applicant. These pumps will be installed at the North end of Duck Lake. The two new pumps will each have a capacity of 30,000 U.S. g.p.m. and will discharge through 36 inch diameter culverts with invert elevations of 1750.0. The elevation of the base of the pumphouse will be 1733.0.

#### Proposed Regulation and Operation

##### Northerly Part of Duck Lake (Water Storage Area)

1. During construction of the proposed dyke the whole of Duck Lake will be pumped down to elevation 1742 or lower, in order that dyke construction can be done under dry conditions.
2. After construction, and in each successive year, the operation of Duck Lake will be



similar to the present regulation.

Commencing in January, Duck Lake will draw down to an elevation approaching 1742 by the 1st of April. This will be accomplished by operating the existing drainage gates in conjunction with the lowering of Kootenay Lake. As soon as gravity drainage is impossible the gates will be closed and the natural inflow to Duck Lake will be stored. By operating the four pumps the maximum water level will be maintained at or near elevation 1745 until drawdown begins in January.

3. Studies have shown that Duck Lake reservoir would rise above elevation 1745 in only 15% of the years, with the four pumps operating. A 20 year flood would produce a maximum lake elevation of 1746.5.

Southerly Part of Duck Lake (Nesting Area)

1. During construction this area would be dry.

2. After construction, and in each successive year, the elevation of the nesting area would be maintained at elevation 1744 all year round. This would be done by operating the reversible control pump and re-circulation drain as required to replenish or lower the water level in the area.
  
3. If it is required to control undesirable plant growth this area would be completely pumped out into the northerly part of Duck Lake, and remain dry during the months of September to January inclusive, or as required.

Amendments required in order to carry forward  
the proposals of the Creston Valley Wildlife  
Management Authority

1. Amendments will be required to existing Orders of Approval of the International Joint Commission, and in particular the Order of the Commission dated the 12th of October, 1950 as amended by the Order of

Approval of the Commission dated the 3rd of April, 1956.

The applicant will require an amendment of the Order of the 3rd of April, 1956, at condition number seven. The required amendment would amend by striking out the words "elevation 1,745.5" where they occur, and substituting therefore the words "elevation 1,745.0".


2. In respect of the Order dated the 12th of October, 1950, the applicant will require the addition of the following conditions:  
firstly,  
(a) That the applicant is authorized to construct a dyke in Duck Lake commencing at a point near latitude  $49^{\circ} 13'$  longitude  $116^{\circ} 38'$  on the West shore of Duck Lake to a point near the mouth of Duck Creek approximately 1,000 feet Southwest of latitude  $49^{\circ} 13'$  longitude  $116^{\circ} 36'$  and thence South to join the existing cross dyke of the Duck Lake Dyking District, complete with control pump and re-circulation

drain so that the water level can be maintained in that area South of the dyke at elevation 1744.0 or lower.

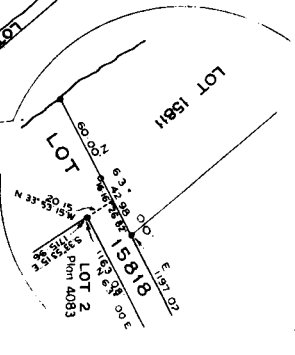
and secondly,

(b) That the Order be amended to permit the applicant to hold the elevation of Duck Lake at the elevation of 1,742.0 or lower for the purpose of constructing the said dyke and drainage works required.

All of which is respectively submitted.

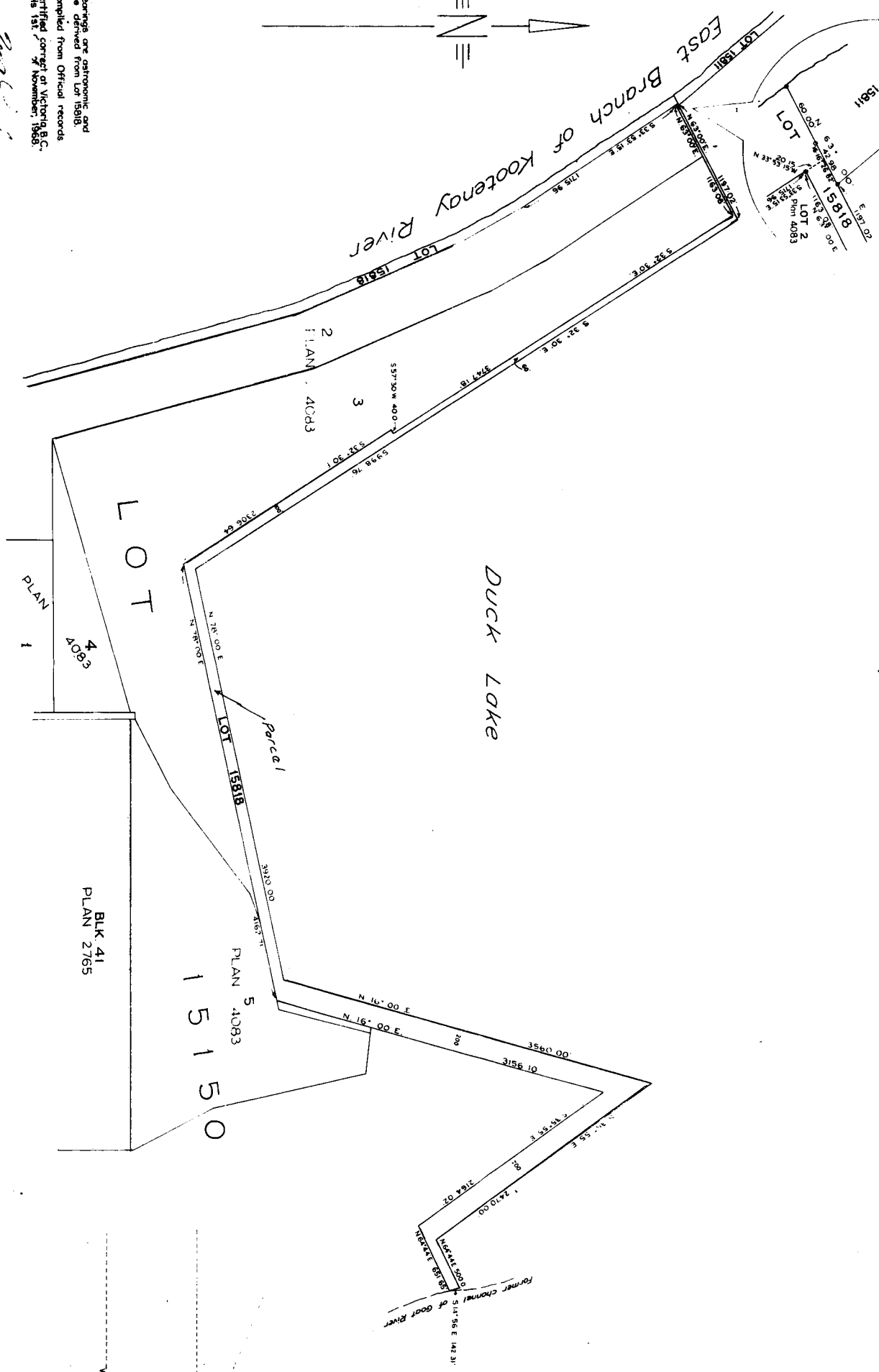
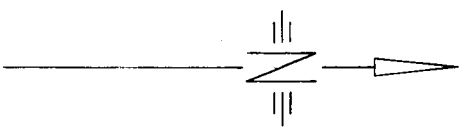
  
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R.H. Vogel, Esq., Solicitor  
for Creston Valley Wildlife  
Management Authority.

ENLARGEMENT  
Scale 1 inch = 60 feet



**EXPLANATORY PLAN  
OF PART OF LOT 15818  
KOOTENAY DISTRICT**

Scale: 1 inch = 600 feet



Explanatory Plan 6870  
Registered in the Land Registry Office  
of Nelson, B.C. this 16 day of  
March 1968

*[Signature]*  
Registrar

Bearings are astronomic and  
are derived from Lot 15818.  
Compiled from Official records  
Certified correct at Victoria, B.C.  
this 1st day of November, 1968.

*[Signature]*

Witness