# Province of British Columbia
## *Water Act*

## CONDITIONAL WATER LICENCE

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

a) The stream on which the rights are granted is Stave River, and the reservoir is Hayward Lake Reservoir.

b) The site of the dam, which creates the Hayward Lake Reservoir, is PD43480 located as shown on the attached plan.

c) The date from which this licence shall have precedence is January 2, 1908.

d) The purpose for which this licence is issued is storage. The storage purpose supports the power purpose at the Ruskin Generating Station authorized under Conditional Water Licences 117535 and 117533.

e) Conditions for the storage of water are as follows:

   i) The water may be stored in the reservoir between elevations of 33.00 metres, the minimum operating level for power generation, and 42.91 metres, the full supply level, measured at the dam using Geodetic Survey of Canada (GSC) datum. The volume of water authorized to be stored under this licence between minimum operating level and full supply level is estimated to be 25.35 million cubic metres.

   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 level 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 clause (g) of Conditional Water Licences 117535 and 117533.

h) The works authorized are a dam and spillway, which are located as shown on the attached plan. Auxiliary works required for the operation of the Ruskin dam are also included.

i) The licensee must operate the works authorized under h) above in accordance with an order of the Comptroller that:

1. Sets values for the parameters of: tailwater elevation below the Ruskin Dam; rate of discharge through the Ruskin Powerhouse and Dam; rate and timing of change of discharge at the Ruskin Powerhouse and Dam; and minimum and maximum elevation of Hayward Lake Reservoir. The values for the parameters are to be based on the Stave River Water Use Plan (Stave Falls and Ruskin Projects) dated December 15, 2003 and accepted by the Comptroller on May 6, 2004.

2. Requires a monitoring program to evaluate the effect of the regulation of the works as ordered in 1 above. The monitoring program is to be based on the Stave River Water Use Plan (Stave Falls and Ruskin Projects) dated December 15, 2003 and accepted by the Comptroller on May 6, 2004.

j) This licence and Conditional Water Licence 117535 are issued in substitution of Final Water Licence 17615.

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

File: 0036376 Date Issued: May 6, 2004 Conditional Licence 117536

# Province of British Columbia
*Water Act*

## ORDER
## *WATER ACT*
## SECTION 39

File Nos.: 76975-35/STAVE, 0045208, 0087939, 0241216, 0042437, 0265631, 2001975, 0036376, 0085236, 2001984

WHEREAS, British Columbia Hydro and Power Authority (BC Hydro) is the holder of Conditional Water Licence 117537 which authorizes the storage of water in Stave Lake Reservoir; Conditional Water Licences 117530, 117531, and 117532 which authorize the diversion and use of water for power purpose at the Stave Falls generating station; Conditional Water Licence 117536 which authorizes the storage of water in Hayward Lake Reservoir; and Conditional Water Licences 117535 and 117533 which authorize the diversion and use of water for power purpose at the Ruskin generating station;

WHEREAS, the works authorized by Conditional Water Licence 117530, 117531, 117532, and 117533, 117535, 117536, and 117537 (the Works) include:

- The Stave Falls Generating Station consisting of, Stave Falls and Blind Slough dams, approach channel, intakes, two tunnels, Stave Falls Powerhouse, tailrace channel, and tailrace protection berm; and
- The Ruskin Generating Station consisting of, a dam, intakes, tunnels and Ruskin Powerhouse;

WHEREAS, the operation of the Works can also benefit:

1. The viability of the Stave River system for fish, fish habitat and the ecosystem;
2. Recreational opportunities; and
3. Protection and management of archaeological resources;

WHEREAS, the licensee has engaged in a consultative process 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, titled the Stave River Water Use Plan (Stave Falls and Ruskin Projects), as per condition 14 of the July 10, 1995 disposition order (#20127) issued under the Utilities Commission Act, S.B.C, c.60;

WHEREAS, the Stave River Water Use Plan (Stave Falls and Ruskin Projects) includes values for parameters and procedures for the operation of the dams, reservoirs, and generation stations, which are intended to provide specific benefits for:

1. The viability of the Stave River system for fish, fish habitat and the ecosystem;
2. Recreational opportunities;
3. Protection and management of archaeological sites; and
4. Power generation;

WHEREAS, I have accepted the Stave River Water Use Plan (Stave Falls and Ruskin Projects) dated December 15, 2003;

WHEREAS, the licensee has proposed a monitoring program to determine if operating the works in accordance with the operating procedures in the Stave River Water Use Plan (Stave Falls and Ruskin Projects) will provide the above listed expected benefits; and

WHEREAS, clause i) of Conditional Water Licences 117530, 117531, 117532, 117533, 117535, 117536, and 117537 require the licensee to operate the Works in accordance with an order of the Comptroller that may set values for operational parameters and procedures;

I HEREBY ORDER THAT:

1. The works authorized under Conditional Water Licences 117530, 117531, 117532, 117533, 117535, 117536, and 117537 must be operated in accordance with Schedule A, the operating parameters.
2. The licensee must undertake a monitoring program as set out in Schedule B.
3. 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.
4. All emergency operations or other deviations from Schedule A set out in 1 above be reported to the Comptroller of Water Rights in a timely manner.

Dated at Victoria BC this 6th day of May, 2004

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

# SCHEDULE A
# OPERATING PARAMETERS

OPERATING CONDITIONS FOR THE STAVE RIVER HYDROELECTRIC PROJECTS

1. WITH RESPECT TO THE STAVE RIVER DOWNSTREAM FROM THE RUSKIN GENERATING STATION, BC HYDRO MUST:
   - 1.1. Discharge sufficient water from the Ruskin Generating Station to maintain a minimum tailwater elevation of:
     - 1.1.1. 1.8 metres[1] for the period of October 15 to November 30; and
     - 1.1.2. 1.7 metres at all other times.
   - 1.2. For the period of October 15 to November 30, when the discharge is less than 100 cubic metres per second, change the rate of discharge through the Ruskin Powerhouse only once over a seven-day period (weekly block loading). After each change the discharge must be greater than that of the previous seven-day period. Changes to discharge are to be conducted within a period of four hours or less.
     - 1.2.1. When the Ruskin Powerhouse discharge in the October 15 to November 30 period exceeds 100 cubic metres per second changing the rate of discharge is permitted on the condition that a minimum discharge of 100 cubic metres per second is maintained and the duration of each peaking event is less than 12 hours.
   - 1.3. For the period of February 15 to May 15, when the discharge is less than 100 cubic metres per second, change the rate of discharge through the Ruskin Powerhouse only once over a twenty-four hour period (daily block loading). Changes to discharge are to be conducted within a period of four hours or less.
     - 1.3.1. When the Ruskin plant discharge in the February 15 to May 15 period exceeds 100 cubic metres per second changing the rate of discharge is permitted on the condition that a minimum discharge of 100 cubic metres per second is maintained.
   - 1.4. In the event of a forced outage, re-establish the pre-outage flow as soon as possible, by spilling water if necessary, to maintain the block load flow or 100 cubic metres per second, whichever is lower.
   - 1.5. During the time periods specified in 1.2 and 1.3 above, decrease the rate of discharge at a rate not to exceed:
     - 1.5.1. 35 cubic metres per second per ten minutes when discharge is 100 cubic metres per second or less; and
     - 1.5.2. 113 cubic metres per second per thirty minutes when discharge exceeds 100 cubic metres per second.

2. WITH RESPECT TO THE ELEVATION OF HAYWARD LAKE RESERVOIR, OTHER THAN FOR FACILITY MAINTENANCE AND ARCHAEOLOGICAL ACCESS, FOR WHICH A MINIMUM ELEVATION OF 33 METRES APPLIES, BC HYDRO MUST:
   2.1. For the periods of February 15 to May 15 and October 15 to November 30 operate the works such that the minimum operating elevation is 39.5 metres.
   2.2. For the periods of May 16 to October 14 and December 1 to February 14 operate the works such that the minimum operating elevation is 41.08 metres.
   2.3. Provide priority to the flow conditions downstream from Ruskin in accordance with 1 above. In the event that insufficient water is available from Stave Lake Reservoir to maintain those flow conditions, Hayward Lake Reservoir may be operated to a minimum of 33 metres to support the provision of those flow conditions.

3. WITH RESPECT TO THE ELEVATION OF STAVE LAKE RESERVOIR, BC HYDRO MUST:
   3.1. For the period of May 15 to September 7 operate the Stave Falls Generating Station to achieve water levels in Stave Lake Reservoir of 76 metres or higher, and to be within an elevation band of 80 to 81.5 metres for 53 days or more.
   3.2. In the case of a conflict between the target elevations, described in 3.1 above, and the flow constraints downstream of the Ruskin generating station described in 1 above, give higher precedence to the flow constraints downstream from Ruskin.
   3.3. For purposes of the Stave River Archaeology Management Plan (June, 2002) developed by BC Hydro with the Kwantlen First Nation, not draft the reservoir below the minimum operating elevation stated in clause e) of Conditional Water Licence 117536 (73.0 metres) prior to receiving leave in writing from the Comptroller of Water Rights.

4. WITH RESPECT TO MAINTENANCE AND PROVISION OF RECORDS BC HYDRO MUST:
   4.1. Keep records of :
      a) daily elevations for Stave Lake Reservoir, Hayward Lake Reservoir and the Ruskin tailwater.
      b) plant loading at the Ruskin Generating Station to confirm block loading.
   4.2. Maintain the records kept in support of 4.1 a) and b) above for a minimum period of ten years.
   4.3. Provide a written report to the Comptroller of Water Rights on February 1 of each year summarizing the records from the previous calendar year.
   4.4. Provide on request of the Comptroller of Water Rights records collected under 4.1 a) and b).

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Foot note
1. All elevations are referenced to Geodetic Survey of Canada datum

# SCHEDULE B

## EFFECTIVENESS AND VALIDATION MONITORING

1. BC Hydro shall in consultation with Fisheries and Oceans Canada, the provincial fisheries agencies, Kwantlen First Nation and the District of Mission develop the terms of reference with a proposed schedule for a monitoring program with the following objectives:

   1.1. Determine the effectiveness of operating the works in accordance with Schedule A in attaining the expected benefits in the following areas:

   1.1.1. Stave and Hayward Reservoirs, with respect to:

   - Total Carbon production, macrophyte community and fish biomass in Stave Lake Reservoir; and
   - Periphyton and macrophyte biomass and production in Hayward Lake Reservoir.

   1.1.2. Downstream from Ruskin, with respect to:

   - High elevation spawning being deterred by peaking when the fall block load is equal to or greater than 100 cubic metres per second;
   - Adult stranding;
   - Fry stranding; and
   - High velocity deterring mid channel spawning.

   1.1.3. Hayward Lake Reservoir Water Quality, with respect to:

   - Changes to frequency or magnitude of turbidity events as a result of change in normal operating elevation of Hayward Lake Reservoir.

   1.2. Evaluate nutrient inflow to Stave Lake Reservoir to provide a better understanding of factors affecting whole lake productivity and relationship of any observed changes in 1.1.1 above with operational parameters set out in Schedule A.

2. On approval in writing by the Comptroller of Water Rights of the terms of reference for the monitoring program noted above, BC Hydro shall implement the monitoring program and submit information to the Comptroller in accordance with the terms of reference.

3. BC Hydro will prepare a report summarizing the monitoring data collected providing the following information:
   3.1. An assessment of how effectively operation of the works as specified in Schedule A has provided the anticipated benefits to the promotion of health and productivity of the Stave River system for fish, fish habitat and the ecosystem.
   3.2. A discussion of reservoir productivity addressing which measured changes (if any) in Stave Lake Reservoir noted in 3.1 may be attributed to regulation of the works as specified in Schedule A versus natural variation or other management activities. Additionally, discuss the implications for water management decisions in the future on Stave Lake and other reservoirs.
   3.3. A summary of any deviations from the ordered parameters and responses to those deviations.

4. Based on the results of studies conducted in accordance with the Stave River Archaeological Management Plan prepare a report which discusses how operations may be affecting archaeological resources within Stave Lake Reservoir, Hayward Lake Reservoir, and the Stave River downstream from the Ruskin Dam and whether the system parameters and operational procedures may be amended to better manage those archaeological resources.

5. The report prepared in 3 and 4 above will also provide a recommendation regarding the continued application, or amendment, of the values set for system parameters and operational procedures as set out in Schedule A.

# Province of British Columbia
## *Water Act*

**ORDER**

Section 88 of the
*Water Act* of British Columbia

**IN THE MATTER OF** Water Licence C117536, held by BC Hydro & Power Authority (BC Hydro), which authorizes the storage of 20,550 Acre Feet of water behind the Ruskin Dam and identified by Provincial Dam Number D410004.

**WHEREAS** BC Hydro has identified a number of dam safety and system reliability deficiencies including:

- Risk of piping failure of the right abutment,
- Seismically induced failure of the concrete piers and/or gates,
- Seismically induced failure of the powerhouse superstructure, and
- Reliability risks related to the age and condition of the powerhouse facility.

**WHEREAS** BC Hydro's strategy to address these deficiencies is to occur in two stages to better accommodate construction logistics with the implementation of Stage 1 to occur in 2009 and the implementation of Stage 2 at a later date.

**WHEREAS** the key component of the Stage 1 work on the Ruskin Right Abutment project includes:

- Construction of a reverse filter blanket and downstream sheet pile cut off wall to direct seepage to a French drain, and
- Flattening of the hillside above Wilson Street and the relocation of Wilson Street to accommodate future planned works at the right at the right abutment, concrete dam and powerhouse which is the focus of the larger Ruskin Program.

**WHEREAS** BC Hydro has submitted the following documentation prepared by a professional engineer registered in BC, to the Dam Safety Officer, Victoria:

- Request for Approval – Ruskin Dam Right Abutment Upgrade letter, dated February 24, 2009,
- Ruskin Dam Safety Right Abutment Upgrade – Stage 1, Notice to Comptroller of Water Rights memo, dated February 19, 2009,
- Fig. 1 – Plan of proposed Stage 1 work.

**WHEREAS** BC Hydro has requested authorization under the Dam Safety Regulation to proceed with the Stage 1 work on the Ruskin Right Abutment project.

**WHEREAS** a Dam Safety Officer has reviewed and accepted all information submitted by BC Hydro for the Stage 1 work on the Ruskin Right Abutment project.

.../2

**NOW THEREFORE,** I, Glen Davidson, 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 & Power Authority has authorization to proceed with the Stage 1 work on the Ruskin Right Abutment project subject to the following conditions:

- The Interim Dam Safety Risk Management Plan be forwarded to the Dam Safety Officer once developed by your project team.

Minor changes may be made if signed off by the Professional Engineer of record for the project.

Dated at Victoria, British Columbia this 26th day of February, 2009.

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

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# Province of British Columbia
## *Water Act*

**ORDER**

**Section 88**

of the

***Water Act* of British Columbia**

**IN THE MATTER OF** Water Licence C117533, C117535, and C117536, held by the British Columbia Power Authority (herein referred to as BC Hydro), which authorizes the storage and use of the water behind Ruskin Dam.

**WHEREAS** BC Hydro plans to make improvements at Ruskin Dam - Seismic Anchoring of Spillway Crest Block as an early risk mitigation measure as outlined in the letter dated June 4, 2007 from Clare Raska, P.Eng.

**WHEREAS** BC Hydro has submitted four plans:

Drawing No. 423-C21-D22 through 423-C21-D25 inclusive, and

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

**NOW THEREFORE,** I, Glen Davidson, 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 Seismic Anchoring of Spillway Crest Block – Ruskin Dam.

Dated at Victoria, British Columbia this 12th day of June, 2007.

Glen Davidson, P.Eng
Deputy Comptroller of Water Rights

WHEREAS, the Stave River Water Use Plan (Stave Falls and Ruskin Projects) includes values for parameters and procedures for the operation of the dams, reservoirs, and generation stations, which are intended to provide specific benefits for:

1. The viability of the Stave River system for fish, fish habitat and the ecosystem;
2. Recreational opportunities;
3. Protection and management of archaeological sites; and
4. Power generation;

WHEREAS, I have accepted the Stave River Water Use Plan (Stave Falls and Ruskin Projects) dated December 15, 2003;

WHEREAS, the licensee has proposed a monitoring program to determine if operating the works in accordance with the operating procedures in the Stave River Water Use Plan (Stave Falls and Ruskin Projects) will provide the above listed expected benefits; and

WHEREAS, clause i) of Conditional Water Licences 117530, 117531, 117532, 117533, 117535, 117536, and 117537 require the licensee to operate the Works in accordance with an order of the Comptroller that may set values for operational parameters and procedures;

I HEREBY ORDER THAT:

1. The works authorized under Conditional Water Licences 117530, 117531, 117532, 117533, 117535, 117536, and 117537 must be operated in accordance with Schedule A, the operating parameters.
2. The licensee must undertake a monitoring program as set out in Schedule B.
3. 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.
4. All emergency operations or other deviations from Schedule A set out in 1 above be reported to the Comptroller of Water Rights in a timely manner.

Dated at Victoria BC this 6th day of May, 2004

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

# SCHEDULE A
# OPERATING PARAMETERS

OPERATING CONDITIONS FOR THE STAVE RIVER HYDROELECTRIC PROJECTS

1. WITH RESPECT TO THE STAVE RIVER DOWNSTREAM FROM THE RUSKIN GENERATING STATION, BC HYDRO MUST:
   - 1.1. Discharge sufficient water from the Ruskin Generating Station to maintain a minimum tailwater elevation of:
     - 1.1.1. 1.8 metres[1] for the period of October 15 to November 30; and
     - 1.1.2. 1.7 metres at all other times.
   - 1.2. For the period of October 15 to November 30, when the discharge is less than 100 cubic metres per second, change the rate of discharge through the Ruskin Powerhouse only once over a seven-day period (weekly block loading). After each change the discharge must be greater than that of the previous seven-day period. Changes to discharge are to be conducted within a period of four hours or less.
     - 1.2.1. When the Ruskin Powerhouse discharge in the October 15 to November 30 period exceeds 100 cubic metres per second changing the rate of discharge is permitted on the condition that a minimum discharge of 100 cubic metres per second is maintained and the duration of each peaking event is less than 12 hours.
   - 1.3. For the period of February 15 to May 15, when the discharge is less than 100 cubic metres per second, change the rate of discharge through the Ruskin Powerhouse only once over a twenty-four hour period (daily block loading). Changes to discharge are to be conducted within a period of four hours or less.
     - 1.3.1. When the Ruskin plant discharge in the February 15 to May 15 period exceeds 100 cubic metres per second changing the rate of discharge is permitted on the condition that a minimum discharge of 100 cubic metres per second is maintained.
   - 1.4. In the event of a forced outage, re-establish the pre-outage flow as soon as possible, by spilling water if necessary, to maintain the block load flow or 100 cubic metres per second, whichever is lower.
   - 1.5. During the time periods specified in 1.2 and 1.3 above, decrease the rate of discharge at a rate not to exceed:
     - 1.5.1. 35 cubic metres per second per ten minutes when discharge is 100 cubic metres per second or less; and
     - 1.5.2. 113 cubic metres per second per thirty minutes when discharge exceeds 100 cubic metres per second.

2. WITH RESPECT TO THE ELEVATION OF HAYWARD LAKE RESERVOIR, OTHER THAN FOR FACILITY MAINTENANCE AND ARCHAEOLOGICAL ACCESS, FOR WHICH A MINIMUM ELEVATION OF 33 METRES APPLIES, BC HYDRO MUST:
   2.1. For the periods of February 15 to May 15 and October 15 to November 30 operate the works such that the minimum operating elevation is 39.5 metres.
   2.2. For the periods of May 16 to October 14 and December 1 to February 14 operate the works such that the minimum operating elevation is 41.08 metres.
   2.3. Provide priority to the flow conditions downstream from Ruskin in accordance with 1 above. In the event that insufficient water is available from Stave Lake Reservoir to maintain those flow conditions, Hayward Lake Reservoir may be operated to a minimum of 33 metres to support the provision of those flow conditions.

3. WITH RESPECT TO THE ELEVATION OF STAVE LAKE RESERVOIR, BC HYDRO MUST:
   3.1. For the period of May 15 to September 7 operate the Stave Falls Generating Station to achieve water levels in Stave Lake Reservoir of 76 metres or higher, and to be within an elevation band of 80 to 81.5 metres for 53 days or more.
   3.2. In the case of a conflict between the target elevations, described in 3.1 above, and the flow constraints downstream of the Ruskin generating station described in 1 above, give higher precedence to the flow constraints downstream from Ruskin.
   3.3. For purposes of the Stave River Archaeology Management Plan (June, 2002) developed by BC Hydro with the Kwantlen First Nation, not draft the reservoir below the minimum operating elevation stated in clause e) of Conditional Water Licence 117536 (73.0 metres) prior to receiving leave in writing from the Comptroller of Water Rights.

4. WITH RESPECT TO MAINTENANCE AND PROVISION OF RECORDS BC HYDRO MUST:
   4.1. Keep records of :
      a) daily elevations for Stave Lake Reservoir, Hayward Lake Reservoir and the Ruskin tailwater.
      b) plant loading at the Ruskin Generating Station to confirm block loading.
   4.2. Maintain the records kept in support of 4.1 a) and b) above for a minimum period of ten years.
   4.3. Provide a written report to the Comptroller of Water Rights on February 1 of each year summarizing the records from the previous calendar year.
   4.4. Provide on request of the Comptroller of Water Rights records collected under 4.1 a) and b).

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Foot note
1. All elevations are referenced to Geodetic Survey of Canada datum

# SCHEDULE B

## EFFECTIVENESS AND VALIDATION MONITORING

1. BC Hydro shall in consultation with Fisheries and Oceans Canada, the provincial fisheries agencies, Kwantlen First Nation and the District of Mission develop the terms of reference with a proposed schedule for a monitoring program with the following objectives:

   1.1. Determine the effectiveness of operating the works in accordance with Schedule A in attaining the expected benefits in the following areas:

   1.1.1. Stave and Hayward Reservoirs, with respect to:

   - Total Carbon production, macrophyte community and fish biomass in Stave Lake Reservoir; and
   - Periphyton and macrophyte biomass and production in Hayward Lake Reservoir.

   1.1.2. Downstream from Ruskin, with respect to:

   - High elevation spawning being deterred by peaking when the fall block load is equal to or greater than 100 cubic metres per second;
   - Adult stranding;
   - Fry stranding; and
   - High velocity deterring mid channel spawning.

   1.1.3. Hayward Lake Reservoir Water Quality, with respect to:

   - Changes to frequency or magnitude of turbidity events as a result of change in normal operating elevation of Hayward Lake Reservoir.

   1.2. Evaluate nutrient inflow to Stave Lake Reservoir to provide a better understanding of factors affecting whole lake productivity and relationship of any observed changes in 1.1.1 above with operational parameters set out in Schedule A.

2. On approval in writing by the Comptroller of Water Rights of the terms of reference for the monitoring program noted above, BC Hydro shall implement the monitoring program and submit information to the Comptroller in accordance with the terms of reference.

3. BC Hydro will prepare a report summarizing the monitoring data collected providing the following information:
   3.1. An assessment of how effectively operation of the works as specified in Schedule A has provided the anticipated benefits to the promotion of health and productivity of the Stave River system for fish, fish habitat and the ecosystem.
   3.2. A discussion of reservoir productivity addressing which measured changes (if any) in Stave Lake Reservoir noted in 3.1 may be attributed to regulation of the works as specified in Schedule A versus natural variation or other management activities. Additionally, discuss the implications for water management decisions in the future on Stave Lake and other reservoirs.
   3.3. A summary of any deviations from the ordered parameters and responses to those deviations.

4. Based on the results of studies conducted in accordance with the Stave River Archaeological Management Plan prepare a report which discusses how operations may be affecting archaeological resources within Stave Lake Reservoir, Hayward Lake Reservoir, and the Stave River downstream from the Ruskin Dam and whether the system parameters and operational procedures may be amended to better manage those archaeological resources.

5. The report prepared in 3 and 4 above will also provide a recommendation regarding the continued application, or amendment, of the values set for system parameters and operational procedures as set out in Schedule A.

# Province of British Columbia
*Water Act*

## ORDER
## *WATER ACT*
## SECTION 39

File Nos.: 76975-35/STAVE, 0045208, 0087939, 0241216, 0042437, 0265631, 2001975, 0036376, 0085236, 2001984

WHEREAS, British Columbia Hydro and Power Authority (BC Hydro) is the holder of Conditional Water Licence 117537 which authorizes the storage of water in Stave Lake Reservoir; Conditional Water Licences 117530, 117531, and 117532 which authorize the diversion and use of water for power purpose at the Stave Falls generating station; Conditional Water Licence 117536 which authorizes the storage of water in Hayward Lake Reservoir; and Conditional Water Licences 117535 and 117533 which authorize the diversion and use of water for power purpose at the Ruskin generating station;

WHEREAS, the works authorized by Conditional Water Licence 117530, 117531, 117532, and 117533, 117535, 117536, and 117537 (the Works) include:

- The Stave Falls Generating Station consisting of, Stave Falls and Blind Slough dams, approach channel, intakes, two tunnels, Stave Falls Powerhouse, tailrace channel, and tailrace protection berm; and
- The Ruskin Generating Station consisting of, a dam, intakes, tunnels and Ruskin Powerhouse;

WHEREAS, the operation of the Works can also benefit:

1. The viability of the Stave River system for fish, fish habitat and the ecosystem;
2. Recreational opportunities; and
3. Protection and management of archaeological resources;

WHEREAS, the licensee has engaged in a consultative process 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, titled the Stave River Water Use Plan (Stave Falls and Ruskin Projects), as per condition 14 of the July 10, 1995 disposition order (#20127) issued under the Utilities Commission Act, S.B.C, c.60;

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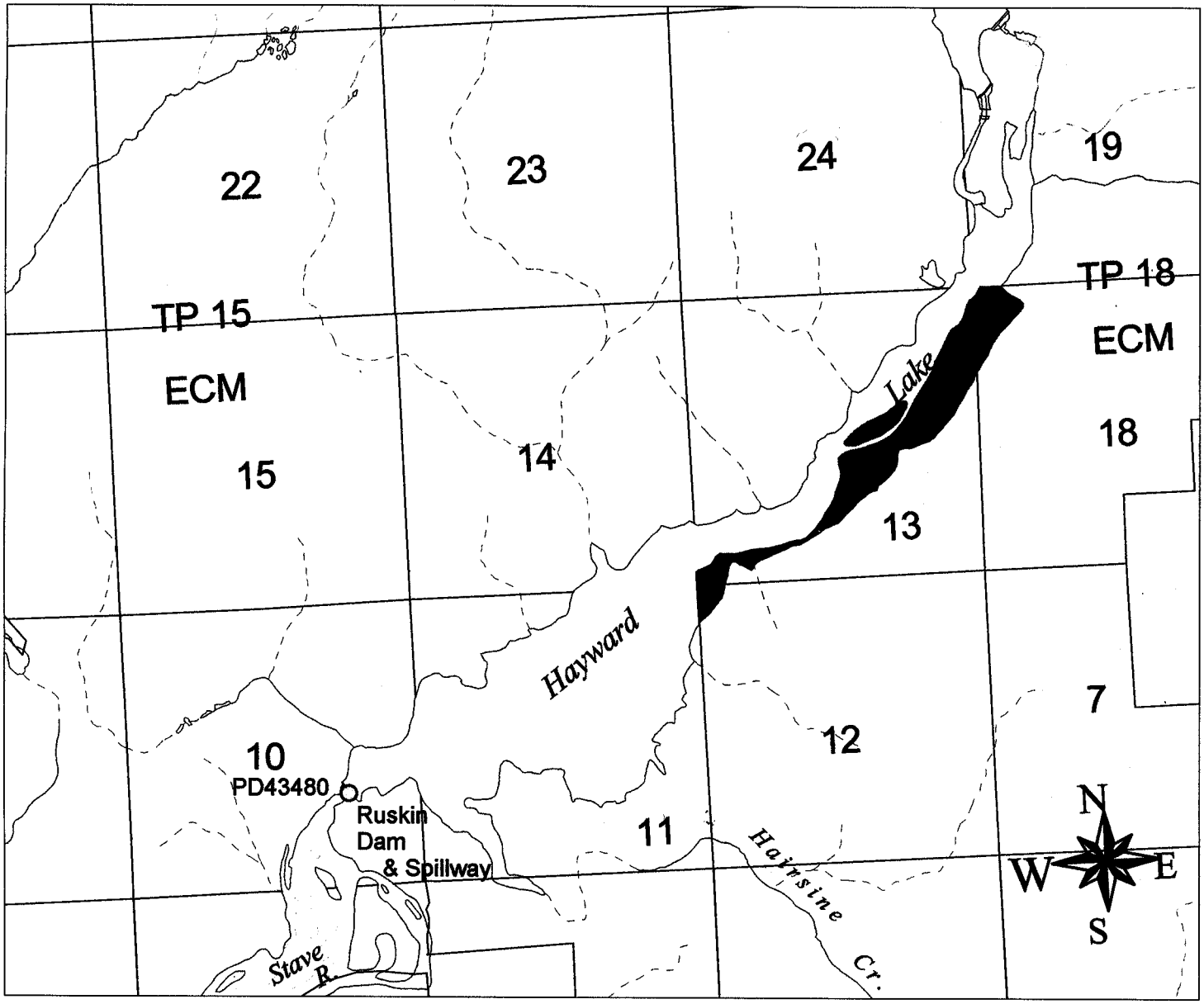


WATER DISTRICT: NEW WESTMINSTER
PRECINCT: MISSION
LAND DISTRICT: NEW WESTMINSTER

Signature: [signature]
Date: May 6, 2004

LEGEND:

Scale: 1:35,000
Dam: O
Map Number: 092G.018
Flooded Crown Land:

C.L.117536 for F.L.17615 in pt.
File 0036376
P.C.L. 24162