

**2021 Public Meeting Minutes**  
**International Kootenay Lake Board of Control (IKLBC)**

**Wednesday, September 22, 2021**  
**6:30 to 8:00 PM**

**Virtual GoToWebinar Platform**

**Attendance**

	<b>Canada</b>	<b>United States</b>
<b>Chair</b>	Dave Hutchinson (Host)	Col. Alexander Bullock
<b>Members</b>	Ted White	Kyle Blasch
<b>Secretariat</b>	Martin Suchy	Ken Brettmann
<b>IJC Commissioners</b>		Jane Corwin Lance Yohe Rob Sisson
<b>IJC Advisors</b>	Rob Caldwell	Adam Greely
<b>IJC Secretaries</b>	Christopher Wilke	
<b>Representatives</b>	Shannon Price (FortisBC) Gillian Kong (BC Hydro) Dan Egolf (FortisBC) Dale Ernst (FortisBC) Matt Casselman (BC Hydro) Steve Hope (FortisBC) Jeff Kart (IJC) Felicia Minotti (Global Affairs Canada)	

**1. Welcome, Introductions, Review of the Agenda**

Dave Hutchinson, Canadian Section Chair, opened the meeting at 6:30 pm and provided some welcoming remarks. Mr. Hutchinson then reviewed the meeting agenda, there were no changes. 27 attendees were present for the virtual meeting, in addition to 13 guests and representatives from the Applicant (Fortis BC), International Joint Commission, BC Hydro, and Global Affairs Canada.

## **2. International Joint Commission and Kootenay Order Context**

Mr. Hutchinson provided an overview of the International Joint Commission framework, responsibilities, and composition. He described the duties of the Kootenay Board, outlined the history of the Kootenay Lake Order of Approval, and referenced the geographic area of the Kootenay Basin. Mr. Hutchinson detailed the main provisions of the Order, including the historical dredging of Grohman Narrows, and explained the significance of Grohman Narrows control on Kootenay Lake levels vs. Corra Linn Dam control, which reduced peak lake levels on Kootenay Lake. Mr. Hutchinson also described the repayment of additional pumping costs to farmers in Idaho.

## **3. Hydrology and Compliance Summary 2021**

Mr. Suchy (Canadian Section Secretary) reviewed the Applicants IJC rule curve compliance and provided a 2020-2021 hydrology year-in-review. The past year was fairly benign hydrologically and Fortis BC did not have trouble meeting the Order requirements. There were no exceedances in the spring during the drawdown period. Minimum lake level was reached on April 1, 2021 (1,738.6 feet), Corra Linn Dam was controlling outflow from the lake at this time. The Board made the Spring Rise Declaration on April 21st, which triggered the rule curve to increase using the lowering formula. Except for a couple of days, Grohman Narrows was in control of lake outflows during the freshet period. Maximum lake level was reached on June 5th (1,743.3 feet).

Snowpack in the Kootenay basin was average to slightly above average at the onset of the freshet mostly because of a very wet and cooler than average February. Precipitation in other key snow building months, December, January, March, and April was mostly below average throughout the basin. Snow Water Equivalent (SWE) in the Kootenay Basin was about 110-120% of average in Canada and closer to average in U.S. A snowpack of 100-120% of normal is typically enough to present a flood threat, but not enough to guarantee a flood. In such a year, floods could happen because of intense heatwaves, and/or rain on snowmelt events. However, this year the basin was spared any flooding, with warm temperatures from April through July but very dry conditions during this period. An intense heat dome in late June resulted in record high temperatures throughout much of the basin for several days, but snowpack was sufficiently diminished by then such that rises in basin streamflow stayed below flood levels.

Mr. Suchy presented an updated plot of historical Kootenay Lake maximum and minimum levels before and after the construction of Duncan and Libby Dams. He indicated that the peak lake level continues to be significantly lower than in the past, due to the dredging of Grohman Narrows (1940's) and, more significantly, due to the construction of the two upstream Columbia River Treaty dams, Duncan (1967) and Libby Dams (1972). The addition of flood risk reduction storage at these dams has, on average, reduced the annual peak stage of Kootenay Lake by about 6 feet.

Ken Brettmann (U.S. Section Secretary) reviewed Libby Dam operations. Construction of Libby Dam was allowed per the Columbia River Treaty and is operated for multiple purposes that include hydropower generation, flood control, recreation, and ecosystem needs. The reservoir was drafted per the water supply forecasts over the winter and early spring, reservoir draft was consistent with the water supply forecasts that were close to average throughout the drawdown period. The minimum elevation of Lake Koocanusa was 2,401.02 feet on April 6, 2021. Maximum inflow was about 63 kcfs and maximum outflow was 25 kcfs as part of the sturgeon augmentation flows released from May 6 through June 3. A maximum reservoir elevation was reached on July 24 at 2453.9 feet.

#### **4. Board Projects**

Ken Brettmann described how at the request of the IJC, the Kootenay Board has undertaken an information review of the existing Kootenay Order of Approval, to provide a recommendation to the IJC regarding an Order review. The information paper is a literature and documentation review to determine the current and future water management issues in the basin and to determine if additional studies are necessary to close any information gaps. Key areas for review in the Paper are climate change, socioeconomic setting, agricultural impacts, Grohman Narrows hydraulics, ecological and fisheries concerns, and flood risk management. The Board had planned to have the Information Paper finished in 2020 but it is still undergoing Board review. The Board would like to complete their internal review and release it by the end of 2021.

Martin Suchy discussed a visualization tool that the Board is gearing up to create. The visualization tool will graphically depict the relationship between Kootenay Lake inflow, the Corra Linn forebay elevation, and Grohman Narrows control. The tool will be able to simulate this relationship under a variety of inflow conditions (wet, average, drought), pre and post dredging at Grohman Narrows, and a variety of Corra Linn outflow conditions (low, medium, high). The tool will be able to highlight what objectives are met or missed (i.e., Order compliance, power generation, ecosystem impacts). The tool will also be able to determine what constrains lake regulation (Corra Linn Dam or Grohman Narrows) and over what time periods. The tool will also be able to help the user understand the interaction of lake levels under differing inflow scenarios and dredging conditions. For next steps, the Board is seeking public participation to help with a project steering committee to ensure the tool is easy to understand and is functional. The Board is preparing a statement of work for a contract and will be engaging with a Contractor to build the visualization tool.

#### **5. Questions and Comments from Public**

**Question 1 (Ramona Faust):** Kootenay Lake levels are very low this year. There is concern with impacts to Kokanee shoal spawning, what are the managers doing to address this?

**IKLBC:** The lake is being managed per the Order, this helps to enhance spawning capacity. FortisBC and BC Hydro are managing the lake to enhance shoal spawning. The Board understands the concern, we need to see where this issue fits in our mandate, but this may be considered as a future area of study. This might also be an issue that could be raised to the B.C. Ministry of Forest Lands, Natural Resource Operations and Rural Development.

**Question 2 (Gerald Garnett):** Why do BC land surveyors use an ungaged designation for Kootenay Lake?

**IKLBC:** This is not related to the Board's mandate but instead likely better directed to the B.C. Ministry of Environment. The Board will contact the B.C. Government and look for the best agency to pass this question and concern on to.

**Question 3 (Joanne Siderius):** This is the third year that the lake level has been drawn down to accommodate Kokanee shoal spawning in a dominant year. Has this draw down provided benefits?

**IKLBC:** This is the fourth time that BC Hydro and Fortis BC have managed the lake to this level in the fall to benefit shoal spawners. The Board is also curious about the potential benefits of this operation. The Board can pass on an answer to you if we are made aware of any numbers regarding spawning activity.

**Question 4 (Garry Jackman):** A few years ago, some additional snow gauges were added to the Canadian portion of the basin. Do you think that more are needed?

**IKLBC:** The Board feels that there are an adequate number of gauges to meet the needs of the Board. Agencies that work with water supply might have a different need, but the Board is satisfied with the current number of gauges.

**Question 5 (Martin Carver):** Is the Information Paper intended to inform Columbia River Treaty negotiations?

**IKLBC:** No, it is only intended to inform a review of the 1938 Kootenay Lake IJC Order and inform the need for potential studies associated with a review of the Order. The Information Paper is not being used for Columbia River Treaty negotiations.

**Question 6 (Martin Carver):** Once it is complete, when will the Information Paper be released to the public?

**IKLBC:** It will be released once it is complete. We expect that it will be complete by the end of the current calendar year.

**Question 7 (Ed Kinakin):** Has dredging Balfour Narrows affected lake levels and to what impact?

**IKLBC:** The Board doesn't have any information on this as this is not within the purview of the Board. The Board will look for any relevant information and pass it on if it is available.

**Question 8 (Martin Carver):** Is there renewed interest in carrying out additional dredging at Grohman Narrows?

**IKLBC:** BC Hydro looked at this recently, but it was solely from the lens of impacts to power generation. The Board is interested in this question, we expect that this question will be part of the gap analysis as it relates to the Information Paper.

**Question 9 (Garry Jackman):** A few years ago, BC Hydro did a study to look at how further dredging of Grohman Narrows could allow more water to be passed downstream to help manage Kootenay Lake levels. This created some apprehension among downstream residents. The visualization tool could help inform the public in this regard.

**IKLBC:** This is more of a comment rather than a question. The Board is looking for interested citizens to help guide the visualization tool, please let us know if you would like to serve in this capacity.

**Question 10 (Ed Kinakin):** What impact is there to the Kootenay canal to the Corra Linn and Grohman Narrows calculated models?

**IKLBC:** The question appears to be if there were changes to Grohman Narrows what would the impacts be to the Kootenay canal? If there were changes proposed, BC Hydro would need to do modeling to assess the impacts. Until the parameters are known regarding what the changes might be at Grohman Narrows, we can't answer this question.

**Question 11 (Linda Worley):** Has any consideration been given to the large fluctuations in water levels in the Columbia River downstream of the confluence with the Kootenay River? Large fluctuations in the water level on a weekly basis have negatively impacted the fishery along this reach.

**IKLBC:** Water levels downstream of Kootenay Lake are outside of the mandate of the Kootenay Board. This question would be better directed either to the Columbia River Treaty parties or to BC Hydro regarding operations on the mainstem Columbia River.

**Question 12 (Rocky Jameson):** I have lived in the area since 1969 and have witnessed the disappearance of much shore life. Is there a way to slow or minimize water level fluctuations? I understand the need to drop water levels, but does it have to drop as low as it does now?

**IKLBC:** The area noted is just upstream of Corra Linn dam. Water levels in this area are closely tied to operations at Corra Linn dam in terms of their operations for power production and following the Order. Additionally, we are experiencing very dry conditions, the lake is at a historical low due to lack of inflow, hopefully the return of rain this fall will help.

**Question 13 (Ramona Faust):** We are quite interested in the question by Mr. Garnett about accretion. Can you share information with the RDCK as we are directly impacted by accretion.

**IKLBC:** Thanks for the extra detail on this, we will pass it on to the BC Ministry of Forest Lands Natural Resource Operations and Rural Development.

**Question 14 (Cindy Pearce):** How will local governments and residents be included in Order review? What role will indigenous nations have?

**IKLBC:** The Board is still considering how to do this. IJC encourages public involvement and first nations input. This doesn't have to be at the Board level, we are looking at options that may include advisory boards. Thanks for the question, we are still looking at how this input could be included in the Board's process. Also, coming to public meetings as well as providing input to the Board Secretaries via email is a good option for providing input.

## **6. Adjourn**

Dave Hutchinson thanked those in attendance and adjourned the meeting. Col. Bullock also thanked the public for taking time from their busy schedules to attend an evening. He thanked people for their input and concerns and mentioned that if they are aware of underrepresented voices, please encourage them to contact the Board Secretaries or show up at the next public meeting.

## **7. List of Public Attendees**

- James Barton
- James Baxter
- Martin Carver
- Ramona Faust
- Brandon Haney
- Gregory Hoffman
- Garry Jackman
- Rocky Jameson
- Emmanuelle Johnston
- Janet Jonker
- Ed Kinakin
- Gerry Mackinson
- Brian Magaton
- Cindy Pearce
- Ronald Planiden
- Dava Prosser
- Tom Ramsey
- Sharon Ramsay
- Bruce Ramsay
- Carol Ryan
- Timothy Schafer
- Joanne Siderius
- Sudan Sangita
- Dean Watts
- Linda Worley
- B. Johnson
- Aimee Watson