

Meeting Minutes

2019 Annual Tour and Board Meeting, International Kootenay Lake Board of Control (IKLBC)

Thursday, September 19, 2019
Tour: 7:45 AM to 12:30 PM
Board Meeting: 2:00 to 4:30 PM

Visitor Information Centre, Nelson, British Columbia

	United States	Canada
Chair	Colonel Mark Geraldi (Remote Attendee)	Bruno Tassone (Host)
Members	Kyle Blasch	Ted White
Secretariat	Kevin Shaffer	Martin Suchy
IJC Commissioners	Lance Yohe	
IJC Advisors	Mark Colosimo	Wayne Jenkinson
Guests	Paul Allen (International Joint Commission, Canadian Section), Dale Ernst (Fortis BC), Caron DeMars (International Joint Commission, United States Section), Adam Greeley (International Joint Commission, United States Section), Dave Hutchinson (Environment and Climate Change Canada), Gillian Kong (BC Hydro), Felicia Minotti (Global Affairs Canada), Shannon Price (Fortis BC), Doug Walker (United States Department of State)	

IKLBC Board Tour Summary

Board members visited the Fortis BC Operations Centre in Castlegar, British Columbia. The tour was led by Dale Ernst, System Operations Manager, and Wayne Gritchlin, Power System Supervisor. The facility opened in 2017 and is utilized by Fortis BC to operate and monitor power generating facilities on the Kootenay and Pend Oreille Rivers. Transmission operators also control and monitor distribution ties with customers from the centre. Corra Linn Dam gates can be operated remotely from the centre, as well as at the dam site. Generation at Corra Linn Dam is dispatched under an operating agreement by BC Hydro, while Fortis BC makes decisions on flows and choice of generating units to meet the generation requests. The Kootenay Lake Operating Order specifies the Kootenay Lake Order of Approval and both Fortis BC and BC Hydro monitor dam operations for compliance with the Order. Mr. Ernst indicated that the general operation during the spring freshet is to operate Corra Linn on freefall, to ensure maximum outflow from Kootenay Lake.

Board members visited Corra Linn Dam. The tour was led by Mr. Ernst and Darren McElhinney, Dam Upgrade Project Manager. Spillway gate replacement was underway at the damsite, with concrete work and construction of a gantry crane occurring at the time of the tour. The project consists of replacing all fourteen spillway gates, reinforcing the hoist superstructure, and upgrading associated components. The work was driven by new seismic requirements and the age of the gates, which are original from 1931. At the time of the tour, workers were preparing to pull the initial three spillway gates for replacement. The number of gates being refurbished at once may be revised as the project progresses. The schedule for the work at the time of the tour was through September 2021.

Board members visited the Grohman Narrows area on the West Arm of Kootenay Lake. Kevin Shaffer, United States Kootenay Board Secretary, provided an overview of the expansion of Grohman Narrows that occurred under the Order of Approval and how the dam, the narrows, and the flow into the lake combine to influence the level of Kootenay Lake. Mr. Shaffer noted that under low lake level and/or high inflow conditions, the narrows becomes the limiting factor on how much water can be released from Kootenay Lake. Under these conditions, the expanded Grohman Narrows provides additional outflow capacity and allows for a lower peak lake level.

IKLBC Board Meeting

1. Welcome and Introductions

The meeting was opened at 2:00 PM by Bruno Tassone, Board Co-Chair, Canadian Section, with welcoming remarks and introductions of the board members and Lance Yohe, IJC Commissioner, United States Section, who was in attendance. Mr. Tassone introduced his successor, Dave Hutchinson, Environment and Climate Change Canada, who was to join as Canadian Co-Chair beginning in November 2019.

2. Agenda

The draft agenda was reviewed and accepted.

3. Overview and History of IKLBC and IJC Order

Mr. Tassone provided an overview of the Columbia and Kootenay River basins, including major rivers and dams. Mr. Tassone also provided a history of the Kootenay Lake Order and explained that the Boundary Waters Treaty applied due to the backwater effect from Kootenay Lake into the Kootenai River valley in Idaho. Mr. Tassone described the provisions of the Order of Approval: the one-time expansion of Grohman Narrows in the 1940s, the seasonal lake rule curve and the reduction of lake levels during the freshet, and repayment from the Applicant to agricultural interests in Idaho to help offset increased pumping costs for land drainage.

4. Hydrologic Conditions

4.1 Compliance with IJC Order in 2019

Martin Suchy, Canadian Secretary, reviewed the IJC rule curve and the 2018-2019 hydrology year-in-review. Fortis BC met Order requirements, despite a rule curve exceedance due to high

natural runoff in late-April. The Board determined that this was not a violation of the Order since Corra Linn Dam was in freefall during this time. The Board declared the commencement of spring rise shortly thereafter, on April 24, 2019, ending the rule curve exceedance.

Water Year 2019 was a below-average water supply year with an early snowmelt runoff. The basin experienced near-normal snowpack accumulation into February, followed by minimal snowpack accumulation in the late-winter and early-spring. The middling snowpack mitigated flood risk in the Kootenay Lake basin, though the basin was still susceptible to flooding depending on temperature and rainfall patterns. The spring was warm and unseasonably dry, alleviating most flood risk.

Mr. Suchy shared historical annual maximum and minimum lake levels. Mr. Suchy indicated that the peak lake levels continue to be significantly lower than in the past, due to the expansion of Grohman Narrows and, more significantly, due to the construction of the two upstream Columbia River Treaty dams, Duncan and Libby Dams.

4.2 Libby Dam Conditions

Kevin Shaffer, United States Secretary, reviewed Libby Dam operations. Libby Dam was drafted over the winter to levels determined by the snowpack and forecasted spring/summer runoff. The minimum elevation of Lake Kooconusa was 2,405.7 feet on March 26, 2019. This was a relatively high minimum reservoir level for Lake Kooconusa. Water was released in late-May through June for augmentation for endangered Kootenay River white sturgeon populations. Due to the low late-season snow accumulation and dry spring, the maximum elevation of Kooconusa Reservoir was relatively low, reaching elevation 2,442.4 feet on August 20, 2019.

4.3 Update from Applicant & Corra Linn Spill Gate Project

Shannon Price, Fortis BC, provided a review of Corra Linn Dam operations. Kootenay Lake reached a minimum elevation of 1,738.5 feet on April 5, 2019, and a maximum level of 1,746.3 feet on June 4, 2019. The peak lake elevation was relatively low, compared to recent years.

Ms. Price noted that preventative maintenance is performed on Corra Linn Dam twice, annually, and was last completed in June 2019. Ms. Price also noted the receipt of several emails with concerns about low water levels in April, exposing shoal spawning kokanee eggs. Ms. Price indicated that lake level had been held lower in October and November to encourage kokanee shoal spawning to occur at lower elevations.

Ms. Price reviewed progress of the Corra Linn Spillway Gate Replacement Project. At the time of the meeting, Ms. Price indicated the project was on track for substantial completion in the third quarter of 2021. Engineering design was substantially complete, the first cofferdam was installed, concealed components on three spillway gates had been inspected, and gates 9 through 14 were expected to be replaced over the next 12 months.

4.4 BC Hydro Update

Gillian King, BC Hydro, presented an overview of BC Hydro Columbia River system operations and the Columbia River Treaty. Ms. Kong noted that under the current treaty, after 2024, Canada will continue to provide a minimum amount of flood protection ("Called-Upon Flood

Control”) for the United States. The Canadian receipt of 50 percent of the calculated United States flood benefit will continue as long as the current treaty is in effect. The two countries have been holding Columbia River Treaty re-negotiating sessions, approximately every 2 months, since spring 2018.

Ms. Kong reviewed Duncan Dam operations. As is typical, the reservoir was drafted to near-empty and refilled to near-full in the summer. The reservoir drafts some in the late-summer, drafts minimally in the fall during kokanee spawning, and then completes the draft in the winter upon the completion of kokanee spawning. The maximum reservoir elevation was 1,891.3 feet, on August 2, 2019. July rainfall enabled the reservoir to reach the targeted fill elevation.

Ms. Kong provided an update on Kootenay Lake operations. BC Hydro directs water management at Corra Linn Dam and the Kootenay Canal, under an operating agreement with Fortis BC. Ms. Kong noted that 2018 was expected to be a peak kokanee shoal spawning year, so Kootenay Lake was operated to be stable in mid-September through mid-October 2018 to protect spawning in the West Arm of Kootenay Lake. Ms. Kong suggested that this was an effective operation, but that it does not eliminate kokanee redd dewatering. Observations of redd dewatering in spring 2019 have raised the focus on the kokanee shoal spawning operation. Ms. Kong indicated that BC Hydro is working with Fortis BC to review the operation. Ms. Kong also noted that in some recent years, Kootenay Lake has not reached the minimum rule curve level in advance of the spring freshet, likely due to rain and early runoff. Kyle Blasch, United States Board Member, suggested that the lake should not have an unattainable rule curve and Mr. Tassone suggested that a solution could be an earlier draft of the lake. Mr. Blasch inquired what the rule curve would look like to operate to a new climate regime with low snowpack, increased rainfall, and earlier snowmelt runoff.

5. Business Items

5.1 Public Correspondences

Mr. Suchy reviewed a public enquiry regarding minimum lake levels in the summer and fall for Kootenay Lake. The response from the Canadian Secretary was that the rule curve for Kootenay Lake was specifically a maximum allowable lake level, with no minimum specified.

5.2 Review of Kootenay Work Efforts

Mr. Blasch described an effort by the Bonneville Power Administration and the Kootenai Tribe of Idaho to restore sturgeon and burbot populations in the Kootenai River. The United States Geological Survey is performing geomorphic surveys on both sides of the border to support restoration and biological monitoring by identifying areas which are suitable for beneficial fish habitat.

Mr. Blasch indicated that studies by the United States Geological Survey found increasing Selenium and Nitrate entering into Lake Kooconusa, behind Libby Dam, and that increased Selenium levels were found in biological tissue sampling in the Kootenai River downstream of Libby Dam. Mr. Tassone stated that the Board does not have a water quality mandate from the International Joint Commission, but that the issue would be brought to the Commission for awareness.

5.3 Kootenay Order Review – Information Paper

At the request of the Commission, the Kootenay Board has begun the process of gathering regional information with implications on transboundary water issues in the Kootenay Basin. The Board plans to coalesce the information into an information paper describing current and potential future transboundary water issues on Kootenay Lake, including topics within and outside of the Board's mandate. The intent is for the Board to use the information to communicate a position to the Commission whether updates are recommended for the Kootenay Lake Order. The United States Army Corps of Engineers has contracted with a consultant to support the preparation of the information paper, which is expected to be completed in the fall of 2020. Mark Colosimo, United States Engineering Advisor, International Joint Commission, expressed that the one-year timeframe to gather and coalesce the information should ideally be shorter. Colonel Mark Geraldi, Board Co-Chair, United States Section, stated that the documentation should be completed, but that it may not be ideal to make recommendations until the outcome of the current Columbia River Treaty negotiations is known. Wayne Jenkinson, Canadian Engineering Advisor, International Joint Commission, questioned what the appropriate method would be to determine future issues on Kootenay Lake. The approach of the contracted effort is to engage regional stakeholders for input on both sides of the border, in addition to reviewing existing documentation.

5.4 Development of 2020-2021 Work Plan

Mr. Suchy reviewed the previous Board Work Plan items. Completed items included posting of information on factors influencing river and lake levels in Porthill, Idaho, and Queens Bay, Kootenay Lake. The development of a basin map for use in public presentations and reporting was also completed. Ongoing efforts in addition to the information paper, above, included tracking the spillway gate replacement at Corra Linn Dam, incorporating regional climate change information into Board efforts such as the information paper, and creating a visualization tool to help describe Grohman Narrows and the alternating control on the Kootenay Lake level between Corra Linn Dam and the narrows. Regarding the visualization tool, Environment and Climate Change Canada personnel and Mr. Jenkinson will assist the Board with the development. Mr. Jenkinson inquired about local groups who could be engaged to help define the need for the tool and Mr. Tassone suggested working closely with BC Hydro. Mr. Suchy indicated these revised efforts and priorities would be incorporated into a new 2020-2021 Work Plan for the Board.

6. Round Table

Mr. Suchy asked whether additional Board meetings would be beneficial during the year. Mr. Tassone and Mr. Blasch indicated their support, and Mr. Blasch also expressed a desire to increase communications with the agricultural community in Idaho.

7. Preparation for Public Meeting

Mr. Tassone reviewed the schedule, location, and presentation planned for the evening's public meeting.

8. Adjourn

Mr. Tassone adjourned the meeting at 4:40 PM.