

Meeting Minutes

Annual Public Meeting, International Kootenay Lake Board of Control (IKLBC)

Thursday, September 22, 2016
7 - 9 PM

Best Western Kootenay River Inn, Bonners Ferry, Idaho

List of Acronyms

IJC	International Joint Commission
IKLBC	International Kootenay Lake Board of Control
PCIC	Pacific Climate Impacts Consortium
USGS	U.S. Geological Survey
USACE	US Army Corps of Engineers

IKLBC 2016 Annual Public Meeting

Attendance

	Canada	United States
Chair	Bruno Tassone (Host)	Col. John Buck
Members	Glen Davidson	Kyle Blasch
Secretariat	Gwyn Graham	Sara Marxen
IJC Commissioners	Richard Morgan	Rich Moy
IJC Advisors	David Fay	Mark Colosimo
Guests	Jamie King (FortisBC), Chris Frans (USACE)	

Welcome, Introductions, Review of the Agenda

United States Section Chair Col. John Buck opened the meeting with welcoming remarks and an introduction of the Board and a roundtable introduction of audience members (16 participants, including 3 IJC representatives, 2 IJC Commissioners, and 2 FortisBC staff).

Col. Buck presented an overview of the IJC (composition, roles and activities) and the IKLBC (roles & responsibilities). Col. Buck also provided an overview of the IJC Order for Kootenay Lake, explaining the conditions of the Order and explained the significance of Grohman Narrows control on Kootenay Lake levels vs. Corra Linn Dam control on lake levels, indicating that when the dam is in "free fall" mode, the control point shifts to Grohman Narrows. Col. Buck reviewed water level management on Kootenay Lake to date and indicated where an exceedance of the IJC rule curve occurred in late March and early April, partially due to increased Libby discharges. Col. Buck explained that the Applicant was still in compliance since they were

operating in free fall mode and not creating any additional backwater effect through their operations.

Chris Frans (USACE) presented on climate change effects in the Kootenay River Basin. He began with an overview of the long-term atmospheric CO₂ trends. This was followed by an explanation of the Global Circulation Models and the process of downscaling the global temperature and precipitation projections to local/regional climate models that can be then used in hydrologic models to simulate the effects on stream flows. Chris provided an overview of the potential effects of climate change on the Kootenay River Basin using results of analysis by PCIC. The projections show an increase in winter flows due to precipitation falling as rain rather than snow along with an earlier freshet with lower peak flows in the 80 year time horizon. Additional studies are being conducted by RMJOC (Phase II) and BC Hydro/PCIC.

Question (Kaslo resident): Will you present an update with 2016 data at next year's meeting?

Chris' Response: This year was a wet and somewhat unusual year. We will probably have opportunities to present updated information and whether it has some correlation with climate change predictions in coming years.

Question (Queen's Bay resident): Can you provide a clarification of rain vs. snow (e.g. will there be in the future (less snow/more rain?).

Chris Response: Chris explained, that mid to lower elevations will probably see more rain than snow in the winter but higher elevations may continue to see snow in the 40-year horizon. In the longer term however (80-years) snow pack is expected to decrease; this will change run-off/freshet patterns, creating more inflow during the winter and possibly lower peak freshet flows in the future.

Question (Bonners/emergency management): He noted that historic ice age CO₂ plots showed peaks and valleys, will we see a valley after the current peak? Is a valley possible/probable?

Chris Response: Some minor natural variability is possible but not to a significant degree unless we significantly slow down the amount of CO₂ being released to the atmosphere. The time frame for the historical data showed variability over very long time frames and not necessarily annual variations.

Question (Kaslo resident): Carbon ends up in wood/trees – how many trees could use up carbon.

Chris Response: This is an active area of study, deforestation and reforestation estimates are built into the models but I can't provide specific answer to that question at this time.

The Board sought further public questions/comments.

Question (Queen's Bay resident): Has lived on Kootenay Lake for 40 years, and notes that many residents see Kootenay Lake as a natural lake. Overall those controlling water levels do

a good job of managing lake levels to maintain the natural integrity of the lake. A current issue on the Queen's Lake/Balfour area is the possible relocation of a ferry terminal to Queen's Bay, which is a shallow, public recreation area. Resident noted there is evidence on the hull of the ferry that it may be scouring shoals on the current approach to the Balfour dock. Resident understands the IKLBC mandate limits maximum water levels. Resident is concerned the Ferry might not have been properly designed for the lake environment. The B.C. MOT is currently engaging in consultation phase. There are a lot of different theories around why ferry terminal change is being considered. Some people say they've found maps that refer to Kootenay Reservoir (not Kootenay Lake). Another is the possibility of a relation to Columbia River Treaty ("CRT") and intentions to manage to the lake for U.S. water supply, etc.

How does the IJC Order relate to the CRT and how could it be considered in possible changes to the CRT?

Board Response: Thanks for bringing these issues to our attention. No specific information to provide regarding the ferry at this time – the board was not aware of these issues regarding the ferry terminal move. The CRT can be terminated in 2024 but if it is not terminated it continues with some modification to flood control provisions. It is also possible for it to be modified if both countries so desire.

Question (Queen's Bay resident): Is IJC Order subordinate to other rules (such as the Columbia River Treaty)?

Board Response: Corra Linn was built first and the order and Boundary Waters Treaty predates the Columbia River Treaty (CRT) and is not subordinate. Both Treaties (boundary vs. CRT) operate for different purposes. The Board did look into the relationship between the Order and the CRT and didn't identify a jurisdictional role for the IJC Order regarding the CRT. The CRT considers the IJC Orders and feels that operations of upstream Treaty dams are consistent to achieve flood risk reduction on Kootenay Lake.

Additional Board Response: The IJC doesn't have involvement in the CRT.

Bruce Freeman (Kaslo) comment: Thanks for interesting and informative presentations.

Question (Kaslo resident): Each year on the Victoria Day long weekend, Kaslo runs May Days celebration/event and a two-day National loggers festival. The organizers are never sure if the lake will rise wiping out loggers-fest which is a large event now (top 4 logger sport events in Canada). People come from all over Pacific Northwest and across Canada to participate. This event is held near the lakeshore, as a result there is no certainty re. high water impacts (1750 feet threshold at Queens Bay). Annual high water always seems to be within a week of May long weekend; can water management efforts help ensure sufficiently low conditions to ensure success of event or at least help us to know if we will be inundated and have to cancel the event?

Board Response: The board referred to 2016 hydrograph for Kootenay Lake. Showed how Grohman Narrows constrained lake outflow and affected lake levels. The board

expressed that it is difficult to predict and not possible to control the freshet timing and peak. Downstream and upstream dams operate to mitigate flood risk but the level of Kootenay Lake is controlled by a natural constriction and the magnitude of inflows.

Bruce Freeman (Kaslo): Is there a way to forecast Kootenay Lake levels and provide advance info?

Jamie King (Fortis BC): Jamie confirmed there is no way to control the Lake during May as the lake is constrained by Grohman Narrows. Fortis website shows hourly water level updates. Jamie provided contact info so that he can be contacted personally for current conditions and questions.

Board Response: There are forecasts (with some uncertainty) that could provide some indication of whether lake levels may exceed the elevation of interest.

Bruce Freeman (Kaslo): Can the water be lowered further before high water to limit rise during this time?

Board Response: No, this is not currently possible. If Grohman Narrows was further excavated that could change somewhat, but there are no plans to do this (by BC Hydro or other entities).

Board Response: The board referred to the plot of extreme (high/low) water levels over time (since 1930s).

Bruce Freeman (Kaslo): Resident expressed that he remembered when lake used to flood more actively (pre-CRT)

The Board thanked everybody and adjourned meeting at 8:15 pm.