

**Minutes**

**International Kootenay Lake Board of Control  
Annual Board Meeting**

**Kootenai River Inn  
7169 Plaza Street  
Bonners Ferry, Idaho**

**Thursday, September 30, 2010  
2:30 – 4:30pm**

Prior to this meeting, Board members visited Kootenai Tribal Hatchery.

**Attendees:**

|           | <b>United States</b>  | <b>Canada</b>  |
|-----------|---|----------------|
| Chair     | Colonel Anthony Wright (host)   | Kirk Johnstone |
| Members   | Steve Lipscomb (absent)   | Glen Davidson  |
| Secretary | Amy Reese   | Daniel Millar  |
| Guests    | Irene Brooks (IJC Commissioner - USA), Dr. Mark Colosimo (IJC), Marko Aaltomaa and Jamie King (Fortis BC), Dwain Boyer (Environment BC), Amy Stevenson, BC Hydro. |                |

**Minutes**

**Welcome and Introductions**

Chair Colonel Anthony Wright welcomed and led introductions of the board members and guests.

**Review of the Agenda**

The agenda was approved without addition.

**Business from the Previous Meeting**

**Spring rise objective declaration method**

Col. Anthony Wright reviewed the spring rise objective declaration – The Columbia River Treaty Operating Committee had voluntarily suggested an alternative method for spring rise declaration. This alternative method was discussed at last year’s meeting, and the CRTOC was considering revising their analysis. Jim Barton indicated that their spring rise declaration paper has been revised and it’s under

review, with the goal of completing it before this meeting. Board consensus is that there is no requirement for the board to do action on this at this time.

#### **Upstream dam operation relative to Order**

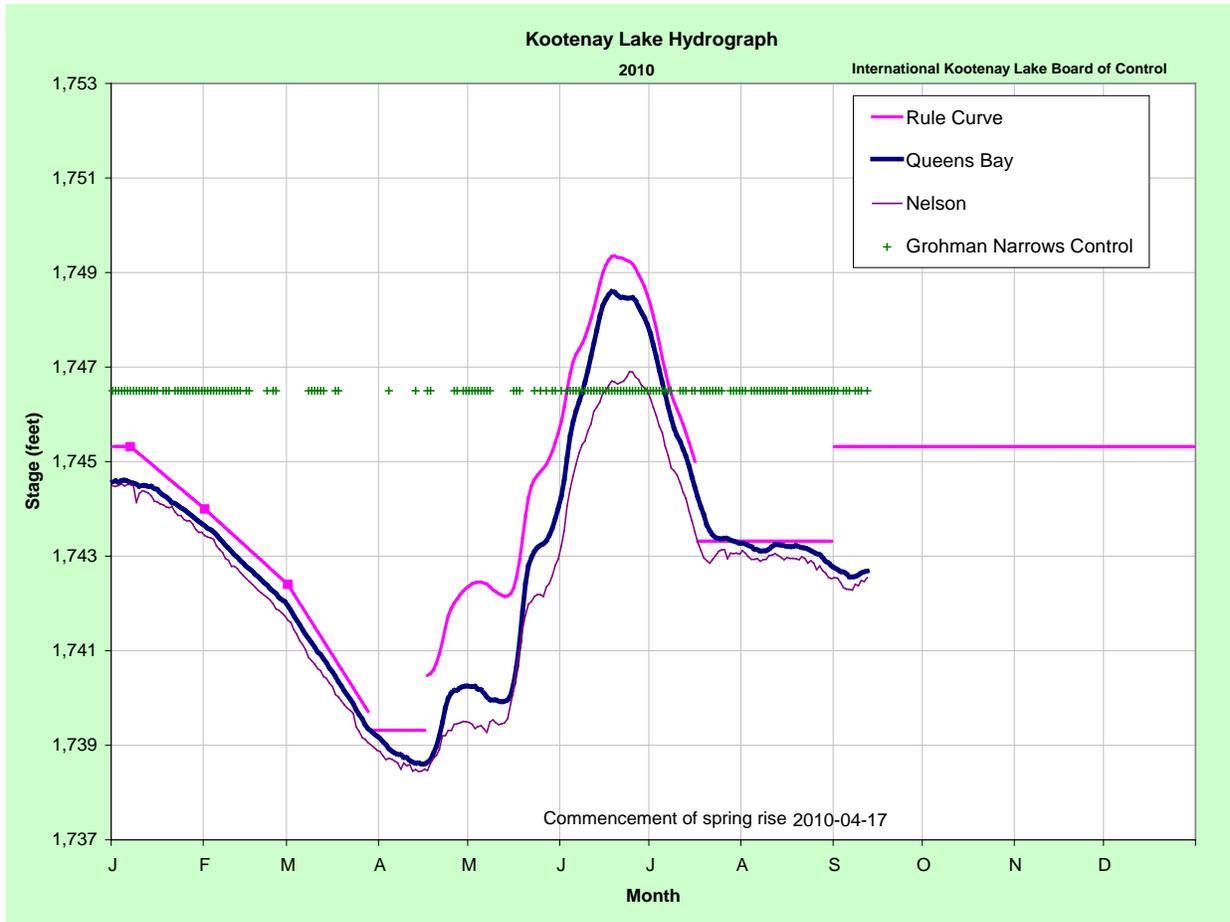
Col. Anthony Wright : This is another revolving discussion – Colonel Wright had received a status report from Mr. Jim Barton. CRTOC is continuing to evaluate options on upstream dam operations. Kirk Johnstone asked whether or not the CRTOC is trying to sort out upstream dam operations independent from the Kootenay Lake Board. In his mind, if they come to a concurrence, then that would be final. Col. Wright concurred: they initially thought we would adjust our procedures for the Columbia River Treaty, but we had the opposite opinion. It sounds like they are sorting it out themselves and are going through the procedure. They also understand that their determination won't authorize them to change how Kootenay Lake is operated under the Order.

No further discussion.

#### **New Business**

##### **Compliance with the Kootenay Order 2010 (Dan Millar)**

Dan Millar described the Kootenay Lake rule curve and WY 2010 lake level operations. The declaration of spring rise occurred on April 17<sup>th</sup>, 2010. The Queens Bay and Nelson hydrographs indicate that the lake has stayed below the allowable level all year



Johnstone and Millar pointed out that the hydrograph has been set up to indicate the control point of the lake level, whether it is at Grohman Narrows or at the Dam. The green x's on the chart are days that the flow is controlled by Grohman Narrows. This is pertinent for when the water level rises above the rule curve. Most days the control it is very close to a balanced condition between the two control points. Col. Wright pointed out that it would also be interesting to designate whether there is considerable difference between the two – and we can think about the threshold of significance. It isn't really significant unless there is some degree of magnitude in the difference. Millar said he can work on the spreadsheet and plot magnitude if the Board would be interested.

DO-OUT: Dan Millar will work out a way to designate the magnitude of difference between control from the Dam and control by Grohman Narrows. Dan will also work with Fortis BC to have them QA/QC Dan's work. Marko Aaltomaa agreed that he would be able to do this.

### Fortis BC Operations 2010

Aaltomaa (Fortis BC): For fall 2009, held Kootenay Lake roughly at the post-freshet elevation 1743.32 feet on the Nelson gage through September to ensure lowest depth for kokanee spawning. This operation was agreed upon by BC Hydro, Fortis, Columbia Power Corp. The basin was dry in October so it was hard to fill Kootenay Lake, didn't start to fill until Libby releases increased in December.

Johnstone: Were we getting complaints on of low lake levels? Aaltomaa: we got the usual calls about lake level planning. In general, Marko didn't feel there was a high concern.

During the spring there was no problem drafting the lake. On March 29<sup>th</sup>, Kootenay Lake dropped below elevation 1739.32. By Mid-May and mid-June, higher precipitation made up for low snowpack and inflow came up.

Kootenay Lake elevation reference switched to the Nelson gage on July 17<sup>th</sup>

Aaltomaa reported that this was the third year in a row Fortis was able to "empty" Kootenay Lake. 1738.5 feet is considered empty. (Historically it was 1738.0, but this affected habitat and ferry operations at Glade).

Due to the low snow pack last winter, Fortis BC did not operate Corra Linn discharge to the maximum during spring fill since they did not project the peak Kootenay Lake elevation over 1749.5, which is a limit below which we do not expect any property damage. They don't operate that way very often. BC Hydro provides forecast information to Fortis BC.

Water Gage Maintenance – preventative maintenance on the water gage is done twice/year. Preventative maintenance completed in October, 2009 and June, 2010.

Dive inspections of the recorder well intakes were performed in Oct 2009. Everything looked good, some minor repairs made to pipe weights at Nelson.

Fortis BC plans to install safety fencing and signage at the Queens Bay gage in 2010.

Pumping Costs: Kootenai Valley Reclamation Association invoices for pumping costs per the Order were not submitted for several years. A negotiated settlement to cover the period from 2004 to 2008 was reached last year – total of \$42k paid by Fortis BC. 2009 pumping costs were settled in April 2010 (\$19,978). KVRA understands the requirement for timely invoicing in the future.

### **Fortis Reports furnished to the Board**

In 2009, the Board asked for supplementary information on five topics related to the operation and maintenance of Corra Linn Dam. A fulsome response was furnished to the Board prior to this meeting along with a summary in the briefing package.

Dan Millar: Is the absence of stoplogs a dam safety issue?

Aaltomaa: We see the need for stoplogs and have a solution in the planning process.

Wright: I am a bit concerned that Fortis doesn't have the ability to close the gate if there is a gate failure.

Amy Stevenson: Canadian dam safety guidelines stipulate testing, ability to open and close on flow, redundant power supply, and operation and maintenance. They do not mandate isolation devices since

you can't put them in against flow to help during an emergency. The real issue is can you get them open when you need to get them open because the main goal is to pass the probable maximum flow.

Wright: The big concern was no isolation and never having inspected the gates. My view is that you need a reasonable precaution – it sounds like the province has that. I'm comfortable with the procedure Fortis has undertaken to establish isolation and rehab.

Johnstone: After the refurbishment, is there an intention to put in a stoplog system?

Aaltomaa: Right now our main concern is refurbishment. We are leaning toward the reverse needle beam coffer dam. This will be a permanent isolation unit for each of the 14 gates.

Wright: Again, I defer to the province on the frequency of spillway gate inspection. In the US we use five years as a standard frequency but we are behind on many dams. In most cases, a spillway gate needs some redundancy like the generation side. From a Board's perspective, we simply want to see due diligence.

This do-out has been adequately answered.

Aaltomaa suggests we add this to next year's agenda. Wright: Capital improvements and major maintenance should be reported to the board. Johnstone: This would be good to share at the public meeting, as well.

### **Kootenay Lake Water Stewardship Partnership**

Davidson: Dwain Boyer is in BC Environment's Nelson office and is involved in local flood plain management. I've invited him to tell us about two projects related to Kootenay Lake

Boyer: Partnership: There has been a fair bit of increase in the development around the lake . The partnership is looking at all arms of the Lake, in an effort to maintain a productive and healthy lake ecosystem and to balance land and water uses. The Partnership, under the lead of Fisheries and Oceans Canada (DFO), held a public meeting to discuss how the lake shore was being managed. Over 600 people attended the meeting, including a lot of First Nations interest. Local government is being pressured about development, particularly uncontrolled development and the related deleterious effects. Current development is not strategic and many agencies don't have staff to oversee it. The Strategic Scope of the Partnership is to facilitate gathering of data and knowledge, develop a science-based guidance, monitor health of lake, share information, recommend protection measures, and monitor/assess the success of the Partnership.

A shoreline inventory or classification provides an indication of the rate or level of impact from development. A report is now complete for north shore of the west arm. 60% of the shoreline was deemed moderate to high impact.

The partnership group was initially established in 2010. Foreshore inventory mapping is expected to be completed under contract to DFO by Oct/Nov 2010. A Terms of Reference Scoping Study is scheduled for completion early in 2011, followed by broader discussions with community in 2011.

The project team may make recommendations on how the lake is managed as a result of their findings, and this might come back to the board.

Johnstone: It would be good to make a note of where they are by next year, especially in relation to the public comment phase.

Stevenson: We have Columbia Operations Fisheries Advisory Committee (COFAC) which is a very similar makeup of folks. DFO is very prominent on COFAC.

Boyer: The local First Nations band has said they want a moratorium on local development on the lake (through the First Nations treaty negotiations).

#### **Creston Valley Floodplain Management Plan:**

Boyer: The Creston Valley floodplain management plan is trying to balance flood risk management with consideration of economic ecological, social and cultural values from Kootenay Lake to US Border where the lowland is protected by 80 – 90 km of dikes. There are Lower Kootenay Band reserves (about five) throughout the valley, along with five diking authorities (four farming, plus the Creston Valley Wildlife Management Area). One of the drivers for the study was that the bands will have a management strategy for their lands but will also want a say in how resources are management outside their areas to protect their hunting and fishing interests. Another key piece is that the reserves are on federal lands and some of them include diked areas that aren't up to provincial standards, so they want lands not subject to potential dike failure. Study will determine flood scenarios with potential dike failures, and how this would affect reserve lands. The dikes were built in the late 30s to early 40s and not necessarily maintained well. Probably around \$10m in the last five years has helped these local diking authorities with diking repairs. The plan is also looking at a more strategic approach to dike maintenance and upgrades. And there is a strong interest in sturgeon recovery as well which may relate to dike maintenance. This study is fairly significant (\$400k so far).

The Baseline study covers existing floodplain management, hydrology, hydraulic modeling, bank erosion, flood hazards, environmental assessment, economic consequences, and First Nations Cultural Values.

Wright: Is the river perched in Canada as it is in US?

Boyer: It's predominantly not perched. However, a 1 in 25 year flood would inundate the valley if the dikes weren't there. Modeling was done in Mike 11.

The Baseline is nearing completion and we planning to share it with a larger audience, seeking guidance for dike repairs that is compatible with environmental and First Nations values

The participants are hopeful for a consolidated dike management authority with a funding program/cost sharing program in Canada to help diking districts. It would be an enhanced way for vying for those dollars. The majority of funding for the project comes from the federal department Indian and Northern Affairs.

Johnstone and Millar: There are orders of approval for the dike construction in the valley – from the 1920s. We believe the IJC did not assume permanent discretion over the dikes at that time.

### **Preparation for Public Meeting:**

As the US Board Section Chair, Colonel Wright plans to introduce board members, commissioners, secretaries, and technical advisor.

Wright will start the presentation describing the Commission and the Board, and Millar will continue with the Kootenay Order context.

Should Fortis BC discuss some of the refurbishment? Wright selected two slides for Aaltomaa to speak to after Millar finishes.

Davidson: What other issues do you think will come up?

Boyer: Regional district vying with provincial surveyor with lakeside properties surveyed into areas that are inundated during freshet.

Johnstone: DFO recovery plan for white sturgeon – that question will come up. The Board would study it and make a recommendation to the IJC, who would decide whether or not to change the order. It is the applicant that has to meet both constraints. Note it as a potential, what do we want to do about it? DFO should talk to the applicant. If the applicant can't operate to it, they can come to us for reconsideration. We don't know what the protection order, or critical habitat ramifications are, so that is jumping ahead. We don't even know if there is a conflict. The applicant doesn't think it needs to be brought to our attention.

For reference during the meeting, "6 feet of storage" means six feet above datum at Nelson – which is 1739.32 feet.

### **Adjourn**

The meeting was adjourned at 4:30pm.