

## MINUTES

### International Kootenay Lake Board of Control Annual Meeting

Best Western Baker Street Inn  
153 Baker Street  
Nelson, BC

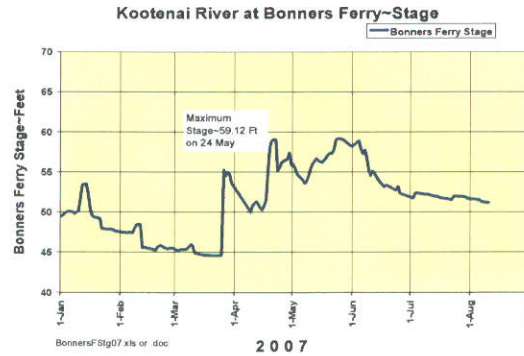
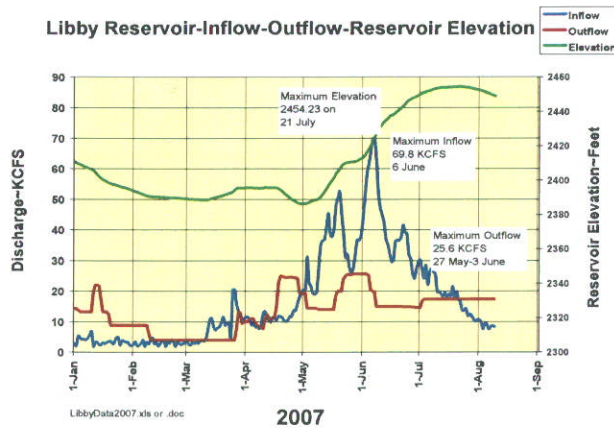
Thursday September 20, 2007  
2:30 – 4:30 PM

#### Attendance

	<b>United States</b>	<b>Canada</b>
Chair	Col. Mike McCormick	Kirk Johnstone (absent)
Members	Kathy Peter	Glen Davidson (host)
Secretary	Larry Merkle	Daniel Millar
Guests	Commissioners: Jack Blaney (Canada) & Irene Brooks (USA) Dr. Mark Colosimo (IJC), Tom McAuley (IJC), Ed Zapel (USACE), Dan Egolf (FortisBC), Doug Ruse (FortisBC), Kevin Bradshaw (FortisBC), Jim Barton (USACE), Kelvin Ketchum (BC Hydro), Eric Weiss (BC Hydro)	

#### Agenda

1. Welcome and introductions Glen Davidson  
Glen Davidson welcomed meeting participants and led a round of introductions.
2. Review of the agenda Glen Davidson  
The agenda was adopted without change except items 4.2 through 4.5 preceded items 3.1 through 4.1 to accommodate the schedules of our guests.
3. Business from previous meeting
- 3.1 Status of EIS to change Libby project operation (VARQ) Col McCormick  
Col. McCormick reminded members that the final Environmental Impact Statement for the VarQ operation of Libby Dam was released in April 2006. VarQ was implemented on an interim basis in Water Year 2003 and final adoption is pending.  
A new US Fish and Wildlife Service biological opinion (biop) for sturgeon was adopted in May 2006.  
Physical efforts to aid endangered sturgeon take two tacks: 1) adjust the channel substrate for better suitability; and, 2) adjust flows to entice the fish to move to better habitat. Various procedures to enhance river stage and discharge conditions and enhance substrate are being considered.
- 3.2 Libby and Bonners Ferry hydrographs Larry Merkle  
The peak inflow to Lake Koocanusa was 69,800 cfs, on 6 June. Maximum reservoir discharge was 25,600 cfs during the period 27 May-3 June. At Bonners Ferry, maximum river stage was 1759.12 on 24 May. Kootenay Lake inflow peaked at 99,400 cfs on 5 June.



3.3

Kootenay Lake Water level-public concerns

Col McCormick

Col McCormick reminded the group that several Canadian citizens attended the public meeting in Bonners Ferry last year and expressed serious concern that the “Corps of Engineers planned to have Kootenay Lake raised to elevation 1755.” This was apparently a rumor or was based on a misunderstanding because there is no plan to regulate the lake to that elevation. The Board consensus was to be prepared to address the issue in the public meeting if it was raised again by the public.

3.4

Development of new generation/discharge curves for lake outlet projects

Kevin Bradshaw

FortisBC has observed that calculated discharge from Corra Linn dam when added to the discharge from the Kootenay Canal Plant and Slocan River do not equal the discharge calculated from Brilliant dam. FortisBC has engaged consultants to make generation versus discharge measurements and spillway gate ratings for Corra Linn dam. This is a complex study requiring on site discharge and generation measurements and detailed hydraulic calculations with consideration of the complex combination of dams and flow conditions in the reach between the lake outlet and Brilliant project. FortisBC will furnish the Board detailed information on the process and conclusions. The study is expected to be completed in 2007.

4.

New Business

4.1

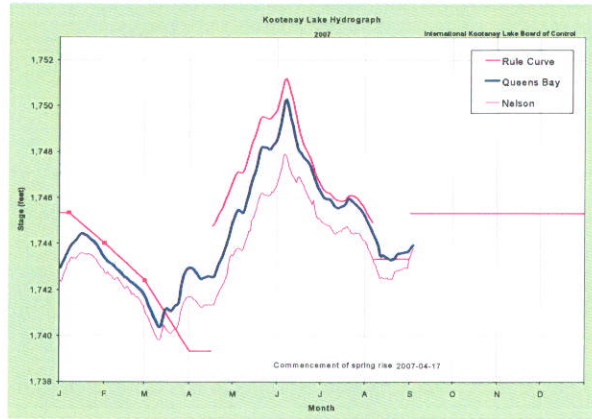
Compliance with the Kootenay Lake Order in 2006

Daniel Millar

Dan Millar reported that the Applicant, FortisBC, managed water levels in the lake during 2007 in compliance with the orders of approval. The lake was



drawn down in accordance with the rule curve until 14 March. Between 15 March and 17 April when “commencement of the spring rise” was declared, lake elevations were above the rule curve. This exceedence was not an Order violation because the high lake levels were attributable to extraordinary high inflows and FortisBC regulated to pass lake discharge control to Grohman Narrows assuring maximum possible discharge from the lake. Lake operation so far in 2007 is illustrated on the following hydrograph:



4.2

Fortis BC operations in 2007

Dan Egolf

Mr. Egolf indicated his concurrence with the presentation by Daniel Millar indicating that there have been no Order violations in 2007 and that operation has been relatively uneventful with the exception of the extraordinary high inflow in March-April period.

4.3

Spring rise declaration process

Daniel Millar

Daniel Millar stated that spring rise declaration has historically been a subjective determination made by monitoring lake inflow, tributary flow patterns, snowpack and, observed and forecast weather. He mentioned that the Order does not provide criteria for the declaration and that the determination is difficult in some years like 2007 when it is not clear whether an increase in runoff is temporary rise or sustained snowmelt runoff. Mr. Millar recommended that the Board secretaries review the issue during the coming year to see if more a more objective procedure is available and advisable. The Board concurred.

**ACTION:** Board Secretaries to confer with relevant agencies and individual Board Members to propose, if warranted, a more objective method for determining the commencement of spring rise. Any proposal will be presented to the Board for decision at the next annual meeting.

4.4

Operation of Duncan Relative to the Kootenay Lake IJC Order

Larry Merkle introduced this topic with an explanation of the issue and invited meeting attendees to offer input to supplement or correct his explanation. This issue surfaced because during the period 15 March through 16 April 2007, Kootenay Lake was above the rule curve specified by the Order. During that period, Libby project restricted operation to passing inflow while Duncan project discharge generally exceeded

inflow by approximately 1000 cfs.

A provision of the Columbia River Treaty states that operation of Libby project shall be consistent with the IJC Order on Kootenay Lake but does not similarly restrict operation of Duncan project. A provision of the Columbia River Treaty Operating Plan states that "Both Libby and Duncan are required to operate in accordance with the 1938 Order for Kootenay Lake."

The Kootenay Lake Order only restricts operation by FortisBC and does not provide authority to direct the operation of Libby and Duncan projects. FortisBC's operation during the period 15 March through 16 April is not considered a violation of the Order because, although the lake elevation was above the rule curve, the principal cause of the exceedence was extraordinary natural high inflow. This condition is anticipated under paragraph 2,(5) of the Order and FortisBC opened sufficient gates to force hydraulic control upstream to Grohman Narrows, thereby fulfilling their requirement to lower the main body of the lake as much as possible.

Because the 1938 Order does not provide for directives to Libby and Duncan projects, those projects' operation can not be construed to be a violation of the Order. However, intent of the Order is to keep the elevation of the lake below the rule curve to the extent feasible for flood control and to minimize impact on upstream farmers. BCHydro indicated that they deemed the Duncan operation to be consistent with the Order since the March-April exceedence was not a violation and thus there was no need to limit outflows. However, the Corps representative suggested that Duncan project operation may not have been in keeping with the intent of the Order because it may have aggravated efforts to minimize the effect of extraordinary natural high inflow. Libby, on the other hand, eased the lake level exceedence by limiting outflows to equal inflows.

BC Hydro, the operator of Duncan project, proposed that "whenever the level of Kootenay Lake exceeds X ft (to be determined via flood regulation studies and subsequent discussions between the parties), upstream projects will not discharge more than inflow." This proposal suggests that Duncan and Libby projects may pass more than inflow when Kootenay Lake is above the rule curve but only when discharge in excess of inflow to Duncan and Libby will not significantly impact flooding. FortisBC voiced support for the proposition of moving potential excess water through the system as early in the season as possible. Such operation may be inconsistent with the rule curve objectives as expressed in paragraph 2,(5) of the Order; however, there is no existing IJC authority to restrict the operation of Libby and Duncan.

The issue was discussed in some detail by meeting attendees including the representatives of BC Hydro and the Corps of Engineers. Both parties agreed that Duncan and Libby Dams should be operated in a similar manner with respect to consistence with the Order.

**ACTION:** The Secretaries will prepare, for the Board's



approval, a draft statement explaining conditions under which upstream dam operations may be inconsistent with the intent of the IJC Kootenay Lake Order. Upon tentative approval by the Board, the draft will be submitted to the two upstream dam operators for comment. The Secretaries will then coordinate with the Board to revise the statement if necessary, prior to submission to the Commission for approval.

- 4.5 Proposed change of Bonners Ferry flood stage effect on Kootenay Lake Col McCormick

Boundary County, Idaho has made a request to the U.S. National Weather Service that flood stage at Bonners Ferry be lowered from elevation 1764 to 1762. This would only affect Kootenay Lake if: (1) flood stage is lowered and, (2) the Corps of Engineers decides to operate Libby project differently if the proposed change were adopted. At present the proposed change is under consideration but has not been adopted.

Preliminary indications are that there would be little or no change in maximum annual Kootenay Lake elevation in below average runoff years and very high runoff years. Maximum annual Kootenay lake elevation may be slightly lower in near average years; however, additional study is required to confirm these estimates.

5. Preparation for public meeting Glen Davidson

- 5.1 Review of agenda

Members reviewed the agenda for the evening's public meeting and adopted it except for deleting Agenda Item 3.2 "Kootenay water level-public concerns" because those concerns will be raised in the public participation period and require no preliminary introduction.

6. Adjourn Glen Davidson

Mr. Davidson thanked members and adjourned the meeting.