

MINUTES

International Kootenay Lake Board of Control Public Meeting

Kootenai River Inn
7169 Plaza Street
Bonners Ferry, Idaho

Wednesday, September 26, 2012
7:30-9:30 PM

Attendance

	United States	Canada
Chairs	Col. Bruce Estok (host)	Kirk Johnstone
Members	Michael Lewis	Glen Davidson
Secretary	Amy Reese	Gwyn Graham
Guests	Commissioner, Rich Moy, Dr. Mark Colosimo (IJC, U.S.), Ted Yuzyk (IJC, Can.), Kelvin Ketchum, BCHydro, Martin Jasek, BCHydro, Ron Malmgren, Corps of Engrs., Marko Aaltomaa, Network Services Manager (FortisBC), Jamie King, Power Supply Operations Manager (FortisBC), Jarret Leason, Senior Engineer, Operations (FortisBC), Larry Merkle (Technical Advisor)	
	27 public guests. Total of about 40 (public + officials).	

Minutes

1. Welcome and Introductions

Col Estok welcomed and led introduction of the Board members and guests.

2. Review of the Agenda

Col Estok led a review of the agenda which was adopted without change.

3. IJC and Kootenay Order context

Col Estok provided a brief overview presentation (attached) describing the IJC and the Kootenay Board including their membership and functions and the provisions of the 1938 IJC Order.

3.1 System Operation 2012

Amy Reese gave a presentation (attached) describing the record rainfall that was superimposed on the slightly above average snowmelt runoff volume during the spring and summer 2012. She presented hydrographs for Libby and Duncan projects to provide context for the inflows to Kootenay Lake and a Bonners Ferry stage hydrograph. Finally, she presented a hydrograph for Kootenay Lake illustrating the lake inflow and outflow and the lake elevation which peaked at elevation 1753.78 on July 3rd.

3.2 Kootenay Lake Levels 2012 and Order Compliance.

Gwyn Graham reviewed the Kootenay Lake hydrograph (attached) showing the lake was below the rule curve elevation in 2012 except for the period from March 28th until April 20th, the date for declaration of spring rise. During the period of exceedence, the hydraulic control on lake discharge was at Grohman Narrows; therefore, FortisBC did not violate the Order. The lake was primarily above the rule curve because of higher inflows caused by drafting at Libby and Duncan projects.

4. Questions and comments from the public

Col Estok invited questions and comments from guests.

(Questions and comments from guests are in plain text. Responses follow in italics. Both are paraphrased.)

Bob Olson, President of the Kootenai Valley Reclamation Association, commented on the high Kootenay Lake elevations and asked if the lake was operated in compliance with the Order? *Gwyn Graham reiterated that the lake discharge control was at Grohman Narrows during the period of maximum lake elevation and briefly explained the "lowering formula" and stated that after the declaration of spring rise, the lake was consistently below the rule curve. FortisBC was in compliance with the Order and did all reasonably possible to minimize high lake elevation. Mr. Olson asked if there is any plan to dredge at Grohman Narrows. Glen Davidson stated that the potential for increasing lake discharge and lowering lake elevations by increasing discharge capacity at Grohman Narrows is being studied.*

Dan Dinning, Boundary County Commissioner, and Brad Richy stated that local residents believe that system operation could be improved if there were more snowtel sites. *Glen Davidson stated that there are approximately 130 Snowtel sites in British Columbia; about 1/3 in the Kootenay area. A primary issue for increased numbers of snowtel sites is agency funding of the required operating budget. This issue will be addressed in more detail at the Corps October 22nd, public meeting on Libby Operation for the past spring and summer.*

Mr. Dinning asked if sedimentation at Libby reservoir has reduced the Libby Project's capability for flood risk reduction. *Col Estok said he did not know of recent sedimentation measurements and said he would get back to Mr. Dinning at the upcoming October 22nd meeting on Libby operation.*

Chris Amos asked if more storage could be reserved at Libby project to provide a factor of safety for flood risk reduction in years like this one (2012)? *Col Estok responded that such an increase is unlikely because increasing the space reserved for flood risk reduction would have adverse impact on other project purposes including recreation, hydropower, and environmental mitigation.*

Bob Olson asked La Nina conditions are considered in runoff forecasts? *Amy Reese responded that La Nina and El Nino are considered in the forecasting.*

Bob Graham (Boundary County) and Patty Perry (Kootenai Valley Resource Initiative) stated that they had heard that Libby drawdown this year (2012) was less than last year (2011). *Amy Reese responded that reservoir drawdown is based on the runoff volume forecast for the year. Therefore, year-to-year comparisons are only meaningful relative to the annual runoff forecast.*

Roger Morter asked if Corra Linn Dam was limiting lake outflow during the period of peak inflow. *Col Estok said; no, discharge control was at Grohman Narrows.*

Roger Morter and Dan Dinning asked: Would the effect of Libby operation been significantly different under non-VARQ as compared to VARQ operation. *Amy Reese responded that the effect would not have been significantly different. The Corps will present more information on this comparison at the October 22 public meeting on Libby Operation for the past spring and summer.*

Adjourn

Col Estok thanked the audience for attending and participating and declared the meeting adjourned.

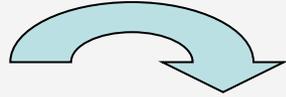
Agenda

- **Welcome and introductions**
- **International Joint Commission context**
- **Kootenay Lake Orders**
 - **System Operation 2012**
 - **Kootenay Lake levels 2012**
- **Questions from the public concerning the Kootenay Order and operation of Kootenay Lake in 2012**
- **Adjourn**

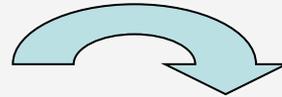
IJC Context



Treaty Between the United States and Great Britain Relating to Boundary Waters, and Questions Arising Between the United States and Canada, 1909
'Boundary Waters Treaty'



International Joint Commission



Kootenay Lake Order, 1938



International Kootenay Lake Board of Control

International Joint Commission

**Lana
Pollack
U.S., Chair**



**Joseph
Comuzzi
Canada, Chair**



Rich Moy, U.S.



Dereth Glance, U.S.



Lyall Knott, Canada

**Canadian Position
(Vacant)**

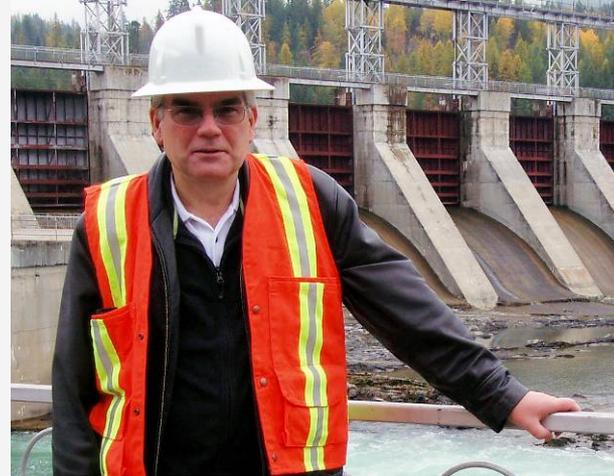
International Joint Commission

- **To prevent and resolve issues, the Commission...**
 - **Undertakes investigations**
 - **Holds hearings**
 - **Issues Orders—For example, the 1938 IJC Order for Kootenay Lake**
- **The Commission appoints Boards of Control to monitor its Orders**

Kootenay Lake Board of Control



**Col. Bruce
Estok,
Chair, U.S.**



**Kirk Johnstone,
Chair, Canada**

**Michael
Lewis,
U.S.**



**Glen
Davidson,
Canada**



Kootenay Lake Board of Control

- **Duties of the Kootenay Lake Board of Control...**
 - **Monitor FortisBC's operation of Corra Linn Dam**
 - **Assure all other provisions of the 1938 IJC Order are followed**
 - **Provide general advice and assistance to the IJC on issues relating to the 1938 IJC Order**

1938 Kootenay Lake Order



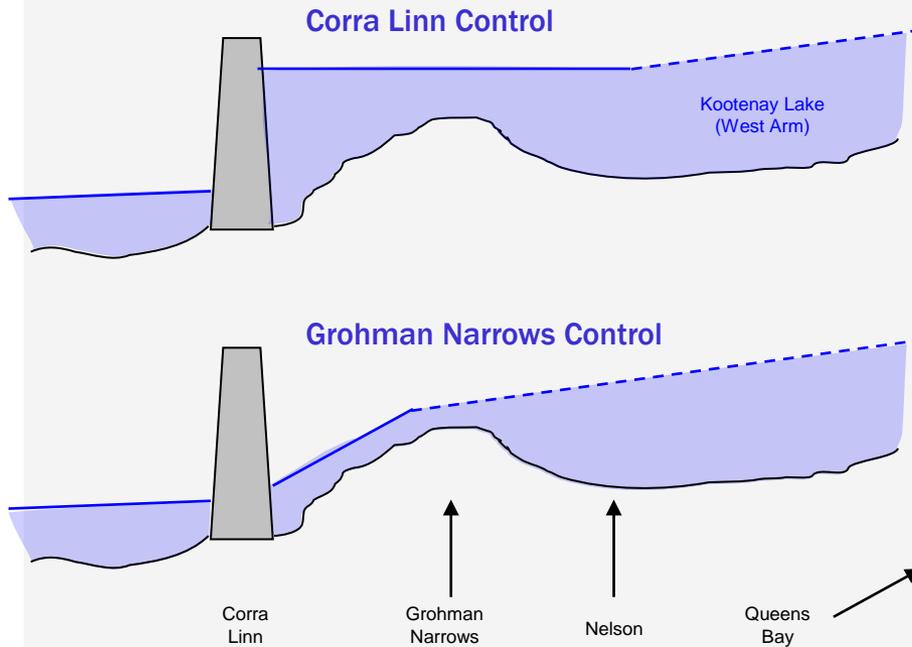
- **Directs FortisBC to help pay increased pumping costs for land drainage incurred by Idaho farmers**

1938 Kootenay Lake Order



- Directed FortisBC's predecessor to dredge Grohman Narrows (completed in the early 1940s)

Kootenay Lake Control



- Lake level depends on inflow and outflow
- Corra Linn dam does not have exclusive control of lake outflow
- When the Corra Linn forebay is kept low, control moves upstream to the natural constriction at Grohman Narrows

1938 Kootenay Lake Order

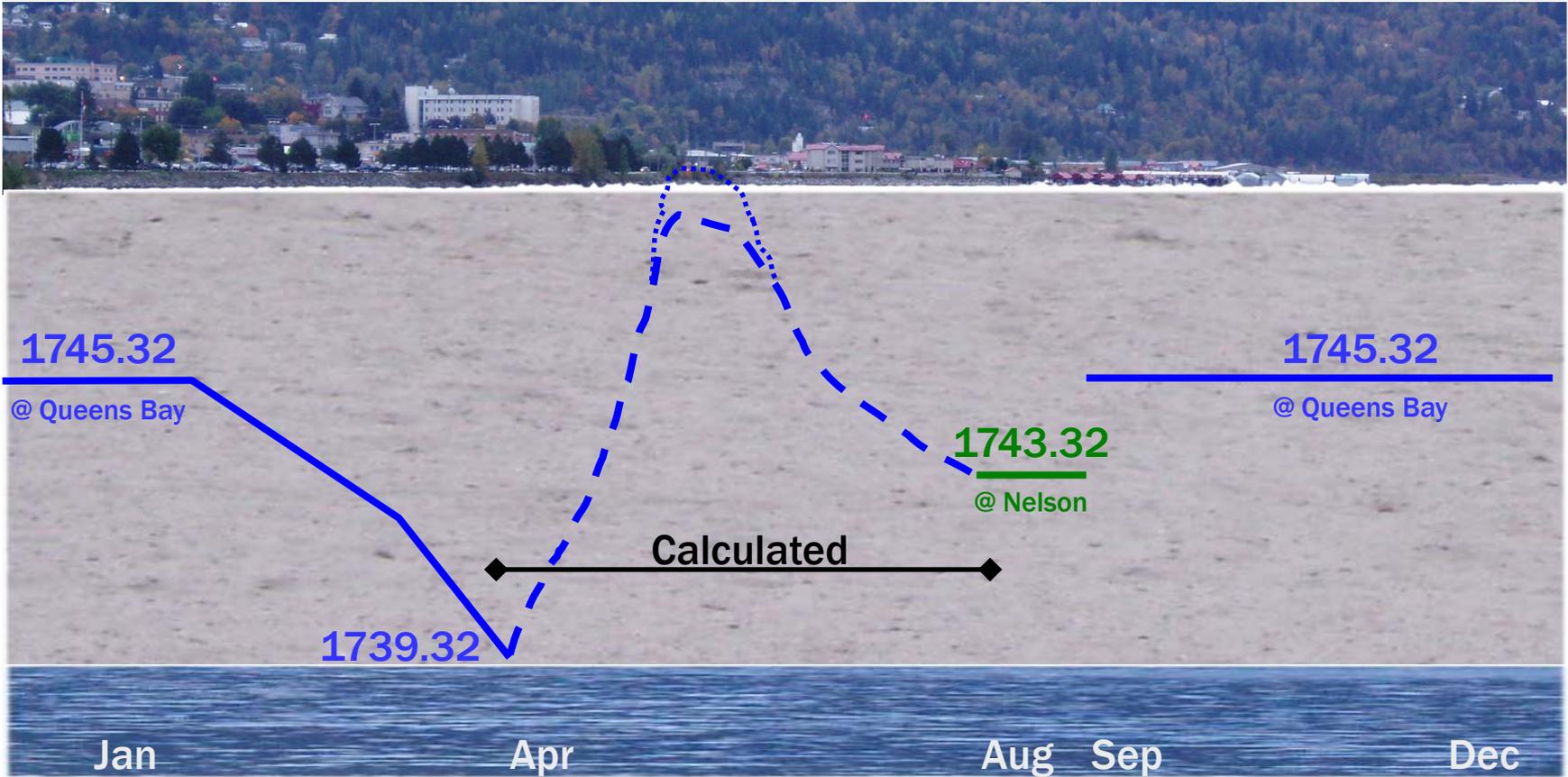


- **Directs FortisBC to take advantage of the dredging to keep Kootenay flood levels lower**

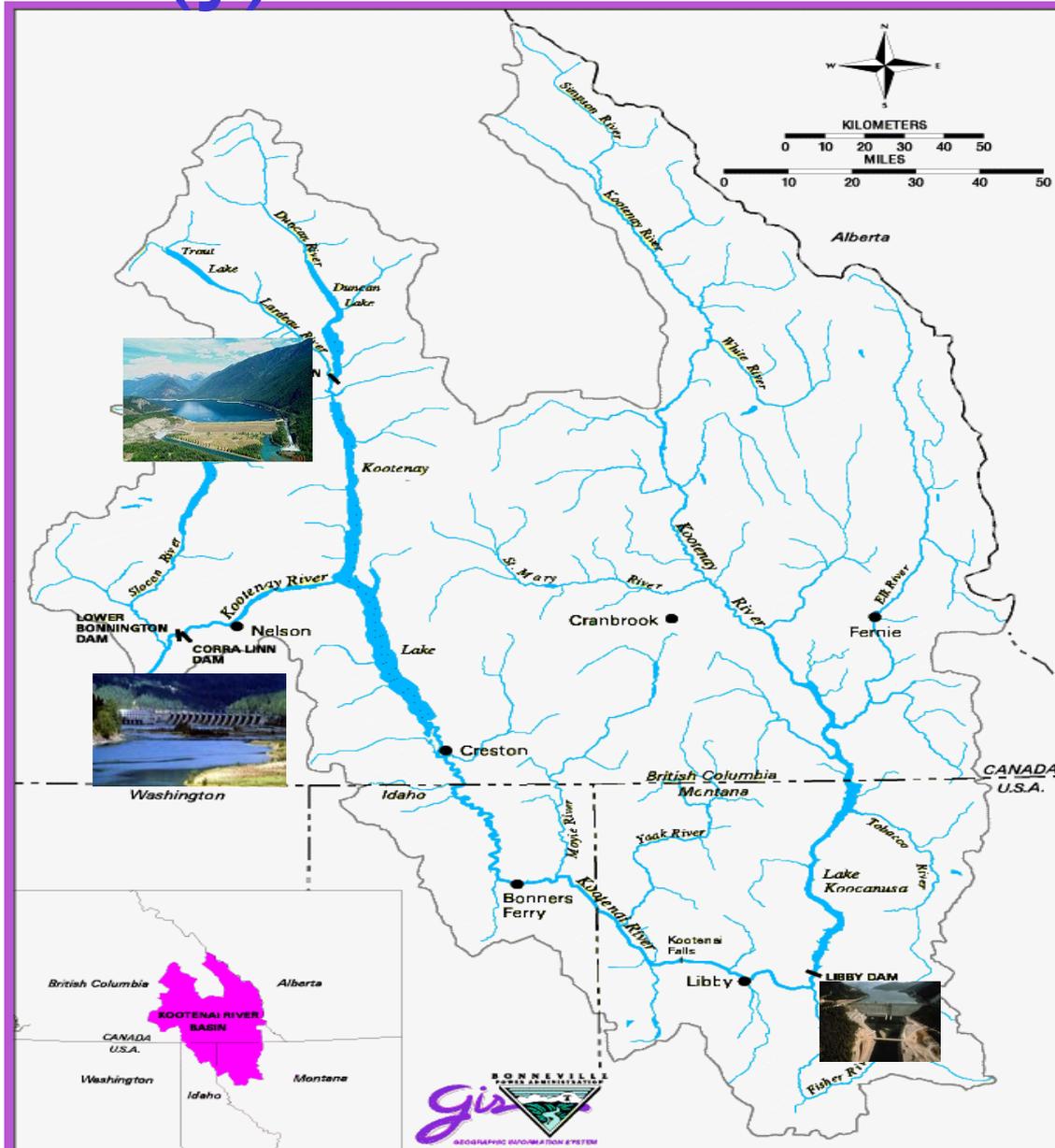
1938 Kootenay Lake Order



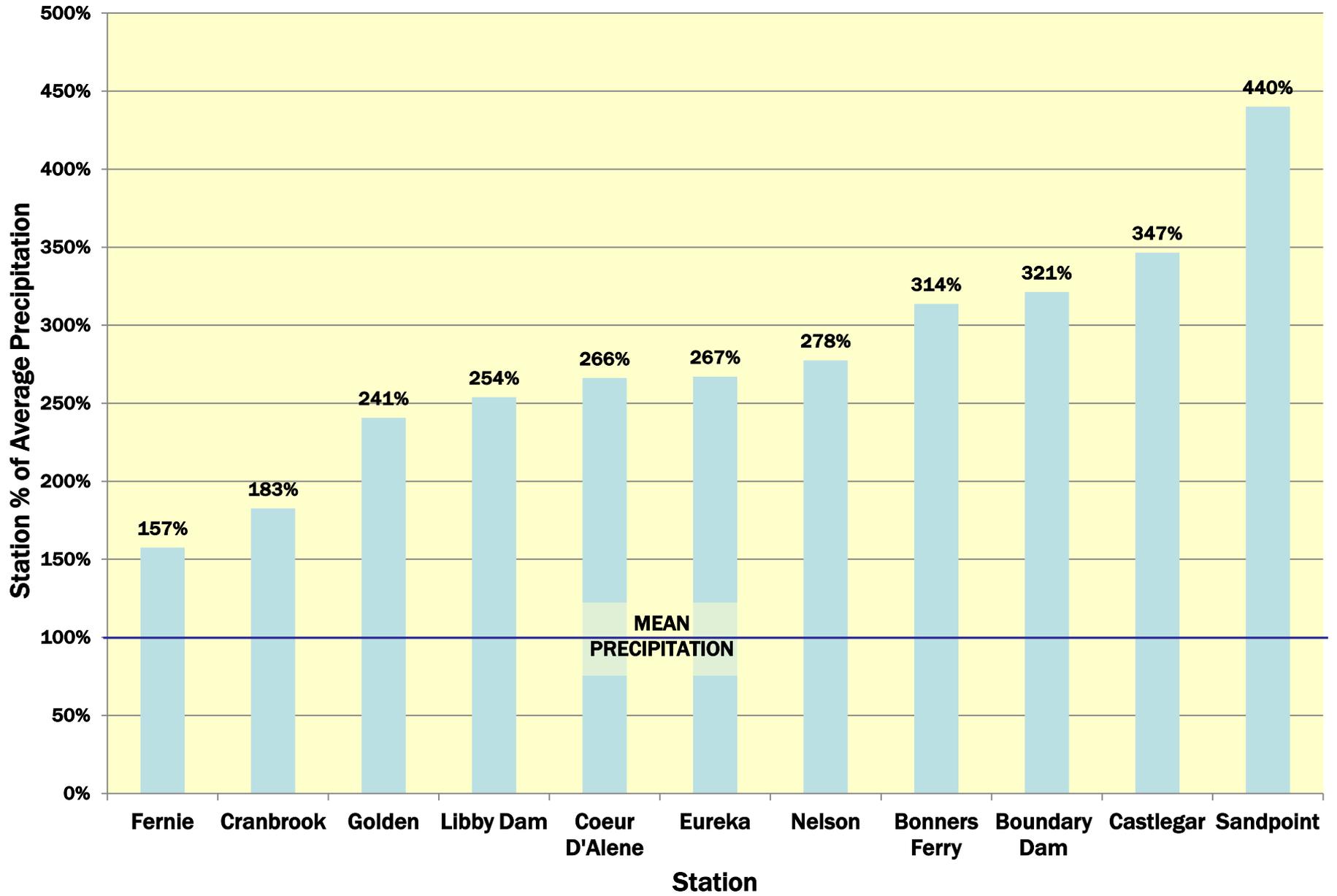
Maximum Water Elevations Ordered



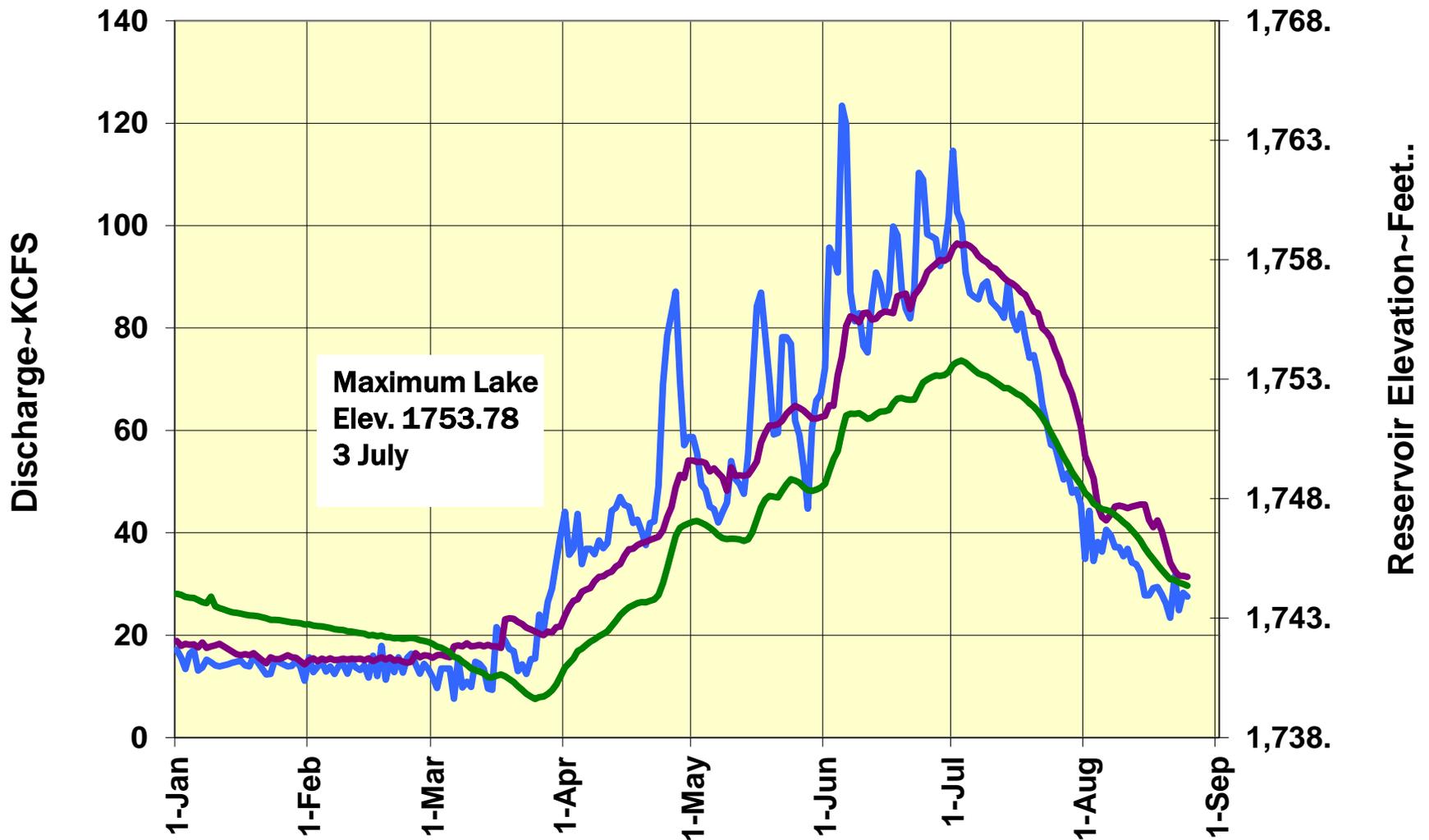
Kootenai(y) Basin



June 2012 Precipitation as Percent of Average

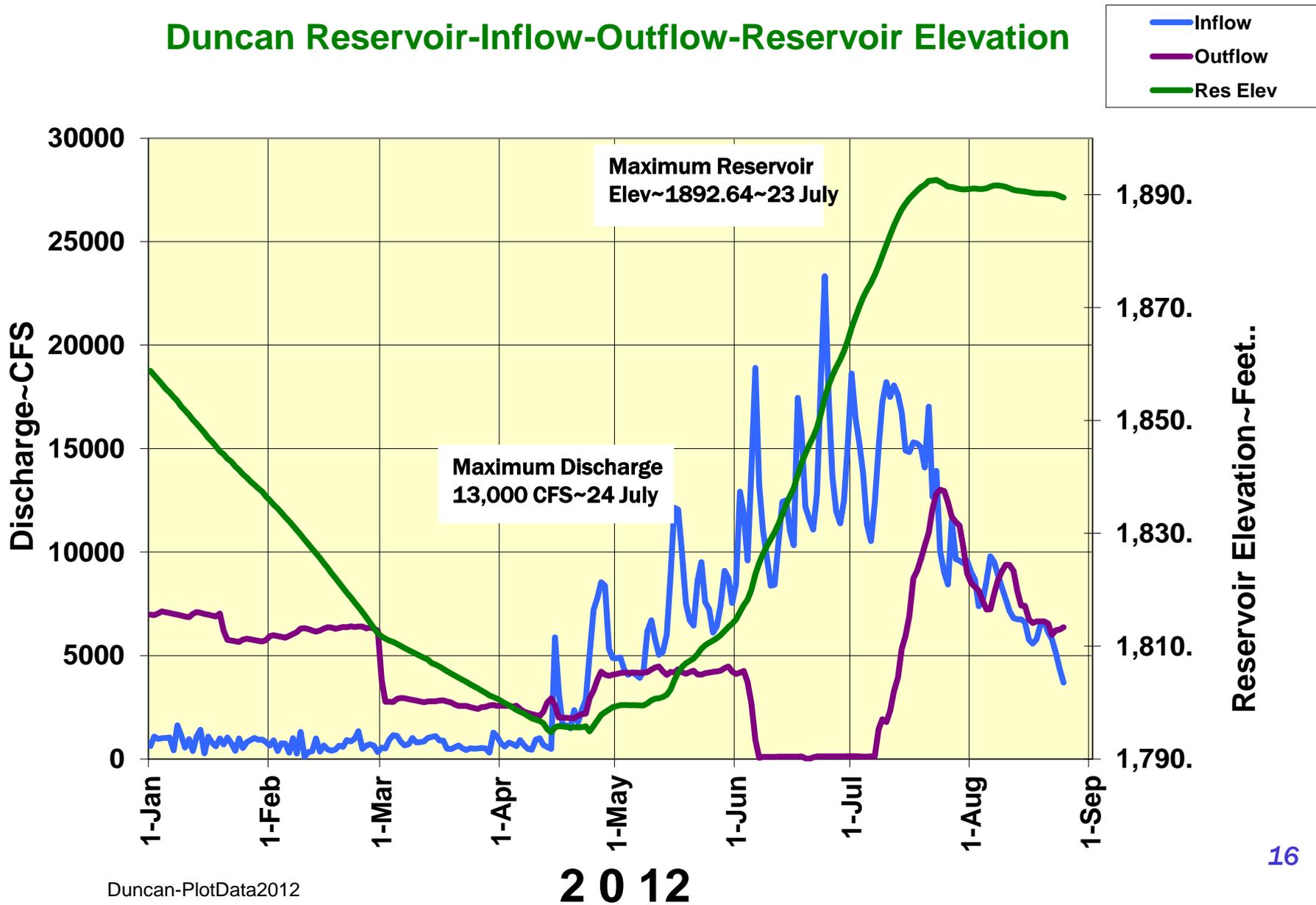


Kootenay Lake-Inflow-Outflow-Lake Elevation



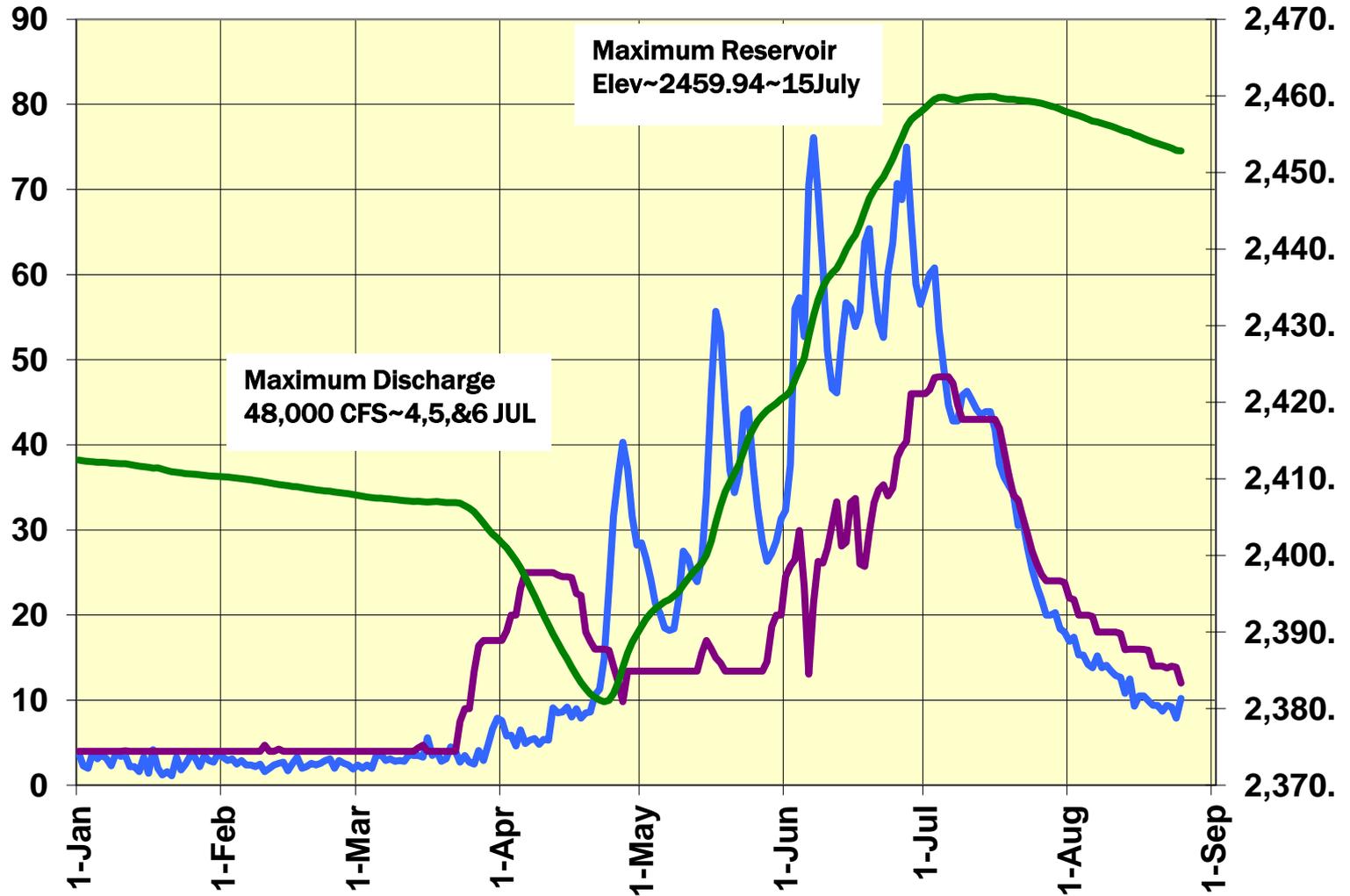
Maximum Lake
Elev. 1753.78
3 July

Duncan Reservoir-Inflow-Outflow-Reservoir Elevation



Libby Reservoir-Inflow-Outflow-Reservoir Elevation

Discharge~KCFS



Reservoir Elevation~Feet..

Kootenai River At Bonners Ferry Stage

Bonners Ferry Stage



2012 Water Levels

