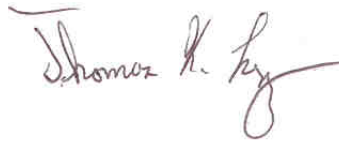


## **SYSTEM OPERATIONAL REQUEST: #2008-7**

*The following State, Federal, and Tribal Salmon Managers have participated in the preparation and support this SOR: the Oregon Department of Fish and Wildlife and the Columbia River Inter-Tribal Fish Commission.*

<b>TO:</b>	<b>Colonel Steven R. Miles</b>	<b>COE-NWD</b>
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	<b>LTC Anthony Hofmann</b>	<b>COE-Walla Walla District</b>
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	<b>Greg Delwiche</b>	<b>BPA-PG-5</b>

**FROM:** Tom Lorz, Vice Chairperson, Salmon Managers



**DATE:** December 16<sup>th</sup>, 2008

**SUBJECT:** End of December Flood Control Elevation at Libby Dam

### **SPECIFICATIONS:**

Draft Libby Dam to the end of December Flood Control elevation of 2413.2 feet, determined by the procedure outlined in the 2009 Draft Water Management Plan (WMP), found at the following location: <http://www.nwd-wc.usace.army.mil/tmt/documents/wmp/2009/>. The specifications for determining the end of December Flood Control Elevation at Libby Dam are the same in the 2009 Draft WMP, the 2008 WMP, and the 2007 WMP.

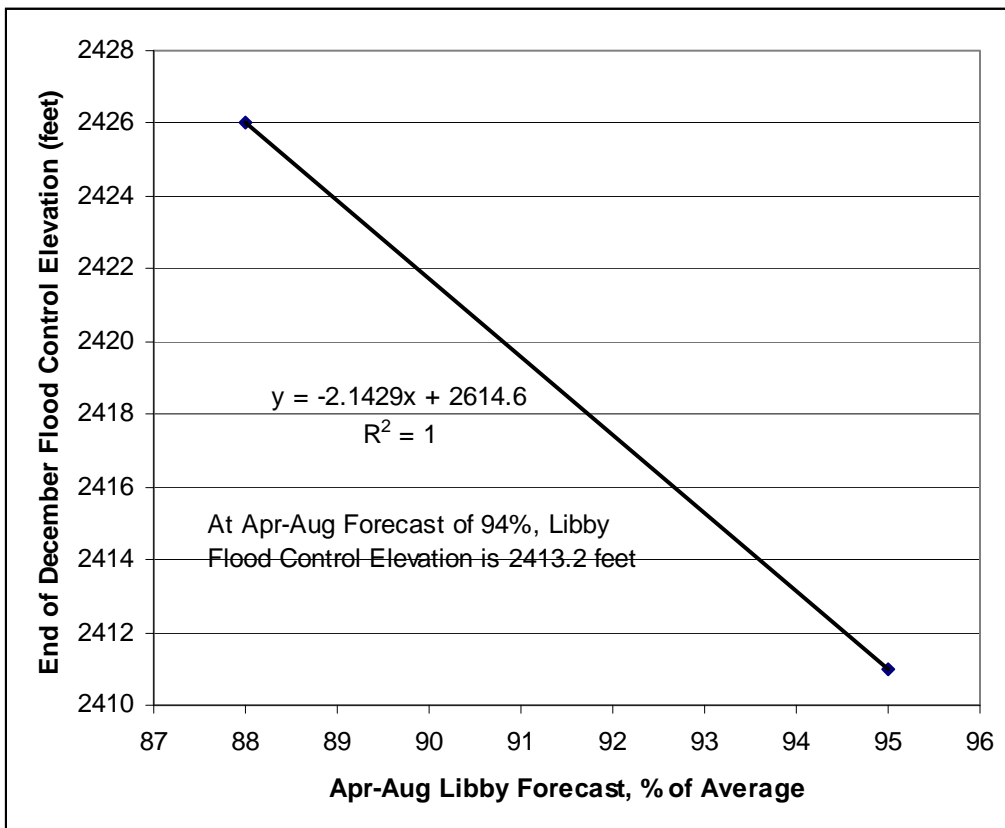
## JUSTIFICATION:

The 2009 Draft WMP states:

The Corps will continue to use the new SOI forecast procedure in December to determine the December 31 flood control elevation. In water years where the forecast for the period April through August is less than 95% of average based on the SOI forecast procedures, the end-of-December draft elevation will be higher than 2411 feet. If the early forecast for April-August is 88% of average or less, the end-of-December target elevation would be 2426 feet. The end-of-December elevation is a straight line sliding scale between elevation 2426 feet and 2411 feet when the forecast is between 88% and 95%.

The Water Year 2009 December Flood Control summary for Libby Dam (found at: <http://www.nwd-wc.usace.army.mil/report/libf/200812.pdf>.) shows the April-August most probable runoff volume forecast of 5937 Kaf, which is 94% of average (the years used to compute the average on the December flood control summary for Libby were 1929-1999).

The 2009 WMP states that the end of December Flood Control Elevation at Libby Dam will be greater than 2411 ft in years when the April-August forecast is less than 95% of average. This elevation, according the 2009 WMP, is determined by linear interpolation between 2426 feet and 2411 feet at average forecasts of 88% and 95%, respectively. The following plot shows this interpolation:



According to the above plot, the end of December Flood Control elevation at Libby Dam should be 2413.2 feet by the end of December 2008, based on the December 94% Apr-Aug Libby Forecast.

According to the COE December Flood Control Summary for Libby Dam, the end of December Flood Control Elevation at Libby Dam is 2411 feet. According to the 2009 Draft WMP (and previous years WMP), Libby would only be drafted to elevation 2411 feet when the December Apr-Aug Water Supply Forecast is greater than 95% of average. According to the same COE December Flood Control Summary for Libby Dam the December Apr-Aug Water Supply Forecast at Libby Dam is 94% of average.

At this point, Water Year 2009 is uncertain. At Libby Dam, the COE Apr-Aug forecast has already decreased from 6822 Kaf in November to 5937 Kaf in December. With Upper Columbia Basin Snowpack at approximately 39% of average on December 16<sup>th</sup>, 2008 (according to the NRCS at: <ftp://ftp.wcc.nrcs.usda.gov/data/snow/update/columbia/wy2009/cu081216.txt>.) any volume of water in the 2009 Water Year may likely become valuable in terms of ensuring that April 10<sup>th</sup> Flood Control, Reservoir Refill, and flow objectives are met.