



# FISH PASSAGE CENTER

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## MEMORANDUM

TO: Agnes Lut

FROM: Margaret Filardo

DATE: February 7, 2008

RE: Including Data since 2000 in calculation of 7Q10 flows

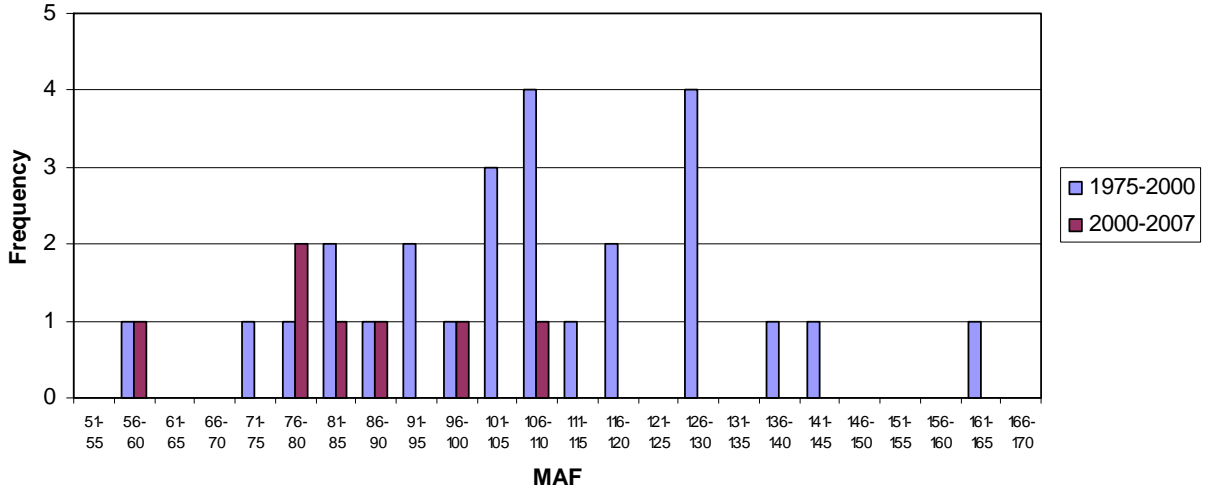
We received your request to discuss what implications, if any, we foresee in updating the 7Q10 flood flows for the lower four Columbia River TMDLs. As we understand the present 7Q10 flood flows identified in the TMDL are based on the flow years from 1975 to 2000. The update would include the flow years from 2001 through 2007.

The flow in any given year is highly dependent on the volume runoff. The following table identifies the January through July runoff volume at The Dalles Dam for the 2001 through 2007 water years. As you can see from the table, five of the seven years had below average runoff (and hence below average flows), one year was near average and one year was above average. The average runoff volume for the years 2001-2007 at 89.2 million acre feet (MAF) is less than the observed volume of 103.1 MAF for the years 1975-2000. If the runoff for 2001 to 2007 is added to the previous years' (1975-2000), the average runoff decreases to 100.2 MAF.

Year	Runoff Volume (MAF)	Runoff Volume % of Average 1971-2000
2001	58.2	55
2002	103.8	97
2003	87.7	82
2004	83.0	77
2005	81.4	76
2006	114.7	107
2007	95.7	89

The following histogram shows where the past seven years' runoff volumes rank relative to the historic record used in the TMDL 7Q10 calculations.

**Histogram of Runoff Volume at  
The Dalles  
(January-July)  
MAF**



The effect of adding the past seven years that were associated with mostly lower runoff volumes to your calculation of 7Q10 flows would be a decrease in the 7Q10 flow. Consequently there would be fewer occasions when water quality standards had to be met.

We also looked at the available water record from 1929 to the present. The average runoff volume observed for the 78 year record was 102.2 MAF, which is still higher than the proposed average from 1975 to 2007.

Years	Runoff Volume (MAF)
1975 - 2000	103.1
2001 - 2007	89.2
1975 - 2007	100.2
1929 - 2007	102.2

We hope this addressed your question. Please contact us if you need any additional information.