

February 1, 2017

Memorandum -- delivered via email

To: Chris Walker, NWP Operations Division Fishery Section  
US Army Corps of Engineers (Corps)

SB

From: Stephanie Burchfield, Fisheries Biologist, Willamette Branch  
West Coast Region, National Marine Fisheries Service (NMFS)

Subject: NMFS' comments on MFR "17BCL03 minimum flow"

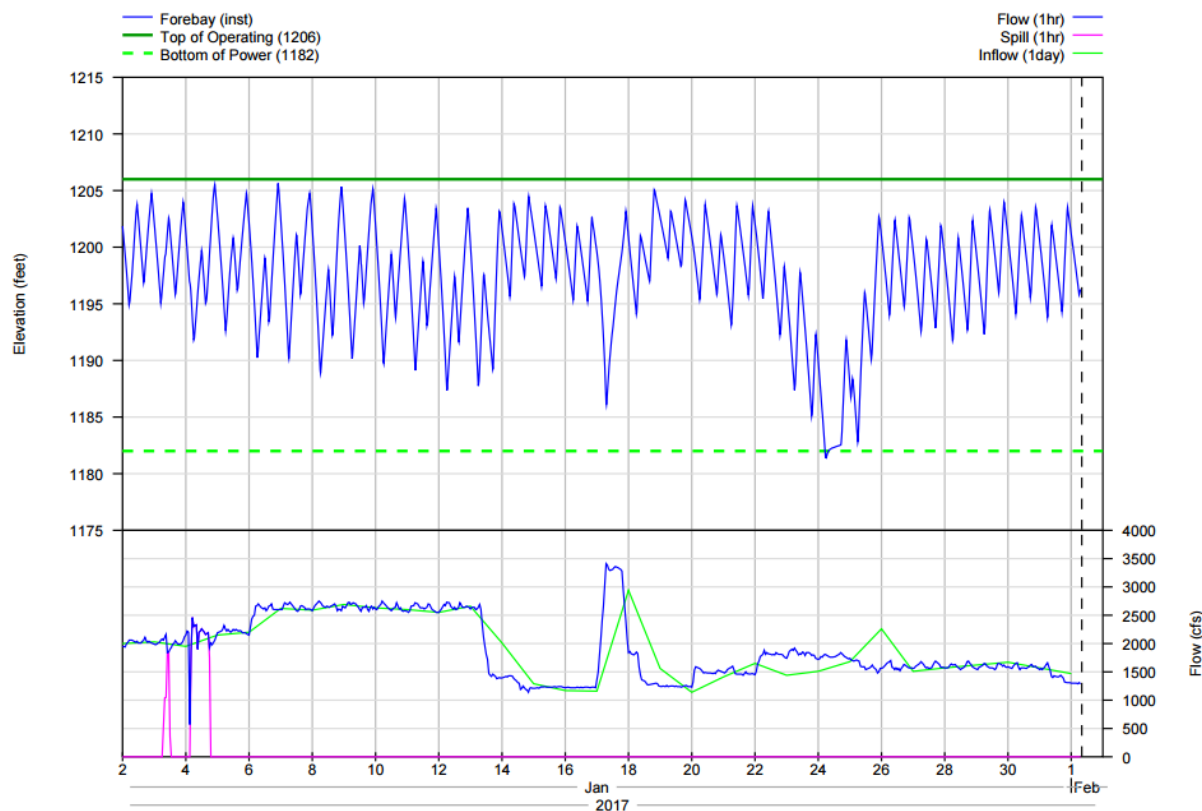
Thank you for this opportunity to review this Memorandum for the Record (MFR). This memo summarizes comments prepared by NMFS' West Coast Region technical staff.

### **General Comments**

This MFR describes a decrease in flow below Big Cliff Dam on January 14<sup>th</sup> that went below the minimum flow criteria set in the Willamette BiOp (1,200 cfs) for approximately three hours. The deviation from the minimum flow target was just beyond the reporting criteria of 5% (flows reached as low as 1,130 cfs, a 5.8% deviation), and therefore only generated a decrease in elevation of approximately one inch below the dam. NMFS agrees that the impacts to fish were likely minimal, and appreciates the timely reporting of incidents that exceed reporting thresholds by even a small magnitude to the WFPOM fish agencies.

While this minimum flow deviation is not anticipated to have negatively impacted fish, it was noted that a steep decrease in flows preceded this event. While the drafting was done within allowed downramping rates, NMFS would like to know whether using slower rates would be possible to avoid decreases that "overshoot" the target at the end of downramping, and any subsequent effects on the emerging fry. Based on flow data provided by the Corps, it appears that inflows from Detroit Dam decreased at a slower rate than the flows released from Big Cliff Dam on January 14<sup>th</sup> and 18<sup>th</sup>:

## Big Cliff Detail - 30 days



In this case it appears it would have been possible for Big Cliff flows to decrease at a rate matching flows released from Detroit rather than at the maximum rate allowed. NMFS encourages flow operations that match natural hydrology patterns, such as the longer recession limb of a storm which was more closely mimicked by Detroit flows in this case, because there is a lower likelihood of stranding fish in off-channel habitats and potentially less erosion in downstream habitats. NMFS would like the Corps to provide further information on whether downramping rates at Big Cliff Dam can be decreased to match outflows at Detroit Dam to avoid or minimize negative impacts to listed fish.

Please direct questions or concerns about these comments to Anne Mullan at [anne.mullan@noaa.gov](mailto:anne.mullan@noaa.gov) or Diana Dishman at [diana.dishman@noaa.gov](mailto:diana.dishman@noaa.gov).

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