

November 27, 2017

Memorandum -- delivered via email

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

*AM*

From: Anne Mullan, Endangered Species Biologist, Willamette Branch  
West Coast Region, National Marine Fisheries Service (NMFS)

Subject: NMFS' comments on MFR "18BCL01 Turbine Testing"

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

### **General Comments**

This MOC describes planning for unit outages at Detroit and Big Cliff Dams in January to conduct necessary power generation control and protective systems testing. During this testing, each unit will be cycled between offline and full load, with various intermediate loads. Outages are planned for a single day for each unit between January 23<sup>rd</sup> and January 25<sup>th</sup>. Outages of either of the Detroit units are not anticipated to result in a noticeable change in flow or impact downstream of Big Cliff Dam, as the other unit will be operating during testing. While the single unit at Big Cliff is tested, flows up to 4,000 cfs will be spilled, which may cause elevated TDG and changes in elevation immediately below Big Cliff Dam. This testing is being scheduled in January to avoid the ramp rate deviations observed when similar testing was conducted in July 2017.

NMFS makes the following recommendations regarding the proposed testing;

1. Per the justification described in the MOC, testing should be conducted when flows exceed 3,000 cfs, not simply when they are predicted to be near that value. As a result, flexibility should be built into planning for these tests if the proposed date for Big Cliff (January 25, 2018) does not happen to have high flows. The schedule for testing should be finalized as close to the proposed date as possible to ensure it is conducted when high volumes of spill are already occurring. If necessary, the months of March and April may also be appropriate as prolonged periods of high flows have occurred during these months in recent years at Big Cliff Dam. Along these lines, operators should be prepared to test any of the units during the testing window and opportunistically test the Big Cliff unit on a day which may have originally been scheduled for Detroit if high outflows are observed.

2. Based on previous outages, NMFS is concerned about the potential for the Big Cliff unit to fail to come back online as a result of testing, which would cause a prolonged period of elevated TDG during a very sensitive life history stage for Chinook salmon. The Corps needs to include a backup plan in the MOC comments response for what will be done to limit TDG exposure if the Big Cliff unit doesn't come back online as scheduled.
3. The Corps must communicate with Greg Grenbemer and Minto Fish Facility staff as early as possible prior to testing so their team can anticipate mobilization of sediment and debris as a result of flow changes caused by testing. As noted previously, WFPOM fish agencies, specifically Minto Fish Facility Staff and ODFW regional biologists, must be notified prior to test initiation to avoid damage to critical facilities and equipment and potentially reduce avoidable negative impacts to ESA-listed salmonids.

NMFS agrees that it is likely some sac fry and recently emerged juvenile Chinook salmon are likely to be negatively impacted by elevated TDG below Big Cliff Dam as a result of this testing. However, the short duration of the outage and already high flows being spilled at Big Cliff Dam concurrently with the testing window make it unlikely that the additional effects of this testing will cause substantial negative impacts to ESA-listed salmonids in this reach.

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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