February 11, 2016

Memorandum -- delivered via email

To: Joyce Casey, Portland District, 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 "OFFICIAL COORDINATION REQUEST FOR NON-ROUTINE OPERATIONS AND MAINTENANCE, COORDINATION TITLE - 16CGR01 Unit Outage Debris, COORDINATION DATE - 28 January 2016, PROJECT - Cougar Dam

Thank you for the opportunity to respond to the Memorandum of Coordination (MOC), "FOR NON-ROUTINE OPERATIONS AND MAINTENANCE, COORDINATION TITLE - 16CGR01 Unit Outage Debris, COORDINATION DATE - 28 January 2016, PROJECT - Cougar Dam." We understand that these repairs are critical to the operation of the project and require your immediate attention. We appreciate your efforts to coordinate with us, and we offer the following request for clarifications and suggestions to help minimize effects on listed Upper Willamette River (UWR) Chinook salmon.

This action may have adverse impacts to both juvenile and adult life stages of UWR Chinook salmon. Most significantly, shutdown of both turbine units during the adult migration period would limit attraction to the Cougar adult collection facility because the facility was designed to rely on turbine discharge as attraction flow to the fishway entrance. Juvenile fish may be affected by project ramping during flow manipulations (use of the diversion tunnel), refill after the project is complete, and during dewatering of the cul-de-sac.

The stated issue is an accumulation of woody debris in front of the Cougar temperature control tower. Portions of the project trashrack were compromised, and debris entered a section of the tower (leading into the penstock). We understand that, on 16 January, 2016, an inspection using a remotely operated vehicle (ROV) was conducted that examined the internal trashracks within the Cougar tower and found three, 3x5 foot bottom trashrack panels that were dislodged. The debris found in the units is likely entering through the large gaps in the wet well trashracks. The units will not be operable until these trashracks can be fixed.

In order to repair this, the MOC states that both units will be offline until a path can be determined to operate units safely. During this period, all flow is being routed through the Regulating Outlet (RO). The reservoir will need to be drawn down to dewater the cul-de-sac

area delaying refill of the reservoir. At this point, flow will be routed through the diversion tunnel. Further, the Portable Floating Fish Collector (PFFC) will need to be temporarily relocated during debris removal.

Cul-de-sac Dewater

Please identify the start and end dates of dewatering of the cul-de-sac, as well as the elevation levels that will be maintained during the repair work. Does the Corps anticipate completing the work in March such that reservoir refill will not be significantly affected?

Juvenile fish salvage will be required if the reservoir drawdown is deep enough and lasts long enough to strand fish on banks. Please follow terms and conditions of NMFS' 2008 Biological Opinion with respect to collection and handling of these fish. Please provide us your plan for fish salvage at least one week in advance of the deep drawdown for our review and comment. Please provide a report to us following the operation and fish salvage, including methods and enumeration of the fish collected.

If the project repairs cannot be completed by the end of March, such that the reservoir will fall far short of refill in 2016, NMFS recommends the Corps work quickly with the WATER RME Team to identify juvenile fish monitoring and evaluations that could be carried out this spring and summer to evaluate a "delayed refill" operation. We have previously recommended that the Corps schedule a "delayed refill" in order to monitor juvenile fish response in the reservoir, however, other project purposes (such as power production, temperature control, and recreation) have thus far prevented the Corps from testing this operation. It appears that this repair effort may provide a unique opportunity to test "delayed refill" this year, and NMFS encourages the Corps to make the most of this opportunity. RME concepts that we have discussed previously, and that would be relatively easy to set up in short timeframe include the following: fish behavior in the reservoir using active-tagged juveniles; migration timing through the reservoir, dam (diversion tunnel), and to Leaburg Dam using PIT-tagged subyearlings; monitoring Chinook fry and subyearling distribution throughout the reservoir; and predator abundance and distribution. Increased sampling below the diversion tunnel (and possibly RO, when it is operational) would also be needed.

Project Duration

We note that the MOC does not define project duration, and we have significant concerns for upstream passage of adult Chinook which start entering the South Fork McKenzie in late April and May. If the repairs are not complete (and turbines operating sufficiently to supply necessary attraction flow for adult Chinook to the trap) by April 15, 2016, we respectfully request that the Corps provide attraction flow to the adult fishway using alternative flow (via

pumps or equivalent methods). This could be critical to attracting adult Chinook to the fishway entrance.

Downramping Effects

We share the concern you noted regarding the potential for ramping to occur below the project. We respectfully request that the downramping requirements as established in the biological opinion are adhered to. We request a report back on the results of the operation and a summary of potential effects to UWR Chinook.

Please direct questions or concerns about these comments to Melissa Jundt at melissa.jundt@noaa.gov or 503-231-2187.

c: Tammy Mackey, Chris Walker, Ian Chane, Eric Peterson, Brad Eppard, USACE-NPP
Dan Spear, Julie Doumbia, Christine Peterson, BPA
Ann Gray, Mike Hudson, USFWS
Steve Marx, Bernadette Graham-Hudson, ODFW
Jim Ruff, NWPCC
Lawrence Schwabe, CTGR
Tom Friesen, Fred Monzyk, Cameron Sharpe, ODFW – Research Lab
Melissa Jundt, Kim Hatfield, Marc Liverman, Anne Mullan, Lance Kruzic, NMFS-WCR