

SYSTEM OPERATIONAL REQUEST: #2020-1

PORTLAND DISTRICT

The following State, Federal, and Tribal Salmon Managers have participated in the preparation and support this SOR: NOAA Fisheries, U.S. Fish & Wildlife Service, Idaho Department of Fish and Game, Oregon Department of Fish and Wildlife, the Washington Department of Fish and Wildlife, Nez Perce Tribe, Colville Tribes, Columbia River Inter-Tribal Fish Commission, and the Yakama Nation.

TO:

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FROM: David Swank, FPAC Chairperson

DATE: April 7, 2020

SUBJECT: Bonneville Dam Minimum Tailwater Management for Incubating and Emerging Chum

OBJECTIVE: Maintain a minimum tailwater elevation of 12.5 feet at Bonneville Dam from April 10-20, 2020, during all hours.

SPECIFICATIONS

This SOR seeks to have operators maintain a minimum tailwater elevation at Bonneville Dam of 12.5 feet beginning at the start of spill (April 10, 2020) and continuing through April 20, 2020, during all hours. The Flex Spill Operation will remain unchanged as previously coordinated.

JUSTIFICATION

NOAA Fisheries expressed concern that the current 11.3' tailwater elevation is inadequate to provide depth compensation for incubating and emerging chum when spill begins April 10, 2020. Operational shaping and cold conditions in the upper basin watersheds have resulted in projections of low flows in the Columbia River that have April flow being projected to be lower than usual. Columbia Basin Water Managers could manage discharges to supplement flows in the Lower Columbia River to maintain higher tailwater elevations below Bonneville while not risking projections to meet spring refill objectives.

Most chum redds in the Ives Island area are estimated to be near an elevation of 10.5 feet. This is roughly 0.7 feet below the 2019–2020 minimum tailwater criteria of 11.3 feet as implemented by TMT. The proposed minimum tailwater below Bonneville Dam of 12.5 feet is expected to allow for depth compensation of approximately 2 feet. This tailwater elevation increase is estimated to reduce TDG exposure to emerging chum. This may also benefit other species (i.e., fall Chinook) that spawned in the area.

The effect this operation may have on system operation could depend on the effect of natural flows during the timeframe of April 10–20, 2020. Based on March 30, 2020 STP projections for Grand Coulee, as an example, to meet a minimum tailwater of 12.5 feet at Bonneville could cause an additional draft of two feet beyond that anticipated in the STP. We anticipated that with the natural variability in flows, this operation could realistically cause Grand Coulee to draft as much as five feet, or as little as zero feet beyond that in recent projections. Coordination with BOR, BPA and Corps expressed this change will put minimal risk to meeting spring flow objectives.