

State of Oregon
Comments on
Draft 2004 Water Management Plan, 01/07/04 Fall/Winter Update
January 21, 2004

The state of Oregon has reviewed the January 7, 2004 Fall/Winter update of the 2004 Water Management Plan developed by the U.S. Army Corps of Engineers, Bureau of Reclamation, and Bonneville Power Administration and submits the following comments.

Chum Spawning Flows- The Action Agencies implemented a “stepwise increase” chum spawning flow operation that differed from the NOAA Fisheries’ Biological Opinion RPA Action 15 and the System Operational Request (SOR) 2003-15 submitted by the U.S. Fish and Wildlife, NOAA Fisheries, Idaho Department of Fish and Wildlife, Washington Department of Fish and Wildlife, Columbia River Inter-tribal Fish Commission, Shoshone-Bannock Tribe, and Oregon Department of Fish and Wildlife. The SOR requested a minimum instantaneous tailrace elevation of 11.5 ft when chum are present no later than November 1 as described in the Biological Opinion. The Action Agencies instead chose to implement an alternative operation, beginning with a 11.2-11.5 ft elevation during daylight hours on November 3 and not increasing to the requested range (11.4-11.7 ft) until November 24 after the peak in chum spawning had occurred. There were more than adequate flows to provide the higher tailwaters because of drafts of Albeni Falls to elevation 2051 ft by November 21, heavy local precipitation, and nearly a full reservoir of water behind Grand Coulee that could have been used to augment flows. Instead of providing 11.5 ft tailwater elevations during daylight hours, operators chose to reverse load Bonneville (nighttime flows and tailwaters exceeded 150 kcfs and 15 ft most of November and 200 kcfs and 18 ft in December) to constrain daytime tailwater elevations below 11.5 ft. Daytime tailwater elevations were only increased in November and December because flows were too high to not exceed daily tailwater fluctuation limits at the project.

An additional need for the minimum 11.5 ft tailwater is to allow access of chum into Duncan Creek as part of the Duncan Creek re-introduction program. Access of chum into the creek and operation of the trap was not possible until the third week of November that decreased the number of chum observed spawning in the creek compared to past years

and reduced the number of chum that could be trapped for transport to the spawning channel.

As discussed in the SOR, small increments in tailwater elevations result in large changes in usable chum spawning habitat. For example, based on Habitat modeling by the USFWS, an additional 0.2 ha (50% increase) of chum spawning habitat would be available by only a 0.2 ft increase (11.3 to 11.5 ft) in tailwater elevation. Although chum spawning habitat was probably not limited in 2003 because of fewer spawners, constraining tailwater below 11.5 ft may restrict access to spawning areas in future years of higher spawning escapements (ex: 2002). Video monitoring data from the USFWS has documented night spawning by chum at Ives Island and higher nighttime flows as occurred during reverse load operations in November and December (hourly flows up to 250 kcfs) may disrupt spawning by causing spawners to move off of redds and seek refuge in lower velocity areas. Alternative (constant flow) operations should be considered for next year to provide more stable spawning conditions during day and nighttime hours.

Initiation of Chum Spawning Flows- Oregon is supportive of the Biological Opinion RPA for initiation of flows for chum spawning below Bonneville Dam and for access of chum into Hamilton and Hardy creeks. The Biological Opinion 125 kcfs minimum instantaneous flow target that results in a 11.5 ft minimum tailwater elevation to be initiated when chum are present no later than November 1 is supported by research collected over the last five years. Since 1998, initiation of chum spawning at Ives Island has been very consistent beginning the first week in November (live fish first observed November 2-6 with spawning activity commencing within a day). Since the spawning "window" for chum is very short (less than 10 days after entering freshwater) it is important to not delay implementation of spawning flows especially when routing time of water from the upper Columbia is taken into consideration. As previously discussed, the Biological Opinion already provides substantial flexibility to modify measures for chum spawning including delaying implementation of the operation if poor hydrologic conditions indicate that the operation cannot be sustained throughout spawning and incubation and reduce flows if the operation conflicts with implementation of other Biological Opinion actions (ex: April 10 rule curve elevations and the Vernita Bar spawning flows).