

Fall / Winter Update to the 2008 Water Management Plan

Introduction

The Fall / Winter Update is part of the annual Water Management Plan (WMP). It is intended to supplement the WMP with more detailed information about fall and winter operations. Due to the delay in the preparation of the 2008 WMP this year's update will be a report on what occurred during the Fall / Winter Period.

Current Conditions

The most recent final water supply forecasts were issued in early March and are as follows. The March final forecast will be issued early in March.

Project	Period	Volume (MAF)	% Normal
The Dalles *	Apr - Aug	94.3	101
Lower Granite *	Apr - Jul	23.0	107
Libby **	Apr - Aug	6.4	102
Dworshak **	Apr - Jul	2.8	105
Grand Coulee *	Jan - Jul	62.3	99
Hungry Horse ***	Jan - Jul	2.27	100

* Prepared by National Weather Service

** Prepared by Corps of Engineers

*** Prepared by Bureau of Reclamation

Seasonal (October through February) precipitation was: 109 percent of normal (1971-2000) at Columbia above coulee, 114 percent of normal at the snake river above ice harbor, and 109 percent of normal at Colombia above The Dalles.

The highest March 1st SWE's are in the Cascades ranging from 150 percent of the March 1st average in northwest Washington to 180 percent of average in the Oregon Cascades. Lowest March 1st SWE's are just east of the Cascades in the Similkameen drainage in British Columbia and in the Methow river in eastern Washington at 80 to 90 percent of average. Most areas have March 1st SWE's in the 105 to 115 percent range..

Lake Pend Oreille Kokanee Operation

The state of Idaho and the USFWS submitted a System Operation Request (SOR) in September requesting the Action Agencies draw Lake Pend Oreille down to an elevation no lower than 2055' while minimizing or eliminating the need to spill at Albeni Falls Dam. If possible, reach the elevation of 2055' by November 20, 2007. During the kokanee spawning season, November 20 to December 31, keep the lake within 0.5' above the level set on November 20th ; ideally 2055.0' to 2055.5'. This operational request was in accordance with the draft Decision Tree proposed by IDFG and USFWS that is used as guidance for selecting preferred winter lake operations.

The decision to hold Lake Pend Oreille higher this winter was based on several factors. First, keeping Lake Pend Oreille higher during winter, after a winter of draw down, has been shown to enhance kokanee spawning. The higher lake level inundates shoreline areas that were previously exposed to wave action, and provides an abundance of good spawning habitat. Secondly, the National Weather Service's Climate Prediction Center forecast on September 20th was for above normal precipitation during November, December, and January.

Operation to maintain lake elevation between 2055 and 2055.5 (as measured at the Hope gage) began November 13, 2007 and ended midnight December 31, 2007.

Chum Spawning Flows

It was agreed at the November 7th TMT meeting that chum spawning operation would begin the evening of November 9th. The desired operation was to maintain a tailwater elevation between 11.3 ft – 11.7 ft with a target elevation of 11.5 ft 24 hours a day. Due to the possibility of high flows the 11.3 ft – 11.7 ft tailwater elevation from 1800 – 0600 was made a soft constraint November 8th. On December 4th it was necessary to suspend the operation until December 7th due to high flows. The operation was suspended again from December 12th until December 14th because of high flows. On December 22 the minimum tailwater elevation was raised to 11.8 ft with a tailwater elevation range of 11.8 ft – 12.2 from 0600 – 1800. As of December 24th the operation was changed from a chum spawning to chum incubation with a minimum tailwater elevation of 11.5 ft in effect until further notice.

Burbot Spawning Flows (Non-BiOp Action)

No specific burbot flow requests were made in the Fall of 2007. However SOR 2007-FWS-2 requested that the U.S. Army Corps of Engineers use the selective withdrawal gate system at Libby Dam to release the coolest water possible in November and December, 2007, before temperature stratification limits the temperature control capability. The Corps began removal of the remaining selective withdrawal gates (13 of 18 rows remained in place after spring and summer temperature management) on October 1st, and completed removal of all gates by October 23rd.

Flood Control

Grand Coulee and all Canadian projects will be operated for standard flood control in 2007. Hungry Horse and Libby will be operated for Variable Q Flood Control.

Beginning in January, the COE calculates Upper Rule Curve elevations based on the monthly final forecasts. Projects are operated to these elevations, with the objective of reaching their April 10 Upper Rule Curve.

For detailed flood control operation see <http://www.nwd-wc.usace.army.mil/report/colsum/200802.pdf>

Spring Creek Hatchery Release (Non-BiOp Action)

On March 5 & 6, 2008 the Spring Creek National fish Hatchery released 7.5 million juvenile tule fall chinook..

In order to support this operation:

- 1) Bonneville PH2 corner collector was opened.
- 2) PH2 units were operated as the first priority.
- 3) PH2 units were operated in the lower 1/4 of the 1% best efficiency range.
- 4) At PH1 the MGR units were run as first on, first off all units operated within 1% best efficiency range.
- 5) Spill of 36 kcfs was provided
- 6) A minimum Bonneville project tailwater as Measured at tanner creek of 13.0' to provide a Depth-compensated TDG level of 105% at chum salmon redds Downstream of the Bonneville project as measured at Warrendale.

Vernita Bar spawning operation (Non-BiOp Action)

The final official fall chinook redd survey occurred November 18, 2007. Based on the results of this survey the Critical Flow Elevation was set at the 55 kcfs.

Snake River Zero Flow (Non-BiOp Action)

According to the Lower Snake projects operating manuals, "From December to February, "zero" minimum project discharge is permitted on a limited basis. Under an agreement between the Corps of Engineers and the fishery agencies, zero riverflow is allowed for water storage during low power demand periods (at night and on weekends) when there are few, if any, actively migrating anadromous fish present in the Snake River...Water stored under zero riverflow conditions may maximize power production from the Columbia River Basin system, but zero riverflow operations are not recommended at Lower Snake projects when fish are actively migrating in the Snake River." Nighttime zero flow was discussed at the December 19th, 2007 TMT meeting and it was agreed to operate at zero flow no more than 6 hours between 2200 – 0600 hours starting 2200 hours on January 1st when the Lower Granite Dam fish ladder goes out of service.