

Draft Fall/Winter Update to the 2010 Water Management Plan

November 1, 2009

Introduction

The Fall/Winter Update is an addendum to the annual Water Management Plan (WMP). This draft update is intended to supplement the WMP with more detailed information about fall and winter operations that have occurred or are scheduled to occur during the fall and winter of 2009-10.

Current Conditions

The most recent Corps of Engineers water supply forecast for Dworshak was issued in early October and is included in Table 1. The National Weather Service and Bureau of Reclamation do not prepare official forecasts in the fall. All parties will issue their January final forecasts early in January.

Table 1.- Water supply forecasts for Action Agency storage projects.

Project	Period	Volume (MAF)	% Normal
The Dalles*	Apr – Aug		
Lower Granite*	Apr – Jul		
Libby**	Apr – Aug		
Dworshak**	Apr – Jul	2.8	104
Grand Coulee*	Jan – Jul		
Hungry Horse***	Jan – Jul		

* Prepared by National Weather Service

** Prepared by Corps of Engineers

*** Prepared by Bureau of Reclamation

Seasonal (October 1 through October 26) precipitation was: 161 percent of normal (1971-2000) at Columbia above Grand Coulee, 159 percent of normal at the Snake River above Ice Harbor, and 167 percent of normal at Columbia above The Dalles.

The highest Snow Water Equivalents (SWEs) as of 30 October are in the Montana Rockies, where the SWE is generally greater than 100% of average and up to over 400% of average. Most other areas in the greater Columbia basin have October SWE's in the 25 – 90 percent of average range.

Lake Pend Oreille Kokanee Operation

The state of Idaho (Idaho Department of Fish and Game (IDFG)) and the U.S. Fish and Wildlife Service (USFWS) submitted a System Operation Request (SOR) presented at the September 30, 2009 TMT meeting requesting that the Action Agencies: *“Draw Lake Pend Oreille down to a winter minimum control elevation (MCE) no lower than 2051' by November 15, while minimizing or eliminating the need to spill at Albeni Falls Dam”.*

The SOR further specified that: “as much of the draw down occur by November 8 as reasonably possible. Idaho Department of Fish and Game (IDFG) will monitor arrival time of kokanee at shoreline spawning areas. If kokanee spawning is in progress prior to November 15 and occurs in locations and depths that are deemed vulnerable to continued drawdown, then the Corps of Engineers shall, within 5 days of notification (but not later than November 15), cease drawdown activities even if 2051’ has not been reached. The elevation reached under this scenario would then become the MCE for this winter. The lake will then be held within 0.5’ of MCE to the end of spawning (monitored by IDFG) or December 31, whichever comes first.”

In response to this SOR the Corps implemented a drawdown plan on as agreed to by TMT on September 30. Additional information will be included in the final Fall/Winter update.

Chum Spawning Flows and The Dalles Spillway Construction Operation

Bonneville Dam operations to accommodate chum spawning will begin in early November. As recommended in the 2008 BiOp, the target tailwater elevation below Bonneville Dam during chum spawning is 11.5 ft., with a likely range of 11.3 ft to 11.7 ft. pending TMT agreement. In addition to providing adequate tailwater for chum spawning below Bonneville Dam, the Corps is currently holding the Bonneville pool elevation as measured in The Dalles tailrace at a minimum 76.0 ft in order to accommodate spillwall construction at The Dalles Dam. The spillwall construction is scheduled for to be complete in late March or early April, 2010. The tailwater constraint limits the typical pool operating range flexibility available to operators during November and December and depending on flows, may compromise the Action Agencies’ ability to maintain the Bonneville Dam tailwater elevation criteria for chum spawning during daytime hours. To be updated as information becomes available.

Burbot Spawning Flows (Non-BiOp Action)

Under the terms of an MOU prepared in 2005 by the Kootenai Valley Resource Initiative (KVRI) and signed by the Corps, the selective withdrawal gate system at Libby Dam has been set to release cool water in November and December, before temperature stratification limits the temperature control capability. The purpose of this operation is to provide cooler river temperatures downstream Libby Dam (closer to normative thermal conditions). This operation will likely result in November and December temperatures being slightly cooler than the existing selective withdrawal temperature rule curve. Corps staff at Libby Dam removed selective withdrawal gates incrementally during late October to assure that daily temperature change remains within 2° F per day; gates were removed systematically to slowly lower river temperature by early November (a span of about 8° F). Temperature will not be minimized this fall until isothermal conditions develop due to constraints and precautions that will be observed related to selective withdrawal crane rehabilitation that will occur over the winter, necessitating a more conservative gate removal pattern. Rather than removing all gates (resulting in

withdrawal elevation of 2,222 ft.), the Corps removed all but 3 rows of gates (resulting in withdrawal elevation of 2,253 ft.).

Flood Control

Grand Coulee and all Canadian projects will be operated for standard flood control in 2009-10. Hungry Horse and Libby will be operated for Variable Q (VARQ) Flood Control. Beginning in January, the Corps calculates Upper Rule Curve elevations based on the monthly official final forecasts. Projects are operated using these elevations as an upper limit, with the objective of reaching their spring refill elevations. For detailed flood control operations see: <http://www.nwd-wc.usace.army.mil/report/colsum>.

Vernita Bar spawning operation (Non-BiOp Action)

Redd count surveys are underway. The initiation of spawning has not yet occurred.

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 river flow 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 river flow conditions may maximize power production from the Columbia River Basin system, but zero river flow operations are not recommended at Lower Snake projects when fish are actively migrating in the Snake River". Nighttime zero flow will be further discussed at TMT later in November.