

**DRAFT JANUARY DECEMBER 1122, 20054****Fall / Winter Update to the 20054 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 information about fall and winter operations that is not available when the WMP is written in October, ~~before any information is available about fall/winter water supply conditions.~~

***Current Conditions***

This water year (October 20043 – September 20054) has started off mixed with some parts of the basin wetter than ~~average normal while most parts are and with some parts~~ dryer than ~~average normal~~.

- Information regarding precipitation and runoff in ~~the fall~~ ~~early October~~ is limited to an El Nino/Southern Oscillation (ENSO) forecast. This year, the October ~~and November~~ Southern Oscillation Index (SOI) ~~values were negative was near zero,~~ indicating ~~the potential for a below average a near neutral~~ condition this year.
- The Corps ~~January December~~ April – July forecast for the North Fork Clearwater Basin was ~~1.92.26~~ Maf ~~72909~~% of ~~average normal~~
- The Corps ~~January December~~ April-August forecast for Libby is ~~5.76.19~~ Maf ~~939111~~% of ~~average normal~~.
- The National Weather Services ~~January Final December Mid month January Early Bird~~ April – July forecast for Lower Granite was ~~14.919~~ MAF ~~698890~~% of ~~average Normal~~.
- The National Weather Services ~~January Final December Mid month January Early Bird~~ April – August forecast for The Dalles was ~~74.388.290~~ MAF ~~80956~~% of ~~average Normal~~.
- Precipitation conditions through October ~~2004~~ and ~~January November~~ 200543 ~~were slightly below average in most sub-basins are mixed.~~ The National Weather Service reported that ~~January November~~ precipitation was: ~~7986152~~ percent of ~~average normal~~ (1971-2000) at the Columbia River above Grand Coulee, ~~899540~~ percent of ~~average normal~~ at the Snake River above Ice Harbor, and ~~7783118~~ percent ~~of average~~ at ~~the Columbia River~~ above ~~T~~he Dalles.
- Snowpack is also mixed for this time of year. As of ~~January 10 December 22 January 5th~~, current snowpack in the Columbia River basin ranges from ~~0181306 percent~~ to ~~15202~~ percent of ~~average normal~~ for this time of year.

## **Chum Spawning Flows**

The Action Agencies started the chum spawning operation on November ~~93~~, ~~the same day chum salmon were first observed in the vicinity of Ives and Pierce Islands downstream of Bonneville Dam. Due to adequate water supply in fall 2004, a Bonneville tailwater operation for adult spawning also began on November 1. The NMFS 2000 BiOp states that a chum operation will commence “If the best hydrologic data available by early October indicate that precipitation, runoff, and reservoir storage are likely to support the operation from the start of spawning (late October or early November) until the end of emergence...”~~

~~Also chum salmon were not observed in the area until November 6th. Based on the current hydrologic conditions and presence of fish, the TMT agreed to begin the chum operation several days later than the November 1 start date specified in NOAA Fisheries’ Biological Opinion.~~

The ~~chosen alternative~~ operation ~~chosen~~ was to initiate a stable tailwater elevation in the Ives ~~and Pierce~~ Islands ~~area beginning~~ with an initial targeted daytime tailwater elevation ~~of was~~ 11.32 – 11.75 feet, ~~beginning~~ November ~~93rd~~. This elevation was increased to 11.73 – 12.14.6 feet on ~~December 8. November 13~~. The elevation was increased ~~again~~ to 11.94 – 12.31.7 feet on ~~December 15. November 24~~. ~~On December 12 the range was increased to 11.6 – 11.9 ft. On December 16 the range was increased to 11.8 to 12.1 ft. On several occasions in December it was necessary to allow daily tailwater change exceedences and expanded hours for higher discharges in order to pass high river flows. Also flows were ramped up and back down during day and night hours on 7 dates between November 17 and December 8 for a chum spawning study. The Bonneville tailwater was increased from 11.5 feet up to 15.1 feet in 1.2-foot increments every other hour, then ramped back down again on the same schedule, for the study. 46 until December 19th the daylight time period was reduced to from 0700 – 1400 in order to be able to evacuate water from the lower river. On December 29, 31 the operation was changed from a limiting spawning access to a redd projection operation. The minimum tailwater level was set at 11.98 ft. [Edit when chum spawning ends and an operation is set for fish incubation and emergence.]~~ The alternative operation did not meet the detailed specifications of SOR 2003-15 submitted by the fisheries managers, but this stepwise increase in elevation has been consistent with fish observations in the area, and an increase in local precipitation.

The Action Agencies intend to recommend the “no later than” November 1 start date be modified to a planning date for future years. Another recommendation is that the start of the chum operation be contingent upon the presence of chum salmon in the Ives Island Area. These recommendations will be made in the 2004 implementation plan.

## **Burbot Spawning Flows (Non-BiOp Action)**

~~No specific burbot flow requests were made in fall 2004. However, SOR # 2004-FWS2 dated November 5, 2004 requested that the Corps utilize selective withdrawal structures at Libby Dam to provide the coolest water possible in November and December for burbot spawning. The Corps implemented this SOR. Libby discharges of 20 – 25 kcfs are planned until December 26, then ramped down to the 4 kcfs minimum by January 8, followed by minimum discharge for several weeks thereafter. A draft SOR (2003-3) received October 21, 2003 from the U. S. Fish and Wildlife Service has requested that starting Dec 1, 2003 and continuing until December 22, 2003 flows from Libby be limited to 15 kcfs and follow established ramp rates. From December 23 until January 30, 2004 outflows from Libby should be between 4 and 10 kcfs. Currently Libby is releasing 20 kcfs. The Action Agencies plan on releasing 20 kcfs until an outflow level of 10 kcfs can be maintained. Outflow from Libby was reduced to 10 kcfs December 19. On January 5 outflow was increased to 12 Kcfs.~~

## **Flood Control**

Projects will be operated for flood control in accordance with the Columbia River Treaty Flood Control Operating Plan. ~~The BiOp has requested that a~~ An SOI forecast at Libby ~~has been be used since 2003~~ in November and December as guidance for in-season management. The SOI forecast at Libby will ~~continue to~~ be used for ~~November and December~~ flood control operations decisions ~~in 2004~~. The Corps will use the regression forecasts (Wortman-Morrow) that have been in use since 1983 to determine operational flood control drafts in 2004. Based on the current forecast the Corps is targeting an end of December flood control elevation of 2411 ft. at Libby.

Dworshak was operated to meet its December 15 flood control elevation of 1558 and once the reservoir has evacuated to elevation 1520 in September, the Corp plans to maintain a minimum discharge, approximately 1.3 –1.5 Kcfs, from September through March to enhance the probability of being on the flood control rule curve by April. High discharges (up to 25 Kcfs) may be released to stay on the flood control rule curve, for emergencies, to provide flows for listed chum below Bonneville “dam, or for other project uses<sup>1</sup>.

## **Spring Creek Hatchery Release (Non-BiOp Action)**

The U.S. Fish and Wildlife Service typically releases between 7 and 8 million tule fall chinook fry from the Spring Creek National Fish Hatchery upstream of Bonneville Dam in March. In 200~~5~~<sup>4</sup> the action agencies plan to operate Bonneville Dam with a second powerhouse ~~2~~-priority, ~~to~~ operate all units with fish screens in place, ~~and to~~ operate the

<sup>1</sup> Record of Consultation and Statement of Decision Concerning the Final Updated Proposed Action for the FCRPS Biological Opinion Remand and NOAA National Marine Fisheries Service November 300,2004 Biological Opinion Consultation on Remand for Operation of the Columbia Rivier Power System and 19 U.S. Bureau of Reclamation Projects in the Columbia Basin, January 2005 Page 8.

bypass facility, and operate the second powerhouse corner collector in order to provide project passage for this hatchery release. This is to implement a 3-year agreement, reached in 2004, on Bonneville operations for Spring Creek Hatchery releases. ~~Discussions are still ongoing at this time as to what combination of spill and/or use of the new Bonneville Corner collection will be.~~

### ***Vernita Bar spawning operation (Non-BiOp Action)***

The final official fall chinook redd survey was conducted on November 28~~3~~, 200~~43~~. A total of ~~79483~~ redds were counted (60 kcfs flow elevation and above), including ~~2437~~ redds above the 65 kcfs flow elevation. Therefore, as provided in the Vernita Bar Settlement Agreement, the Critical Elevation was set at ~~6570~~ kcfs. Flow will be measured at the USGS gauge downstream of Priest Rapids Dam. This protection level will be in effect through emergence in spring 200~~53~~.

### ***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 authorized on the lower Snake River effective December 8, 2004, following coordination at a TMT meeting earlier that day. Generation at night may be required to provide project heating during cold weather.