FINAL JANUARY 31, 2005

Fall / Winter Update to the 2005 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.

Current Conditions

This water year (October 2004 – September 2005) has started off mixed with some parts of the basin wetter than average while most parts are dryer than average.

- Information regarding precipitation and runoff in the fall is limited to an El Nino/Southern Oscillation (ENSO) forecast. This year, the October and November Southern Oscillation Index (SOI) values were negative, indicating the potential for a below average condition this year.
- The Corps January April – July forecast for Dworshak inflow was 1.9 maf, 72% of average.
- The Corps January April-August forecast for Libby inflow was 5.8 maf, 93% of average.
- The National Weather Service January Final April – July forecast for Lower Granite was 14.9 maf, 69% of average.
- The National Weather Service January Final April – August forecast for The Dalles was 74.3 maf, 80% of average.
- Precipitation conditions from October 1, 2004 to January 24, 2005 were below average in most sub-basins. The National Weather Service reported that precipitation was: 92 percent of average (1971-2000) at the Columbia River above Grand Coulee, 83 percent of average at the Snake River above Ice Harbor, and 83 percent of average at the Columbia River above The Dalles.
- Snowpack is also mixed for this time of year. As of January 31, current snowpack in the Columbia River basin ranges from 0 to 134 percent of average for this time of year.

Chum Spawning Flows

The Action Agencies started the chum spawning operation on November 9, 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 chosen operation for chum spawning was to initiate a stable tailwater elevation in the Ives and Pierce Islands area with an initial targeted daytime tailwater elevation of 11.3 – 11.7 feet, beginning November 9. This elevation was increased to 11.7 – 12.1 feet on December 8. The elevation was increased again to 11.9 – 12.3 feet on December 15. 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. On December 29, the operation was changed from a limiting spawning access to a redd projection operation. The minimum tailwater level was set at 11.9 feet.

The Action Agencies will continue to coordinate with TMT regarding post-spawning operations to protect chum during the incubation and emergence phases. Decisions will be based on location and elevation of redds at the Ives/Pierce Island spawning area, the potential for below average water supply this year, and the need to refill storage reservoirs to meet flood control elevations by April 10.

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.

Flood Control

Projects will be operated for flood control in accordance with the Columbia River Treaty Flood Control Operating Plan. An SOI forecast at Libby has been 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. 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 feet at Libby.

Dworshak was operated to meet its December 15 flood control elevation of 1558 feet and once the reservoir has evacuated to elevation 1520 feet 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[1].

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 in early March from the Spring Creek National Fish Hatchery upstream of Bonneville Dam. In 2005 the Action Agencies plan to operate Bonneville Dam with a second powerhouse priority, operate all units with fish screens in place, operate the 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.

Vernita Bar spawning operation (Non-BiOp Action)

The final official fall chinook redd survey was conducted on November 28, 2004. A total of 79 redds were counted (60 kcfs flow elevation and above), including 24 redds above the 65 kcfs flow elevation. Therefore, as provided in the Vernita Bar Settlement Agreement, the Critical Elevation was set at 65 kcfs. Flow will be measured at the USGS gage downstream of Priest Rapids Dam. This protection level will be in effect through emergence in spring 2005.

[1] U.S. Army Corps of Engineers. January 2005. Record of Consultation and Statement of Decision Concerning the Final Updated Proposed Action for the FCRPS Biological Opinion Remand and NOAA's National Marine Fisheries Service November 30,2004 Biological Opinion – Consultation on Remand for Operation of the Columbia River Power System and 19 U.S. Bureau of Reclamation Projects in the Columbia Basin. Page 8.

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.