

Subject: Rationale for NMFS' recommended Bonneville Dam operations to support chum spawning in the fall of 2002.

Date: November 12, 2002

The chum operation to date is being operated consistent with the provisions of NMFS' 2000 FCRPS biological opinion. The Opinion does not stipulate that a mainstem spawning operation needs to occur every year. A chum spawning operation is conditional on whether "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". Information regarding precipitation and runoff in early October is limited to an El Nino/Southern Oscillation (ENSO) forecast. This year, the Southern Oscillation Index (SOI) is negative, indicating an El Nino event this year. During an El Nino condition, precipitation is often below average in the Columbia River Basin. The current NOAA long term forecast calls for drier-than-average conditions in the Pacific Northwest during fall 2002. This effect is also reflected in the Corps' early season forecast for flood control operations at Dworshak Reservoir. The October forecast for the North Fork Clearwater Basin was 2.05 Maf. Average runoff is 2.7 Maf for this basin. Also, precipitation leading up to the month of October was well below normal in the Columbia River Basin. Water held in reservoir storage was near normal, however, the availability of water from Lake Pend Oreille would be limited to drafting this project to elevation 2055 this year, as opposed to elevation 2051 last year. Precipitation conditions through October 2002 remained dry, resulting in this being one of the driest Octobers on record. Neither Hardy or Hamilton Creeks were flowing in late October. To summarize, both the long term forecasts and near term precipitation requirements were not satisfied, and reservoir storage was less than optimal. Given these conditions adopting an alternative operation to the 125 kcfs November 1 start date is warranted.

The alternative operation chosen was to initiate a stable tailwater elevation in the Ives Island area beginning early November. The initial targeted daytime tailwater elevation was 11.1 feet beginning November 5. This elevation was increased to 11.3 feet on November 6. The elevation will increase to 11.5 feet on November 13. This stepwise increase in elevation has coincided with fish observations in the area, and an increase in local precipitation. However, the seasonal precipitation to date is still less than 30% of normal and an early season precipitation forecast for the Libby Reservoir Basin is also for a below average volume runoff (81.7%).

Recent information suggests that mainstem chum spawning sites exist at flows below the 125 kcfs level referenced in the Opinion. Observations from last year indicated chum spawned in numerous sites below Bonneville Dam when flows were held below the 125 kcfs level through most of November, 2001.