

## SYSTEM OPERATIONAL REQUEST: #2001-3

*The following State and Federal Salmon Managers have participated in the preparation and support this SOR: Oregon Department of Fish & Wildlife, U.S. Fish & Wildlife Service, Columbia River Inter-tribal Fish Commission, Washington Department of Fish and Wildlife and the Nez Perce Tribe.*

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**FROM:** Christine Mallette, Chairperson, Salmon Managers

**DATE:** April 19, 2001

**SUBJECT:** Operation of Brownlee Reservoir and Upper Snake River Projects for Lower Granite Migration Flows and to contribute to the objective of river operations this year, the improvement of BPA's financial stability

### **SPECIFICATIONS:**

- Evenly draft Brownlee Reservoir from full elevation, 2077.4 on May 1, 2001 to elevation 1976 feet on May 31.
- Refill Brownlee Reservoir from June 1, 2001 through June 30, 2001 with releases, in addition to projected normal operations, of 980 KAF water volume stored in Upper Snake Reservoirs.
- Pass natural inflow, projected to be, 10 kcfs during the refill period.
- Provide as close to the 980 KAF water volume as possible so that spill does not occur at the Hells Canyon Complex.

### **JUSTIFICATION:**

#### **Critical Conditions**

The Pacific Northwest impacts of energy deregulation in California combined with a record low runoff volume has created a financial crisis for the Bonneville Power Administration and a survival crisis for listed and unlisted anadromous fish. The result of this has been that the primary objective of the 2001 hydro system operations is to protect and improve BPAs' financial stability. Several power emergencies have been declared which have resulted in the elimination of critical fish protection measures. Thus far the listed and unlisted stocks of Columbia and Snake River anadromous fish have paid the consequences for all other resource users. This has resulted in a fish emergency. The water required for fish protection measures will not be provided. The intent of this

proposal is to strive for a balance and equity among river uses. All water uses must be included in the objective of maintaining BPA's financial stability and reducing the burden on the listed and unlisted salmon resources.

### **Passage Conditions**

The juvenile salmon downstream passage conditions in the Snake River will be disastrous this year for ESA threatened, endangered and unlisted stocks. None of the Biological Opinion FCRPS measures established to avoid jeopardy will be implemented. The federal parties have chosen to maximize the transportation of smolts in the Snake River as a last resort. Implementation of this "last resort" effort is dependent on the provision of flows to allow downstream migrants to get to Lower Granite Dam, the most upstream Snake River collection point. Past years data collected in low water years of 1977, 1992 and 1994 shows that migration through Lower Granite pool is dependent on the flow level provided. The higher the flow the faster the travel time through the pool. The past years monitoring data also shows that in low flow years smolts may approach the dam and travel back upstream through the pool. The intent of this proposal is to enhance the collection of downstream migrants at Lower Granite Dam, to improve the success of the minimal mitigation measure being provided in 2001.

### **Use of Brownlee for Spring Flow Augmentation**

The utilization of the Brownlee Reservoir volume has been discussed and reviewed on several occasions. Federal water quality temperature standards are violated for most of the summer above Brownlee Reservoir. This has been discussed as a limiting factor for summer flow augmentation (Dreher et al., 2000). This proposal addresses the concerns discussed in Dreher et al., the water temperature limitation at Brownlee Reservoir, by utilizing the flow volume prior to seriously increased water temperature.

The provision of flow augmentation from Brownlee Reservoir, of 980 KAF, is the only available option for Snake River ESA listed yearling migrants. The provision of flow is critical to the downstream migration in the Snake River. The NMFS 2000 Biological Opinion includes the provision of spring flow augmentation from Dworshak Reservoir. Because of critical conditions this year, no spring flow augmentation will be provided from Dworshak Reservoir. Dworshak reservoir releases will be limited to summer flow releases for power production, water temperature mitigation and fish passage. Brownlee remains the only alternative to provide some protection to spring migrants under the current critical conditions. The refill of Brownlee from the upper Snake water sources prior to the summer period is necessary to support BPA financial stability, which is a system and regional priority this year.

### **Fish Passage**

The attached summary of passage travel time data for the Lower Granite pool and for the Lower Granite to McNary reach show that at low flow levels, as are being predicted for this year, each increment of additional flow has a greater beneficial impact on fish travel time. At low flows each additional increment of flow will benefit fish passage and power production, since the federal plan has eliminated spill for fish passage measures.

### **Power Generation**

The proposed fish passage operation should provide a significant contribution to the regional objective of maintaining BPAs' financial stability at the same time that it is providing benefits for fish passage.