SYSTEM OPERATIONAL REQUEST: #99-30

- ***The following State and Federal Salmon Managers have participated in the preparation of this SOR: Oregon Department of Fish & Wildlife, U.S. Fish & Wildlife Service, and Washington Department of Fish and Wildlife.***

TO:	**Brigadier General Strock**	**COE-NPD**
	William Branch	**COE-Water Management**
	Cindy Henriksen	**COE-RCC**
	Bolyvong Tanovan	**COE-RCC**
	Doug Arndt	**COE-P**
	Col. R. Slusar	**COE-Portland District**
	Lieut. Col. W.E. Bulen, Jr.	**COE-Walla Walla District**
	J. William McDonald	**USBR-Boise Regional Director**
	Judith Johansen	**BPA-Administrator**
	Greg Delwiche	**BPA-PG-5**

FROM: **Marv Yoshinaka, Chairperson, Salmon Managers**

DATE: **November 4, 1999**

SUBJECT: **Flows at Bonneville Dam**

SPECIFICATIONS:

As per SOR #99-28, Immediately increase instantaneous flows to 140 Kcfs at Bonneville Dam until November 14, 1999. Continue after that time with the implementation of SOR #99-28.

JUSTIFICATION:

On November 2, 1999 field survey crews observed chum salmon in the Pierce/Ives Island areas. This occurrence is consistent with the expected timing of these fish. The 140 Kcfs was initially recommended in SOR #99-28 to allow chum and chinook access to preferred spawning areas. A detailed justification was provided with that SOR.

We have reviewed both the SSARR of October 31, 1999 and the most recently provided (Nov. 3, 1999) BPA model output. The SSARR model shows an average outflow at Bonneville of 127 Kcfs for the November 4-15 period. Grand Coulee is drafted to 1286.7 feet and Non Treaty Storage (NTS) releases are assumed to be 7 Kcfs. The request for 140 Kcfs through November 15 can be accomplished in this model scenario by simply drafting Grand Coulee to 1282.8 feet. In the BPA model run a flow of 140 Kcfs would necessitate drafting Grand Coulee Reservoir to 1282 feet by November 15. However, the BPA run only has NTS releases of 4 Kcfs. An additional release of 3 Kcfs of NTS from Mica during this period would leave the reservoir at 1283 feet. In other words, both models are producing identical results and show that meeting the 140 Kcfs flow (without violating the Grand Coulee elevation of 1283 feet until November 15th for kokanee spawning) can be achieved.

In addition, field crews observed dewatered fall chinook redds, fish mortalities that may have been related to the dewatering and fish exposed in shallow water. These events occurred in spite of the fact that Bonneville Dam outflow was near 125 Kcfs at the time. Increasing flows to 140 Kcfs for the chum eliminates these occurrences. The following pictures, taken on November 2, 1999 illustrate the extent of these shallow water problems for fish still in water. The following pictures and others can be found at our web site www.fpc.org/Spawning Fish.htm.