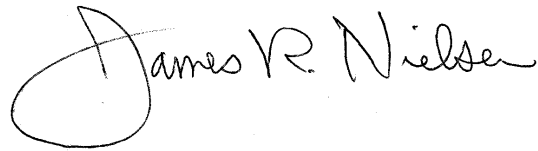


SYSTEM OPERATIONAL REQUEST:#98-5

TO: **Brigadier General Griffin** **COE-NPD**
 William Branch **COE-RCC**
 Cindy Henriksen **COE-RCC**
 Bolyvong Tanovan **COE-RCC**
 Dave Geiger **COE-P**
 John Keys III **USBR-Boise**
 Jack Robertson **Acting BPA-Administrator**
 Greg Delwiche **BPA-PGP-5**
 Mark Maher **BPA-PG-5**



FROM: **Jim Nielsen, Chairperson, Salmon Managers**

DATE: **March 3, 1998**

SUBJECT: **Spill at Bonneville Dam for the Spring Creek Hatchery Release.**

SPECIFICATIONS:

The Salmon Managers* are requesting the following operation at the Bonneville Project for the ten day period following the March Spring Creek Hatchery release:

1. No operation of unscreened units at Bonneville powerhouse I or II;
2. No operation of Bonneville II powerhouse, except to limit daytime spill or to achieve the 110% TDG standard as measured at the Warrendale monitor;¹
3. A 75 kcfs cap on 0700 to 1800 daytime spill for adult passage concerns;²
4. Manage flows to an instantaneous 160 kcfs at Bonneville Dam;
5. Spill at Bonneville Dam up to the 110% TDG cap at Warrendale; at an instantaneous 160 kcfs that should equal 50% of total flow, or 80 kcfs;³
6. Operate Bonneville II ice and trash sluiceway only for ice and trash removal;
7. Operate turbine units within 1% of peak efficiency;
8. Operate juvenile and adult facilities according to criteria.

¹ CRITFC strongly opposes any operation of Bonneville Powerhouse II.

² CRITFC strongly recommends no less than a 100 kcfs spill cap consistent with SOR #96-1.

³ CRITFC strongly recommends that spill is maintained at the 120% TDG level, measured at Warrendale, OR. These measures collectively and individually will significantly increase spring creek migrant survival resulting in protecting and enhancing US/Canadian and tribal treaty fisheries.

These operations are to begin at 2000 hours March 13, and continue through 2000 hours on March 23, 1998.

JUSTIFICATION:

Spring Creek Hatchery is scheduled to release 7.728 million tule fall chinook on the morning of March 13, 1998. Additional releases of this stock will occur during the spring and summer migration season. The importance of these fish has been previously documented.

The current performance of the Bonneville project is significantly below fish passage standards. Recent FGE studies have shown that spill must be provided to augment passage at the first powerhouse to achieve the 80% FPE standard.

The request to maintain flows at an instantaneous 160 kcfs is based on the presence of chum redds below the Bonneville Project. Flows above 160 kcfs will reduce the benefit of spill because of the volume limit on spill imposed by the 110% TDG cap. Below 160 kcfs, the water level over the chum redds will decrease substantially. Concern has been raised regarding the potential impact of TDG levels on these emerging fish. The 160 kcfs flow is expected to maintain approximately 2 feet of depth over the redds allowing some depth compensation to occur. This water level will also offer protection to the fall chinook redds present. The Hamilton and Ives Island area will be closely monitored during this spill event to avoid imposing any potential impacts on these fish. The COE has indicated that the rating curve for Bonneville Dam shows that a spill of 80 kcfs would result in a TDG level of 110% at the Warrendale monitor.

The passage duration of the Spring Creek Hatchery fish has been variable over the historic record. There is no direct relation between the passage speed or pattern and other environmental variables. Fish passage index counts in previous years have shown that significant numbers of fish continue to pass Bonneville Dam during the 10-day period of requested spill (See attached Table). For this reason the ten-day spill period has been requested. In-season monitoring will be used to further consider this duration.

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**The Salmon Managers are state, federal and tribal entities who have legally recognized mandates and jurisdictions to manage salmon resources in the Columbia River Basin. The following have participated in the preparation of this SOR: Oregon Department of Fish & Wildlife, National Marine Fisheries Service, Columbia River Inter-Tribal Fish Commission, U.S. Fish & Wildlife Service, Idaho Department of Fish and Game, Washington Department of Fish and Wildlife.*