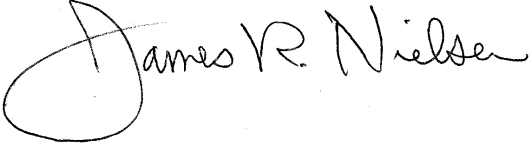


SYSTEM OPERATIONAL REQUEST:#98-7

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 19, 1998**

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

SPECIFICATIONS:

Continue spill operations for the Spring Creek Hatchery release for the entire ten-day period requested in SOR #98-5 (through 2000 hours on March 23, 1998). Additional spill may be requested after this date dependent on smolt passage indices.

JUSTIFICATION:

The fishery agencies and tribes have considered the passage numbers of Spring Creek chinook passing the Bonneville Project over the last several days and recommend the continuation of spill protection for these fish for the full ten-day period requested in SOR #98-5. The importance of this hatchery stock has been documented several times for the operating agencies.

Date	BO1 Passage Index (Hatchery Ch 0)
March 12	40
March 13	22
March 14	68,537
March 15	97,494
March 16	28,897
March 17	11,195
March 18	9,758

As can be seen from the passage data presented in the table above, significant numbers of fish continue to pass the project. We believe the 1998 passage index at Bonneville Dam is underestimating juvenile fish passage at the project. It is also not appropriate to compare the 1998 passage index at Bonneville Dam to past years, or to derive population estimates from the passage index at Bonneville Powerhouse 1. The accompanying graphs show the operation of Powerhouse 1 and 2 for 1997 and 1998. The Spring Creek hatchery fish are released on the Washington side of the river and, consequently, the passage will be predominately through Powerhouse 2 (if it is being operated). From the graphs of the last two years, it is apparent that Powerhouse 2 flow is equal to, or often exceeds, Powerhouse 1 flow during the passage period. However, in 1998 the proportion of flow going through the second powerhouse represents a greater proportion of the total flow. Sampling as described in the table above only occurred at Bonneville Dam Powerhouse 1 and any fish passing through Powerhouse 2 were not assessed. Given the greater proportion of flow passing through this project in 1998, and the greater propensity of these fish to pass on the Washington shore, it is expected that the passage index calculated for BO1 (with an assumed 1:1 expansion) severely underestimates the actual passage of fish.

Sampling at Bonneville Powerhouse 1 only occurs between 1600 and 2400 hours. It is not possible to determine from the data what effect daytime peaking of flows for power generating purposes has on the daytime passage of these juvenile migrants. Again, many migrants are likely to be passing the project and not be accounted for due to the operation of Bonneville Powerhouse 2 and daytime load following.

In addition, adequate protection has not been afforded this stock to-date. Spill was initially limited by the 110% total dissolved gas criteria. SOR #98-5 requested spill as described in the attached graph. Spill that was provided by the operating agencies was far below the requested level, further decreasing the protection afforded this stock. The decreased spill provided during the peak passage period of the Spring Creek Hatchery release and the daily load factoring undoubtedly increased turbine passage and, consequently, mortality at the project.

Given all the information collected to-date the Salmon Managers recommend the continuation of spill at the Bonneville Project for the entire ten-day period as requested in SOR #98-5. We are concerned that measurements of total dissolved gas taken below the Bonneville project by the U.S. Fish and Wildlife Service indicate lower gas levels than registered at the Warrendale Monitor. Therefore, we continue to recommend spilling the levels specified in SOR #98-5. The Salmon Managers will review the data at the end of the ten-day period to determine if continuation of the spill program for this stock is necessary.

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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.*