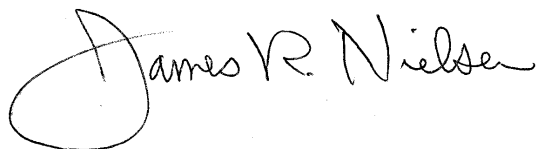


SYSTEM OPERATIONAL REQUEST:#98-1

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: **January 5, 1998**

SUBJECT: **Operations at Bonneville Dam to facilitate chum salmon spawning data collection, to guide river operations.**

SPECIFICATIONS:

Operate Bonneville Dam to maintain constant flows, without fluctuations, of 160 kcfs for at least five hours (1100 to 1700 hours) on January 7, 1998.

JUSTIFICATION:

The U.S. Fish and Wildlife Service (USFWS) and Washington Department of Fish and Wildlife (WDFW) coordinated a field survey of spawning chum and fall chinook salmon in the Ives, Pierce, and Hamilton Islands area on December 15, 1997. The goal of the survey was to collect additional data on the location and extent of spawning activity and/or redds, and to quantify the total spawning area. It was also planned to collect additional data to verify, or further refine, the mainstem flows required to maintain adequate flow through spawning areas.

Direct observations were made of both chum and fall chinook salmon either on or near visible redds. Direct observations of redds were also made in other areas where spawning was complete. One spawned out (live) female chum salmon was captured near a redd with visible eggs, photographed, and released. Some observations were made in shallow water from a boat, but most observations of either fish or redds were made by snorkelers. Precision Lightweight GPS Receivers (PLGR) were used to delineate boundaries of chum and fall chinook spawning areas as well as to mark locations of individual redds or other hydraulic features.

These data corroborate historical survey data collected by WDFW which documented chum salmon spawning downstream from Bonneville Dam in the Hamilton slough area of the Columbia River. Chum salmon spawning was documented in this area in 1976, 1994, and 1995, in addition to the current effort for 1997 spawners. The absence of data on chum spawning in other years is primarily a function of no survey work during the spawning period for chum, rather than the absence of spawning fish. Since Columbia River chum spawning in other years, is primarily a function of no survey work during the spawning period for chum, rather than the

absence of spawning fish. Since Columbia River chum salmon are presently being considered for Endangered Species Act listing, they are of particular interest to the Salmon Managers.

Chum salmon were found to be using discrete areas for spawning located away from the fall chinook spawning areas that had been previously surveyed. The requested Bonneville Dam discharge of 160 kcfs (constant, without fluctuations) for five daylight hours, will allow USFWS and WDFW to collect additional data to determine the discharge necessary to protect the presently established chum redds in these areas. The additional data at 160 kcfs will allow the determination of the effect of main channel discharge on this area empirically and provide a more refined flow level required to protect the chum chinook spawning area.

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