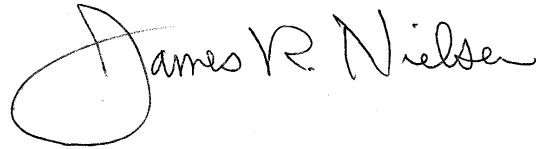


## SYSTEM OPERATIONAL REQUEST:#98-9

**TO:** Brigadier General Griffin COE-NPD  
William Branch COE-RCC  
Cindy Henriksen COE-RCC  
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**FROM:** Jim Nielsen, Chairperson, Salmon Managers

**DATE:** April 7, 1998

**SUBJECT:** System Spill

**SPECIFICATIONS: Implement spill effective immediately as follows:**

**Lower Granite Dam** – Because of the COE imposed 30 kcfs temporary limitation on spill related to barge mooring, the Salmon Managers recommend spilling 30 kcfs, 24-hours per day until the towboat departs on April 9 with the loaded fish barge. After April 9 and prior to the conduct of the surface bypass tests, the COE should implement spill to the gas cap (120%) from 1800 to 0600 hours. Spill less than 60 kcfs did not affect adult passage based on Bjornn et al. 1998 (pers. com.). Consequently, spill to the gas cap (approximately 45 kcfs) is recommended for the full twelve-hour period. During the conduct of the surface bypass testing implement the following:

- At flows up to 60.4 kcfs, spill 5.8 kcfs, 24 hours per day.
- At flows between 60.4 kcfs and 70 kcfs, spill  $(5.8 \text{ kcfs} + (\text{flow} - 60.4 \text{ kcfs}))$  for 24 hours per day.
- At flows greater than 70 kcfs, spill a minimum of 30 % of instantaneous flow for 24 hours per day (not to exceed the 120% TDGS cap).

Hydroacoustic data will be evaluated weekly and spill levels may be modified dependent on the performance of the surface bypass collector.

- \* NMFS favors following the COE's April 9, 1998 proposed contingency plan for spill.
- \* CRITFC would prefer a 30% spill level at all flows.

**Little Goose Dam** – Spill to the 120% TDGS cap (approximately 60 kcfs) from 1800 to 0600 hours. A restriction on spill during daylight hours for adult passage concerns is not required based on Bjornn et al. 1998 (pers.com.).

**Lower Monumental Dam** – Spill to the 120% TDGS cap (approximately 40 kcfs) from 1800 to 0600 hours.

**Ice Harbor Dam** – From 0500 to 1800 operate Unit 1 and spill the balance of flow, up to 45 kcfs. April flows are projected to be in the 50-60 kcfs range for the next few weeks and this operation is feasible. One unit operation should allow capability to maintain a 45 kcfs daytime spill cap for adult passage. Spill total project flow during nighttime hours, up to a tailrace maximum possible TDGS level (not to exceed 120%) until April 9 (this level of TDGS should meet the OR Department of Environmental Quality standard at McNary Dam forebay until the waiver goes into effect on April 10), and up to 120% beginning April 10, 1998. Powerhouse operation during nighttime hours is not of concern for adult passage, and since juveniles will be passing via the spillway, bypass outfall conditions are not an issue.

## **JUSTIFICATION:**

Fish passage efficiency and survival should be considered on a system-wide basis. Spill should be maximized to the extent possible given physical limitations. The hatchery yearling chinook passage index at Lower Granite Dam is over 7000 fish per day, while the wild yearling chinook numbers exceed 6000 fish per day. The wild steelhead passage index at Lower Granite Dam has been between 2000 and 4000 fish per day for the past three days, with hatchery steelhead numbers over 9000 fish per day. PIT tagged hatchery fish are being detected at Lower Granite Dam. Wild steelhead PIT tagged as parr in 1996 and 1997 are being detected as well as hatchery fall chinook. All of the passage index data and tag recovery information indicates that the spring migration is well underway in the Snake River for wild chinook, steelhead, and hatchery chinook yearlings.

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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.*