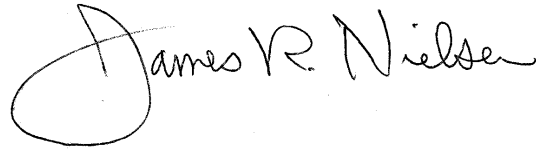


SYSTEM OPERATIONAL REQUEST:#98-4

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: February 25, 1998

SUBJECT: Operation of Reservoirs to Flood Control Elevations.

SPECIFICATIONS:

- Shift flood control requirements from Brownlee Reservoir, maintain Brownlee Reservoir at elevation 2044 until the spring migration begins. The intent is to delay flood control releases to coincide with migration needs.
- Begin refill of Grand Coulee reservoir on March 15; this requires expedition of the drumgate maintenance work. Reduce Grand Coulee outflow by 20 kcfs to about 90 kcfs on March 16, to refill the project to elevation 1263.5 feet by March 31.
- The USBR should optimize operations of Upper Snake River reservoirs, including Palisades and American Falls, to shape required flood control releases to enhance flows at Lower Granite Dam during April. This requires that Brownlee not refill during April.
- Reduce draft of reservoirs in March to reach end of April target elevations by March 31, to avoid refill in April and the resulting reduction in April flows.

JUSTIFICATION:

The February 18, SSARR flow projections indicate that Grand Coulee, Hungry Horse, and Dworshak reservoirs will be below their flood control elevations throughout the month of March. The projects are projected to be filling throughout April. This operation is projected to result in April average flows at McNary, Priest Rapids and Lower Granite that are unacceptably low. Priest Rapids flows are projected to average 91 kcfs, Lower Granite is projected to average 64 kcfs and McNary is projected to average 158.9 kcfs for the month of April.

Grand Coulee reservoir has been drafted approximately 27 feet below its flood control elevation target for March 31, which allows the shift of flood control from the Brownlee project. Based upon the USBR present flood control projections, the Palisades project is required to draft 240 KAF in March and 150-200 KAF in April for flood control. This totals 400 to 440 KAF for flood control releases in April and March. The American Falls project will refill 300 KAF by April 30. This will leave approximately 100 KAF flood control releases to pass through Brownlee in April to enhance flows at Lower Granite Dam. Also, the additional 50 KAF which remains in storage at Brownlee, instead of being drafted for flood control in March, will enhance Lower Granite flows in April; in addition to the scheduled draft of 50 KAF to the April 30 flood control elevation of 2034.

Refill of the Grand Coulee project in the last two weeks of March will decrease the need to refill the project in April. This will maintain the flow requirements at Vernita Bar and Ives/Hamilton islands in March. This will allow Grand Coulee to draft in April rather than refill and will improve April average flows at Priest Rapids and McNary. This operation will shift approximately 600 KAF from the last two weeks of March to April. On the basis of February 18, SSARR projections, this will result in monthly average flows of 100 kcfs for April at Priest Rapids.

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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.*