SYSTEM OPERATIONAL REQUEST: #2002-4

- ***The following State, Tribal and Federal Salmon Managers have participated in the preparation and support this SOR: U.S. Fish & Wildlife Service, National Marine Fisheries Service, Oregon Department of Fish & Wildlife, Idaho Department of Fish and Game, Columbia River Inter Tribal Fish Commission, Nez Perce Tribe and the Washington Department of Fish and Wildlife.***

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Raymond R. Boyce

FROM: **Ron Boyce, Chairperson, Salmon Managers**

DATE: **May 21, 2002**

SUBJECT: Biological Opinion Flow Objective at Lower Granite Dam from May 22, 2002 through May 28, 2002 and Biological Opinion Flow Objective at McNary Dam from May 22 through June 2.

SPECIFICATIONS:
Beginning Immediately:

- Adjust Dworshak outflows in accordance with flows recorded at Lower Granite Dam above the 97 Kcfs Biological Opinion flow objective.
- Begin passing inflows at the Brownlee Reservoir to meet the Biological Opinion flow objective of 97 Kcfs at Lower Granite Dam.[1]
- Meet the Biological Opinion flow objective of 246 Kcfs at McNary Dam. This operation includes the potential drafting of Grand Coulee to 1237 feet and the incorporates the US Bureau of Reclamation agreement on May 15th to not fill Grand Coulee above 1240 feet if the flow objective of 246 Kcfs at McNary Dam is not being met.

Natural flows have increased over the last several days at the Lower Granite Dam and are predicted to remain relatively high for a brief period of time. Last week, in response to SOR 2002-3, TMT decided to limit Dworshak outflows to a 10 Kcfs minimum, as opposed to dropping outflows to the 1.5 Kcfs minimum. Due to predicted increasing flows above the Lower Granite Dam, we are requesting that the refill of the Dworshak reservoir be managed to maintain

[1] IDFG would not object to Idaho power Company's voluntary participation.

the NMFS Biological Opinion flow objective of 97 kcfs at Lower Granite. This proposal is designed to both take advantage of the runoff to refill the Dworshak reservoir and improve migration conditions for salmon and steelhead. The following operation is suggested:

> When flows at Lower Granite exceed the 97 Kcfs flow target, adjust outflow at Dworshak in accordance with the level at which the flow target is exceeded at Lower Granite, down to the minimum flow of 1.5 Kcfs. For example, if flows at Lower Granite exceed the 97 Kcfs flow target by 6.0 Kcfs, outflows at Dworshak could be lowered to 4.0 Kcfs. Conversely, if flows at Lower Granite Dam are below 97 Kcfs the outflow at Dworshak would be increased to meet the 97 Kcfs Biological Opinion flow target up to a maximum outflow of 10 Kcfs at Dworshak.

Flows at McNary continue to be very low. Last week, TMT agreed (5-15-02) to draft Grand Coulee down to 1237 feet AMSL to meet a 220 Kcfs minimum flow at McNary with the goal of meeting the Biological Opinion flow objective of 246 Kcfs. Since this time, average daily flows have not met the 220 Kcfs minimum at any time (average over the period from 5-15-02 to 5-19-02 was 209.6 Kcfs). The operation discussed at last week's TMT meeting was to draft Grand Coulee to a minimum of 1237 feet AMSL to provide a minimum average daily flow of 220 Kcfs[2] at McNary, and not fill above 1240 feet at Grand Coulee if the 246 Kcfs is not being met.

While flows in the lower Snake and Columbia rivers remain low, the Brownlee Reservoir continues to refill. As of midnight on 5-20-02, Brownlee was at an elevation of 2073.8 feet AMSL, 3.2 feet from full. It is proposed that Brownlee immediately stop refilling and begin passing inflow.

JUSTIFICATION:

The NMFS Biological Opinion flow targets have not been met for the entire spring migration period in the Snake and Columbia Rivers. Throughout the spring period, reservoir operators have provided minimal reshaping of runoff volumes, which has not been successful in achieving Biological Opinion migration flows for juvenile steelhead and chinook salmon.

The attached cumulative passage plots of the Lower Granite and McNary dams illustrate the current passage pattern and distribution. From inspection of these plots, the influence of low river flows on delay, passage distribution, and passage magnitude is clear.

Yearling chinook and steelhead smolt passage indices at Lower Granite Dam have oscillated over the last 15 days in response to changes in river flows. Between May 4 to 8, daily average flows were 75 Kcfs, dropping to 59 Kcfs during the next five days, and rising again to 67 kcfs during May 14 to 18. During these same 5-day intervals, yearling chinook passage indices have averaged 137,000 fish, dropping to 37,000 fish, and rising to 52,000 fish. In the two days of May 18 and 19, yearling chinook passage indices have risen above 70,000 fish, so greater numbers of yearling chinook are passing Lower Granite Dam again. A similar trend has been recognized with steelhead. Between May 4 to 8, steelhead passage indices averaged 66,000 fish, dropping to 24,000 fish during the next five days, and rising slightly to 28,000 fish during the 5-day interval ending May 18. In the two days of May 19 and 20, steelhead passage indices have risen again to levels above 60,000 fish. Increased passage indices have also been seen at

[2] It should be noted that the 220 Kcfs minimum flow objective at McNary is well below the BiOp objective of 246 Kcfs.

Little Goose Dam during the past few days. Little Goose Dam saw a large passage day on May 18 with 211,000 yearling chinook smolts and on May 20 with 130,000 steelhead smolts. Overall, there appear to be large numbers of Snake River basin yearling chinook and steelhead still in the river between Lower Granite and McNary Dam at this time and increases in flow would be beneficial to move these fish out of the Snake River and into the lower Columbia River before the end of the month.