



April 7, 2004

Mr. Stephen J. Wright
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Bonneville Power Administration
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Brigadier General William T. Grisoli
Commander and Division Engineer
U.S. Army Corps of Engineers
Northwestern Division
P.O. Box 2870
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Dear Sirs:

The PNUCC members support your March 30, 2004 proposal to replace the August portion of summer spill with more cost-effective offset alternatives. The proposal is a good first step to increase the cost-effectiveness of the Northwest salmon recovery efforts. Ultimately, the package of offsets will provide the same or greater biological benefits than the current summer spill regime, while injecting an additional \$100 - \$125 million into the economy over the next three years.

The agencies' proposal to implement specific alternatives to summer spill is a solid example of applying adaptive management as was intended in the 2000 Biological Opinion to cost-effectively achieve our regional salmon goals. PNUCC applauds the amount of time and work that BPA, the Corps and other federal agencies, in consultation with NOAA, have devoted in recent months to the planning and analysis of the range of options for improving both Columbia and Snake river salmon runs.

The offsets presented in the proposal appear to be conservative in their estimates of benefits. Earlier analyses suggest that expansion of the proven Northern Pikeminnow Bounty and Hanford Reach Anti-Stranding programs would more than mitigate for the losses due to decreasing spill the proposed amount. However, we recognize the lack of agreement surrounding the certainty of the benefits. We can therefore support some additional offsetting measures as long as they are within the framework of meeting the biological criteria of no net loss using proven cost-effective measures. To that end, the

attachment is our thoughts on several of the offsets that have been considered in the past several months.

Many of these offsets make sense. Predator controls and harvest reductions have the advantage of helping all salmon stocks, ESA listed and non-listed. Investing in hatchery programs has the advantages of being targeted and quantifiable, allowing the region to help specific salmon stocks and being able to evaluate the results. PNUCC believes that these actions will do the most for salmon populations at the least cost to the region.

Thank you for stepping out with this proposal and considering our comments. The PNUCC members care greatly about improving the survival of Northwest salmon and the region's economy.

Sincerely,

A handwritten signature in black ink, appearing to read "Dick Adams". The signature is fluid and cursive, with the first name "Dick" and last name "Adams" clearly distinguishable.

Dick Adams
Executive Director

cc: Bob Lohn, NOAA Fisheries
William McDonald, Bureau of Reclamation
Dave Allen, US Fish and Wildlife Service
NW Power & Conservation Council
NW Governors

Attachment

Cost-Effective Alternatives to Summer Spill

Enhanced Northern Pikeminnow Management

This is a proven program that can be enhanced further. Staff with the Oregon Department of Fish and Wildlife (ODFW) contracted with BPA to study the effects of Northern pikeminnow predation on outmigrating juvenile salmonids. The estimated mortality on salmon and steelhead was so significant that BPA funds an annual program that pays a bounty to anglers that catch Northern pikeminnow. Both the ODFW and WDFW staff sites along the Columbia and Snake Rivers to register anglers and record their catch each day. Since inception, over two million pikeminnow have been removed from the basin with an estimated reduction of juvenile salmonid mortality of 25%. As a result, an estimated four million more juvenile salmonids survive to the ocean each year.

Currently, anglers are allowed to fish in waters only open to the public. Yet there are significant predator populations located in the immediate vicinity of the dams within the Boat Restricted Zones (BRZs). We propose that the federal agencies implement a more site-specific removal program in the BRZs. Notably, when juvenile salmonids pass a dam, either through a spillway, turbine or juvenile bypass system, they are typically exposed to significant turbulence. As a result, they are more likely to be disoriented within the BRZ and therefore more prone to be eaten. Removing predators in the BRZ will likely have a more significant benefit to the survival to juvenile salmonids than removing predators in the open water between the dams. We make this recommendation with the understanding that there are safety issues associated with operation of small craft within the BRZ. The Corps will need to take a look at how this type of increased predator removal can be implemented without jeopardizing human health and safety.

Anti-Stranding Flow Fluctuations Limits in the Hanford Reach

No party questions the biological benefit provided here. The program could result in long-term, legally binding obligations for protection of rearing fall chinook and with added protection relative to anything done in the past. BPA's participation in this program is necessary to realize the full benefit of this operation. For these reasons, the proposed program is a valid offset to be credited against the elimination of summer spill.

Grant Co. PUD (Grant) did not include the program in its FERC re-license application because it had not been negotiated and signed. The program provides significantly more protection (flow fluctuation limits and 10-year duration) for rearing fall chinook than the voluntary contributions it described in its application. Further, Grant does not have a mitigation obligation for mortality due to stranding of fall chinook in its current FERC license. Grant's mitigation obligation was established for reduced spawning habitat caused by the construction of its dams. That mitigation calls for the replacement of five million fall chinook smolts that Grant provides via its hatchery program.

Grant will be providing up to 7.7 million smolts in the future from its hatchery – exceeding its current requirements. The excess smolts provided will specifically be for mitigation of unavoidable mortalities related to the impacts of flow fluctuation. The

combined effect of additional hatchery production and the proposed river operations program during the rearing period more than mitigate for the expected loss of juvenile fish from stranding.

Commercial Harvest Reductions

Limiting the non-tribal commercial gill net fishery in the lower Columbia River can be an effective strategy. The non-tribal commercial fishery utilizes gill nets that cause a significant mortality of non-target fish, including significant numbers of ESA listed salmon and steelhead stocks. When using a gill net to catch fall chinook, significant numbers of other non-target species are caught and killed. By reducing the non-tribal commercial fishery, the impact to non-target ESA listed fish is reduced. Hence more fish can be allocated to a selective sport fishery and more fish can be allowed to continue upstream to reproduce and further build populations for the future.

Reducing commercial harvest, whether through a voluntary compensation program or through a federal mandate, would have very measurable effects on salmon populations. According to actual non-treaty commercial harvest data from 2003, a 1% reduction in lower river non-tribal commercial harvest would provide at least 80 ESA listed Snake River fall chinook salmon escaping upriver. This would provide more than 4 times the mitigation needed from the most severe adverse affects to listed Snake River fall chinook salmon.

Artificial Production Improvements

The vast majority of non-listed stocks not fully offset (except the Deschutes River population) are hatchery fish or are naturally spawning fish supplemented by hatchery releases. Increasing production and/or slightly modifying the operation of these hatcheries could provide a cost-effective offset for summer spill. Even the listed Snake River fall chinook population is significantly influenced by hatcheries because many Lyons Ferry hatchery fish (considered important to the recovery of the ESU) are allowed to spawn naturally as adults.

Knowing that fall chinook hatchery releases constitute the bulk of the fish that are not offset, additional hatchery production could be used to compensate for the losses. That is, the estimated losses in juveniles could be replaced with commensurate hatchery production. Overall, the additional fish production would be relatively small and should not pose significant risks to other stocks.

In certain programs, operators could consider raising and releasing yearling fall chinook instead of subyearlings. Yearlings are generally released in March and April and will have migrated out of the hydrosystem before the end of summer and therefore will not be affected by summer spill reductions. Yearlings also generally have higher survival rates than subyearlings. There are probably several other rearing and release strategies that could be proposed by hatchery operators to compensate for losses.

As just noted yearlings released in the spring are not effected by spill reductions in August. The estimates of fish losses should be adjusted to reflect this. The Umatilla fall

chinook juveniles are primarily hatchery releases – 480,000 yearlings and 600,000 subyearlings. The yearlings are released in March and April and are probably not affected by reductions in August spill. The Lyons Ferry hatchery also releases 450,000 yearlings.

Avian Predation Research

We understand that the Corps is moving forward with part of this work because of the likely benefits. Although it may not be possible to fully implement this offset measure until 2005, the offset as proposed would reduce the number of Caspian terns in the lower estuary by 2,500 to 4,500 pairs. This reduction would result in an estimated additional 350,000 to 500,000 juvenile salmonids surviving to the ocean each year. This measure has a proven record. Even under the restrictions imposed by the court under the Migratory Bird Treaty Act, relocation of terns from Rice Island to East Sand Island reduced predation mortality by 50%, saving four to eight million smolts per year.

Smallmouth Bass Control

Smallmouth bass are another source of salmonid mortality that has been largely overlooked as a possible salmon recovery strategy. Controlling smallmouth bass, which are a non-native species introduced for the sport fishing industry, was identified by the collaborative offset group as a way to mitigate for the effects of summer spill. While eradicating these predators is not realistic, they can be controlled where their impact on salmon is greatest, thus decreasing one of the major sources of juvenile salmonid mortality.

Recent research by the Corps identified very large populations of smallmouth bass associated with dams, especially The Dalles Dam. A recent turbine survival study was cut short because predatory fish was eating test fish before they could be retrieved. Additionally, smallmouth bass populations are dramatically increasing above the Lower Snake River dams.

In the Washington Statewide Strategy, the Governor's Office said that
Non-indigenous predatory fishes such as walleye, smallmouth bass and channel catfish, and native species such as northern pikeminnow (squawfish), have been found to consume significant numbers of juvenile salmonids.

We support site-specific removal of smallmouth from the BRZs around each dam to reduce predation on juvenile salmonids.

Additionally, smallmouth populations can be further controlled in other areas of high predation by varying the reservoir elevation during the spring. Drafting the reservoirs for a short interval in the spring would disrupt the reproductive success of smallmouth bass, thereby further reducing the population. This operation may also affect other non-native predatory species.