

MAR 22 2000

Federal Caucus Comment Record  
c/o BPA-PL  
707 W. Main St., Suite 500  
Spokane, WA 99201

March 15, 2000

Dear Federal Caucus:

Thank you for providing us with the opportunity to comment on the Federal Caucus' Draft All-H paper. These comments provide part of Idaho Rivers United's formal input; additional input on the draft documents will be incorporated into a more detailed set of comments submitted by the Columbia & Snake Rivers Campaign/Save Our Wild Salmon (SOS) Coalition.

Idaho Rivers United is a non-profit river conservation organization representing nearly 1,800 members from Idaho and the Northwest. In 1995, we became one of the first organizations in the nation to endorse breaching the four lower Snake River dams as the surest way, and likely the only way, to restore ESA-listed Snake River salmon and steelhead stocks to sustainable, harvestable levels. We consider Snake and Columbia River salmon recovery to be one of the most important conservation issues of the new century, and one of the most daunting challenges ever faced by the people of the Pacific Northwest.

Our comments are presented in 7 major categories. We begin by commenting generally on the science and economic analyses used (or not used) in the Draft All-H paper. Next we present comments on each of the four conceptual recovery options described in the Draft All-H paper. We then offer a few final conclusions.

### Science

We believe the greatest single shortcoming of the Draft All-H paper is that it presents a menu of four conceptual recovery options as if each option has an equal probability of restoring ESA-listed fish stocks within the same time frame, and as if each option is equally beneficial from a biological standpoint. Clearly, the "integrated options" are not created equal. For example, while breaching the four lower Snake River dams offers major biological benefits for ESA-listed Snake River salmon and steelhead almost immediately, a strategy that relies alternatively on major habitat improvements would require decades to produce measurable effects.

Similarly, while breaching the lower Snake River dams would have major biological benefits for all four ESA-listed Snake River salmon and steelhead stocks (especially fall chinook), a plan that relies instead on harvest constraints would benefit only those stocks which are heavily impacted by harvest (fall chinook and B-run steelhead).



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An accurate context for the integrated alternatives requires the Federal Caucus to state clearly the biological benefit of each recovery strategy in the Final All-H paper in empirical terms, and the amount of time required to realize those benefits. This might be done by stating the percentage increase in each ESA-listed population for each recovery option (as in the multi-Species Framework), by stating the improvement in SARs, by stating the improvement in adult recruitment ratio, or by stating the probability of recovery for each ESA-listed stock over a given time frame – as was done by PATH.

**Given the high risk of near-term extinction for many ESA-listed stocks (e.g., Snake River spring/summer chinook), it is absolutely critical that the Federal Caucus describe the desired effects of each recovery option, and the time frame required for each recovery option to produce those effects.**

Because of major errors and inconsistencies currently uncorrected in CRI, we believe that the PATH process, and not CRI, is the best current source of scientific information for decision making in the Hydro "H". The PATH process has been called the most comprehensive, peer-reviewed natural resource modeling effort ever conducted anywhere (Marmorek 1999). Unlike CRI, PATH has withstood rigorous peer-review, and is a collaborative effort of NW states, tribes, multiple federal agencies, and independent scientists. In his 1993 court ruling, Federal District Court Judge Malcolm Marsh made it clear that any comprehensive salmon recovery plan for Columbia basin fish stocks must be a collaborative effort that includes the states and tribes. CRI has failed to fulfil that requirement; in fact, CRI has been broadly criticized by the states and tribes.

We also believe the Draft All-H paper must incorporate the conclusions of PATH's Weight of Evidence (WOE) process and the Scientific Review Panel (SRP) report. These are critical omissions, because these reports concluded that smolt transportation was unlikely to be a viable recovery tool for ESA-listed Snake River stocks, and largely discounted the hypothesis that the benefits of smolt transportation might be masked by extra/confounding factors (e.g. ocean regime shift, BKD, stock viability, etc.).

#### ***General Comments on the Cumulative Risk Initiative***

- CRI focuses on a narrow set of poorly-supported assumptions relating to the differential delayed mortality of transported and in-river spring/summer chinook juveniles to conclude that the natural river option may not offer significant benefits over transportation-based options. Then, NMFS goes on to say that more research is needed to resolve key scientific uncertainties, and that waiting until this information is obtained does not significantly increase extinction risk. Mundy (1999) disagrees strongly with this assertion, showing in his 1999 study that the risk of further delaying recovery actions for ESA-listed Snake River spring chinook is in fact extremely high.

- CRI largely ignores critical elements of the PATH report that compare survival rates of upriver and downriver stocks. These stocks (e.g. Yakima and Snake chinook) experience closely similar life histories, but exhibit major differences in survival, measured by smolt-to-adult returns (SARs). These comparisons are a compelling indicator for determining whether any proposed strategy (e.g. smolt transportation) has compensated for adverse effects of the lower Snake River dams. And, the data clearly indicates that compensation for the adverse effects of the dams has *not* been accomplished.
- The "D" (differential delayed mortality) values used in CRI were overly optimistic (NMFS selected a value in the 95th percentile) for spring/summer chinook smolts. Whereas NMFS chose a D-value of 0.8, a more reasonable assumption based on actual observations of transportation related delayed mortality is 0.4 (IDFG 1999).
- NMFS and CRI state that further studies could reduce the uncertainty surrounding "D," but does not specify what types of experiments might accomplish this, in a timeframe that does not subject listed stocks to an unacceptably high extinction risk. In addition, extremely small returns of wild spring/summer chinook adults and smolts may preclude estimating reach survivals and SARs for non-detected fish.
- CRI does not speak of recovery in terms of the smolt-to-adult returns (SARs) that are needed to maintain (SAR = 2 percent) and recover (median SAR = 4 percent) ESA-listed Snake River stocks. Independent peer-reviewers have concluded that "unless a minimum level of survival is maintained for ESA-listed stocks sufficient for them to at least persist, the issue of the effect of smolt transportation is moot (Mundy et al. 1994)."
- CRI analyses for ESA-listed Snake River spring/summer chinook use only brood year data from a decade or two ago (1980-90 brood years), ignoring the 1991-94 brood year data that are now available. Because these populations have been declining at an accelerating rate, NMFS' selection choice of older data produces overly optimistic results (Oosterhout 2000), and understates the true extinction risk.
- CRI models ignore population and environmental trends, focusing instead on average population growth rates. Focusing on average population growth rates from the 1980s has a similar effect to assuming that conditions today are no worse than they were a decade or more ago, further understating actual extinction risk.
- The CRI results reach a questionable, indefensible conclusion that improved habitat quality in headwaters rearing areas is the number one management tool for recovering Idaho's spring/summer chinook populations. This defies empirical evidence, when spring/summer chinook in Idaho currently have 3,700 miles of high-quality spawning and rearing habitat available, with over 1,000 river miles located in pristine, undisturbed, federally-designated wilderness areas (IDFG 1998). Further, the health of

resident native species (e.g. Cutthroat in the Middle Fork Salmon River) in these undisturbed watersheds confirms the habitat quality available for anadromous fish stocks.

If tributary habitat conditions were a major cause of salmon declines since the four lower Snake River dams were constructed, one would expect that stocks in relatively healthier habitats would have outperformed stocks in degraded habitats. That has not been the case: performance has been uniformly poor regardless of habitat conditions (IDFG 1998).

- CRI analyses assume smolt-to-adult ratios (SAR) that are four times higher than the actual SARs measured for many years, and survivals to age one that are about one-fourth of what they are generally observed to be (Oosterhout 2000). This problem ripples through the CRI models because the unrealistically high estimates of post-Bonneville smolt-to-adult survival force the models to use unusually low estimates of egg-to-smolt survival, which is inconsistent with available data. Actual SARs must be used in CRI modeling.

***When the correct SARs and brood year survival data are used, CRI results fall closely into line with PATH conclusions. It is then post-Bonneville survival, including the delayed impacts of hydrosystem passage and/or juvenile transportation, that becomes the most important management focus, rather than first-year freshwater survival.***

- In selecting a quasi-extinction definition of one or fewer fish in a stream for one year, CRI chose one of the least conservative standards possible, not a more conservative one. The Federal Caucus concedes this on page 25 of the draft All-H paper: "The quasi-extinction threshold of one fish in one year may not be sufficiently conservative." We agree that it is not nearly conservative enough.

To account for compensatory population dynamics - meaning that once a population has dropped below a certain level, the damage is irreversible and the population is doomed - CRI must set a much higher quasi-extinction threshold. For example, the standard for population survival used by PATH was 150 -300 fish, depending on the population. "Raising the extinction bar" to appropriate levels results in a much more realistic assessment of extinction risk for individual stocks and, accordingly, dramatically increased extinction risk with further delay of recovery actions.

### **Economics**

The second greatest shortcoming of the Draft All-H paper is that it offers a range of comprehensive recovery alternatives without putting comparative price tags on them.

For example, one of the four alternatives described in some detail – the aggressive non-breach Alternative C - would involve tough new habitat restrictions with major economic impacts on logging, mining, grazing, and agricultural practices, and additional flow volumes from the upper Snake River to achieve target flows. The only reference to the cost for this option comes from the Framework's estimate that it could have a \$100 million per year impact on the timber industry (pg. 39). There is no reference at all to the cost of additional flow augmentation, probably in the range of \$430 million per year, according to the BuRec, or to the high costs of keeping all dams and complying with the Clean Water Act. These costs must be developed, or extracted from other Forums like the Multi-Species Framework Project.

***These costs must be detailed to inform the region and the nation, so that policy makers can make salmon recovery decisions that are based on economic realities and comparative costs.***

Any comprehensive recovery plan that does not include breaching the four lower Snake River dams must include: cost estimates of habitat protection and restoration strategies required, costs of additional flow volumes required from the upper Snake or Columbia Rivers to achieve target flows, costs of Clean Water Act (CWA) compliance measures for lower Snake River projects, costs of improved fish passage structures, etc.

Estimates for some of the above costs might be extracted from other sources. The Multi-Species Framework reports that new habitat restrictions would cost the timber industry at least \$100 million annually. The Bureau of Reclamation (1999) found that an additional 1 million acre-feet of water from the upper Snake River to improve flows would cost between \$151.3 million and \$1.3 billion annually, and result in the loss of 4,203 to 6,530 jobs. Federal documents estimate the cost of CWA compliance in the lower Snake River at \$125 million annually.

In addition, the Federal Caucus must estimate and consider in the All-H paper the price of extinction – in terms of potential reparations or judgments that would likely ensue from litigation by Columbia basin treaty tribes (Shoshone-Bannock, Nez Perce, Umatilla, Yakama, and Warm Springs nations). If ESA-listed Snake River salmon and steelhead are allowed to go extinct because NMFS selects an inadequate recovery plan, the tribes have threatened to file lawsuits that NMFS concedes could cost US taxpayers \$10 billion or more.

And finally, the Draft All-H paper currently fails to discuss the opportunities and strategies needed to mitigate adverse impacts that would result from actions in the four alternatives described. This is very disappointing, especially so in view of the Draft All-H paper stating that one of the primary goals of a regional fish recovery plan is to,

"...implement salmon and steelhead conservation measures in ways that minimize adverse human effects." (pg. 2)

A comprehensive discussion of mitigation must include the following, at a minimum:

- What strategies are available to adjust and improve shipping infrastructure in the lower Snake valley, to replace lost barge transportation?
- How might irrigation systems be modified to continue drawing water from Ice Harbor pool if the lower Snake River dams are breached?
- How might farmers and water users in southern Idaho, eastern Washington, or eastern Oregon be compensated for water volumes needed to achieve target flows, necessary in non-breaching scenarios? How might the impacts of associated economic losses be mitigated?
- How might sport, commercial, tribal fishermen, and fishing-related businesses be mitigated, if harvests are further reduced or salmon stocks lost?

#### **Conceptual Recovery Options:**

##### **Alternative A. Remove the four Lower Snake River dams**

***This is Idaho Rivers United's preferred option for restoring ESA-listed Snake River salmon and steelhead stocks.***

To maximize the biological benefits of this option, it is critical that the lower Snake River dams be breached as quickly as possible. We recognize that additional measures in the other Hs will be needed to conserve and recover the other 8 ESA-listed salmon and steelhead stocks in the mid- and lower Columbia River, as well as to recover other native ichthyofauna such as white sturgeon, Pacific lamprey, bull trout, westslope cutthroat trout, and molluscs in the Snake River.

We suggest that this option should include the following measures:

- Flow augmentation from the upper Snake River above Brownlee Dam should no longer be required, unless limited to "willing-buyer, willing-seller" arrangements year-to-year. Flow augmentation in the Snake may continue from Dworshak Reservoir, as a valuable source of exceptionally cool, clean volumes of water. This water, and additional flows volumes from Idaho Power Company's Hells Canyon Complex, may be required to normalize flows below Hells Canyon and to cool river temperatures for migrating Snake River fall chinook.

- Habitat restoration should be accelerated only where degraded salmon spawning and rearing habitat can be improved significantly. Examples of such areas are in the Clearwater River drainage – where logging, roadbuilding, and mining continue to have some adverse impacts on fish; and in the Pahsimeroi River, East Fork Salmon River, Lemhi River, and Yankee Fork Salmon River – where improvements can be made, but currently do not limit the overall recovery potential of Snake River salmon, with so much pristine habitat available.

INFISH and PACFISH standards should be applied to all federal *and* state lands in critical habitat areas. Economic incentives should be offered to private landowners in order to facilitate fencing of riparian areas, reducing or eliminating harmful diversion dams, screening irrigation ditches, and conserving water.

- Juvenile salmon and steelhead in the mid- and lower Columbia River should be left in-river to pass through existing dams using flow and spill to maximize survival. Restore normative flow conditions from Priest Rapids Dam to McNary pool, and from Hells Canyon dam to the Columbia, achieving target flows in all river reaches of the Snake and Columbia with revised flood control strategies and flow augmentation (esp. in the upper and mid-Columbia, with all dams in place). Update the FCRPS operating model to incorporate VarQ strategies and Integrated Rule Curves (IRCs) in storage facilities, and a normalized hydrograph below storage facilities.
- Flow augmentation from headwaters areas in Montana, Washington and British Columbia should be geared toward maximizing biological benefits for mid- and lower Columbia River stocks, while minimizing adverse impacts to native resident fish such as bull trout, westslope cutthroat trout, and white sturgeon. We believe the best way to do this is to implement Integrated Rule Curves (IRCs) and VarQ methods at upstream storage projects (e.g., Libby, Hungry Horse) to benefit resident fish, and to restore a more natural hydrograph, with no significant loss of flood control.

#### **Alternative B. Harvest Constraints**

We believe this recovery option yields the fewest biological benefits of the four major recovery options, and unfairly places the burden of recovery on the backs of those who have already made significant sacrifices to date in the name of conservation.

While this option would yield benefits for a few ESA-listed Snake River stocks (e.g., fall chinook and B-run steelhead), it would do little for other stocks that do not currently suffer significant harvest impacts (e.g., sockeye and spring/summer chinook). This option also accomplishes little for other species of special concern, such as white sturgeon, Pacific lamprey, bull trout, and westslope cutthroat trout.

It makes little biological sense to pin the hopes of Snake River salmon recovery on sharp cutbacks in ocean fisheries when only one ESA-listed stock, Snake River fall chinook, is intercepted in significant numbers there. According to the Alaska Department of Fish and Game (ADFG), eliminating the entire southeast Alaska salmon troll fishery would result in only 5-68 additional Snake River fall chinook making it back to their spawning grounds. ADFG further states that a harvest cutback of approximately 10,000 Pacific chinook salmon is required to save every single additional Snake River fall chinook, at a cost of \$2 million to coastal fishing communities that have no other major sources of income.

This recovery option also raises some significant legal issues:

First, and most importantly, the promises to Columbia River basin treaty tribes (Shoshone-Bannock, Nez Perce, Umatilla, Yakama, and Warm Springs), with their treaty right to fish for salmon in all "usual and accustomed places," would almost certainly be broken in this alternative. Any recovery plan that eliminates harvest guaranteed by treaty would potentially expose US taxpayers to a legal judgment, amounting to an estimated \$10 billion or more for treaty violation.

Second, the National Marine Fisheries Service recently issued a "no-jeopardy" opinion regarding the renegotiated Pacific Salmon Treaty between the U.S. and Canada. If NMFS calls for further harvest cutbacks beyond the new agreement, this treaty will have to be renegotiated, with the compliance of both Alaska and Canada required (where 60 percent of the ocean harvest of Snake River fall chinook is thought to occur). This complicated effort of international diplomacy, in the face of what will certainly look like another broken promise, may not succeed.

Third, the lower Snake River Compensation Act was passed by Congress to mitigate for the effects of the four lower Snake River dams. If mitigation hatcheries are eliminated as part of this alternative, violation of this law is inherent. The Framework analysis estimates the cost of eliminating hatchery programs as up to \$140 million per year. Closing steelhead mitigation hatcheries could eliminate Idaho's \$90 million a year steelhead fishery along with 2,700 steelhead-dependent jobs (Idaho Fish and Wildlife Foundation 1999).

Finally, the Framework analysis estimates the economic value of the Columbia River basin commercial salmon and steelhead fishery to be nearly \$25 million per year, based on early 1990s conditions. But they concede that the actual value of the harvest may be much higher, since economic incentives and value for fishermen may not be based solely on the value of the catch. Any recovery strategy that reduces harvest would have the direct impact of reducing this annual value.

**Alternative C. Aggressive Non-Breach**

We observe that this option includes major new habitat restrictions that would impact land use across the region, and might therefore benefit many ESA-listed stocks throughout the Columbia basin. However, this strategy has two major problems:

- 1) Contrary to CRI's flawed findings, the availability of high-quality habitat is not currently a limiting factor for three of four ESA-listed Snake River stocks (fall chinook are the exception); and
- 2) Even if habitat was an actual limiting factor for Snake river spring/summer chinook and sockeye, these stocks would likely be extirpated before the benefits of even the most aggressive habitat restoration measures could be realized.

According to the Idaho Department of Fish and Game, over 3,700 miles of relatively high quality spawning and rearing habitat is currently available to ESA-listed Snake River salmon and steelhead in Idaho alone. Approximately 1,000 of those river miles are located within federally-designated wilderness areas or Wild and Scenic River corridors. It is the best, most pristine, undisturbed habitat in the entire Columbia River basin, if not in the entire lower 48 States. It would be difficult if not impossible for human intervention to improve upon this outstanding habitat, now largely vacant of salmon because of losses downstream.

We note that, if spawning/rearing habitat was the major limiting factor for ESA-listed Snake River fish, then one would reasonably expect that fish populations in degraded streams would perform worse than populations in pristine streams. That is not the case. All ESA-listed Snake River spring/summer chinook, regardless of where they originate, are performing equally poorly, and declining precipitously.

Note also that other resident salmonid species that are extremely sensitive to water quality (e.g., bull trout and westslope cutthroat trout) continue to thrive in most central Idaho watersheds, many in the same streams where anadromous salmonids are in sharp decline. The only difference is, obviously, that anadromous fish must travel through Snake and Columbia River dams twice during their lifetime. Resident fish do not make that same migration, but both types require clean, cold, oxygenated water and clean gravel beds in which to spawn. This high quality habitat exists in abundance in central Idaho watersheds.

A major problem with this alternative, the aggressive non-breach option, is that a dam removal decision is deferred, ostensibly to clarify scientific uncertainties relating to delayed mortality ("D"). Unfortunately, several ESA-listed Snake River stocks (e.g., sockeye and spring/summer chinook) simply do not have the time to wait; these stocks may well succumb to extinction before meaningful experiments could be carried out and the results implemented.

This raises a key question not addressed in the All-H draft. What experiments in fact could be designed to resolve the issue of delayed transportation-related mortality, and how long would they take to complete? If NMFS desires to implement the most risk-averse recovery alternative, then surely the aggressive non-breach option, deferring a decision on more significant improvements, would be near the bottom of the list.

Finally, any option that relies heavily on the continued use of smolt transportation to reverse a 20-year decline – during which transportation has been the principal strategy – is not likely to succeed. We must note that juvenile fish trucking and barging has never produced smolt-to-adult returns (SARs) that are sufficient to maintain or restore ESA-listed Snake River salmon and steelhead. In fact, only in years when barging was suspended (for high spring flows in the mid-1980s) did significant rebounds occur in Snake salmon populations.

Every independent scientific review panel to analyze smolt transportation over the past decade, including the Independent Scientific Group (ISG), Independent Scientific Advisory Board (ISAB), and PATH, found smolt transportation deficient. Further, their studies asserted that Snake River salmon and steelhead are likely to be recovered *only* by restoring “normative” river conditions. In short, salmon stocks are not likely to be restored using technological fixes – such as juvenile fish transportation. This program should be abandoned as an insufficient, failed experiment, in favor of “normative” strategies.

#### **Alternative D. Maximum Protections**

Although this option is likely the most robust of the four options presented in the All-H paper for listed salmon stocks, it is also the most expensive and, consequently, the most difficult to advance in the political arena. We therefore recommend, as our preferred alternative, not Alternative D, but instead, a scaled-down version that includes breaching the four lower Snake River dams, but does not include further harvest reductions, excessive habitat restrictions, or additional flow volumes from the upper Snake River. It is our view that these additional measures, although beneficial for salmon, are unnecessary biologically, adding smaller benefits at very high cost. Accordingly, our preferred alternative is Alternative A, which we view as biologically prudent and cost effective in addressing the needs of both people and salmon in the Pacific Northwest.

#### **Conclusions**

Thank you once again for the opportunity to comment on this critically important study. We share your view that there is no one action, a “silver bullet” that alone restores all 12 ESA-listed salmon and steelhead stocks in the Columbia basin, and that actions in

all "Hs" are required to achieve recovery. But we also note that some steps are more important than others for salmon, and that we must take the most important, most substantive steps to reverse the decline of listed stocks without further delay, and without further increasing the significant extinction risk. We should not delay taking substantive, prudent steps in one area, out of concern that all other steps in other areas might not yet be fully identified.

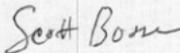
The decision regarding the lower Snake River dams will not only determine the extinction or survival of several of the greatest salmon and steelhead stocks on earth, but it will also affect to some degree every resident of the Pacific Northwest – from Jackson Hole, Wyoming to Juneau, Alaska.

After studying the Corps' DEIS and your Draft All-H paper, we are more convinced than ever that removal of the four lower Snake River dams must be included in any comprehensive recovery plan aimed at restoring ESA-listed Snake River salmon and steelhead stocks.

Idaho Rivers United firmly believes that we in the northwest can restore our salmon and steelhead runs to the sustainable, harvestable levels of the 1960s, while at the same time we protect and enhance the economic diversity and prosperity of the region. We believe that a vision that includes both *people and salmon* in the northwest can only be achieved if the four lower Snake dams are removed. The major challenge, therefore, is not to defend the status quo in the hydrosystem, or in any other "H". It is, rather, to formulate a plan that adequately addresses the needs of people, while we make the changes we must to restore salmon.

We are confident that, if you follow the recommendations of the overwhelming majority of the region's scientists, and shift the focus of federal agencies to a comprehensive economic transition plan for lower Snake River communities, the federal family and the Clinton Administration will meet that challenge. In the process, you can establish a new benchmark for ecological restoration and a more balanced vision in the use of Snake/Columbia River resources in the regional economy.

We wish you the best of luck, and offer our help to achieve this goal.



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