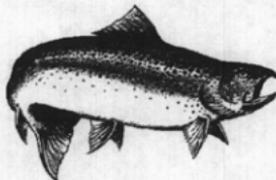


Sierra Club

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March 17, 2000

Federal Caucus Comment Record
c/o Bonneville Power Administration
707 W. Main St., Suite 500
Spokane, WA 99201

RE: Comment on the Draft "All-H" Science Paper

Dear Sirs and Mesdames:

On behalf of the more than 35,000 members in the Pacific Northwest, and the nearly 650,000 members nationally of the Sierra Club, this letter is written in order to comment on the draft "Conservation of Columbia Basin Fish: Building a Conceptual Recovery Plan," also known as the "All-H" science paper. In addition to these comments, the Sierra Club is also a signatory to comments submitted from the Save Our WILD Salmon coalition.

"All-H" Can Not Provide an Informed Public Discussion

Overall, we find the draft document wholly inadequate even for the modest goal set by the agencies of the Federal Caucus. The draft "All-H" paper states at page 82, "The alternatives describe broad policy choices for salmon and steelhead recovery, and are intended to stimulate public discussion and allow the public early access to the thinking process within the Federal Caucus." As if the public has not had more than enough debate about salmon and steelhead recovery in the Snake River Basin, the document fails to provide the basic information necessary for an informed discussion much less to gain insight into the "thinking" of the federal agencies.

Some of this failure is purposeful. The draft document continues at page 82, "[The alternatives] do not represent the only combinations of options that could provide recovery, nor do they represent preferred federal alternatives." Worse, even with the examples of alternatives provided in the

draft document, the Federal Caucus fails to offer any estimates whatsoever of fish survival, population growth, or reduced probability of extinction. So the public can and does see in the draft "All-H" paper whatever one wants to find there, even though some of us in the Pacific Northwest want salmon recovery to come on the backs of anyone else.

Extinction Danger Is Real; Action Necessary in All 4 Hs

In a ham-handed way, the draft document does correctly point out the grave danger of salmon and steelhead extinctions in the Snake and upper Columbia Basins. We describe the analysis as "ham-handed" because the standard for modelling extinction probabilities is just one fish in any given year. Particularly for spring chinook and steelhead which spread so widely across watersheds, hundreds, even a few thousands, of adult spawners can result in extinction simply because the fish are unable to find mates in order to breed the next generation. With the proper standard in place, the computer model would demonstrate a much greater danger of losing the fish which gave the Salmon River its name.

The draft "All-H" paper also correctly argues that salmon recovery requires actions in all four Hs: harvest, hatcheries, hydropower, and habitat. The Sierra Club and other conservation organizations have always said so. However, we believe that the most aggressive options (#3) for harvest and hatcheries would violate federal treaty obligations to Canada and sovereign American Indian Tribes. It is also hard to understand how it is feasible for humans to improve the excellent-to-pristine spawning habitat in central Idaho's Frank Church River of No Return Wilderness designated by the Congress in 1980. When and where the draft document asks aloud whether the most aggressive options (#3) in the non-hydropower Hs are feasible or legal, the Federal Caucus needs to address those questions because, we suspect, the answers are, in all likelihood, no.

"All-H" Fails on Hydropower

In section 4.1 (pages 79-82), the biological "considerations" for integrating the four Hs into action alternatives hinge entirely on one factor and assumption: the delayed mortality of barged juvenile salmon. Methodically assuming very low delayed mortality, the draft "All-H" paper concludes from its "numerical (theoretical) experiments" (page 79) that juvenile fish barging can serve as a tool to re-build Snake Basin salmon populations, that packages of actions in the 3 Hs other than hydropower can prevent extinctions, and that partial removal of the four Lower Snake dams is unnecessary.

These "theoretical" findings are at odds with the vast majority of biological studies of the past decade. According to scientific peer reviews by the Columbia Basin Fish and Wildlife Authority (1992), an independent panel for the U.S. Fish and Wildlife Service (1994), the National Research Council (NRC, 1995), the Independent Scientific Group (ISG, 1996), the

Independent Scientific Advisory Group (ISAB, 1998) co-sponsored by NMFS, and the Process for Analyzing and Testing Hypotheses (PATH, 1998), neither the current nor an expanded juvenile fish barging program can prevent the extirpation of Snake Basin salmon and steelhead. In light of such a broad rejection of the fish barging program as a recovery tool, the "All-H" paper should not have given any consideration to juvenile transportation in any option -- much less two out of three -- for addressing the hydropower H.

As you know, the PATH group (1998) recommended partial removal of the four Lower Snake dams as the only certain way to recover endangered salmon and steelhead in the watershed. PATH's conclusions were entirely consistent with the NRC (1995) and ISG (1996) reports which stressed restoration of a healthy river ecosystem, and rejected technological fixes, as the essential part of any salmon recovery effort. Moreover, the PATH computer modeling successfully underwent peer review by an utterly independent panel of world-class biologists.

Nevertheless, the draft "All-H" relies heavily upon the Cumulative Risk Initiative (CRI) instead of PATH despite the latter's success in peer review and consistency with other blue-ribbon reports. This is particularly disturbing because the ISAB (1999) in peer review identified a large number of weaknesses and flaws in the CRI. Among other criticisms, the ISAB and other biological reviewers such as Gretchen R. Oosterhout for Trout Unlimited (2000) note that the CRI computer model is far too "simple," deals with the data in a "mechanistic" way, and ignores other data -- yielding results which contradict actual in-the-river, on-the-ground observations.

NMFS Must Recuse Dr. Peter Kareiva from the CRI

In a March 3, 2000 letter to the Sierra Club, NMFS Northwest Regional Administrator William Stelle states "that it is the policy of NMFS to make peer-review the arbiter of science 'credibility,' and that no one at NMFS escapes this standard." If this is the agency's policy, NMFS and the Federal Caucus should have relied upon PATH, not CRI, for the "All-H" science paper, but they did not.

Regional Administrator Stelle wrote to the Sierra Club in response to letters recently exchanged between our organization and Dr. Peter Kareiva who heads the CRI at the NMFS Northwest Fisheries Science Center in Seattle. In his letter which began the exchange, Dr. Kareiva argued that "the removal of those [four Lower Snake] dams has some chance of doing zero good." In our reply letter, the Sierra Club pointed out that "in your science papers for the National Marine Fisheries Service, you have never supported a value for delayed mortality in juvenile fish barging which would result in any 'chance of [these dam removals] doing zero good' for the watershed's salmon and steelhead." In a responding letter to ours, Dr. Kareiva apologized for some inappropriate language in his previous missive, but stood unwavering on the

scientific substance, including his position that partial dam removal might do "zero good," despite our rebuttal.

These letters from Dr. Kareiva to the Sierra Club, especially his later one, demonstrate a clear bias and lack of objectivity on his part. Therefore, if NMFS is to have any credibility in marshalling the science and in making decisions for threatened and endangered salmon, the agency must recuse Dr. Kareiva from any further participation in the CRI process, and any related scientific inquiries such as the Quantitative Analytical Report (QAR).

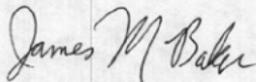
The Sierra Club urges NMFS to recuse Dr. Kareiva from such duties at the agency's Northwest Fisheries Science Center. With these comments on the "All-H" science paper, the Sierra Club formally requests a written explanation if NMFS does not remove Dr. Kareiva from the CRI and related processes. Enclosed please find photocopies of Dr. Kareiva's two letter, the reply letter from the Sierra Club, and Administrator Stelle's letter. The Sierra Club formally requests that these letters be included as part of the public comment and administrative record on the "All-H" science paper.

Conclusion

Frankly the draft "All-H" science paper provides little of the fish biology, or of the action specifics, necessary for the public or the Federal Caucus to make an informed decision on a recovery program for threatened and endangered salmon and steelhead in the Snake and Columbia Basins. We respectfully urge NMFS and the Federal Caucus to prepare a supplemental draft document which corrects these inadequacies, to submit that document for independent scientific peer review and public comment, and to do so before proceeding with recovery decisions for listed salmon and steelhead in the Columbia and Snake Basins.

Thank you for this opportunity to comment on the draft "All-H" science paper.

Sincerely,



James M. Baker
NW Salmon Campaign Coordinator

for
Edwina Allen
NW Regional Vice-President

for
Bill Arthur
NW Regional Director

Peter Kareiva
4722 Latona Ave NE
Seattle, WA 98105
Peter.Kareiva@noaa.gov

15 November 1999

Carl Pope, Executive Director
Sierra Club
55 Second Street
San Francisco, CA 94105

MAR 22 2000

Dear Mr. Pope,

I am writing you regarding The Sierra Club's endorsement of a recent advertisement that appeared in the NY Times concerning salmon and the Snake River dams. I happen to know something about this issue because I am the NMFS scientist in charge of analyzing the pertinent data. I am also a member of the Board of Governors for TNC, a member of the Governing Board for the Society of Conservation Biology, author or editor of several conservation textbooks, and frequent expert witness in endangered species litigation (e.g., I testified in all of the Dwyer trials regarding spotted owls, on behalf of the Sierra Defense Legal Fund).

You should be embarrassed by signing on to that particular advertisement. Dams are certainly environmentally undesirable in a number of contexts, including with respect to salmon. But the extinction analysis referred to in that advertisement was stupid and fatally flawed: the removal of those dams has some chance of doing zero good (do not forget there would remain the four largest dams still blocking passage of the fish), and harvest, habitat degradation and hatcheries represent huge threats to salmonids that are not corrected by dam removal. By placing such focus on dams "as the solution", you undermine serious discussions about water pollution, harvest reductions, and so forth. Mark Shaffer of DEFENDERS OF WILDLIFE called me up and asked for the science regarding dam removal, and I sent him the latest scientific synthesis. I notice "defenders did NOT sign on to the advertisement -- perhaps because they took the time to become informed on the issue.

If you have a science advisor, he or she is either ignorant, irresponsible, or uneducated in allowing your organization to sign on to such an advertisement. Did you realize that after those 4 dams are removed the four largest dams remain? Did you know that in the Columbia Basin the number of dams between a spawning ground and the ocean explains less than 10% of the variation in recruits per spawner (whereas water quality attributes explain 60% of the variation)? Do you realize that we are still harvesting 20% of the reproductively mature adults for two of the listed species -- can you imagine allowing hunters to kill 20% of the breeding spotted owls every year? **WHAT HAPPENS WHEN THOSE FOUR DAMS ARE REMOVED AND NOTHING GOOD COMES OF IT -- HOW EASY WILL IT BE TO PROMOTE THE REMOVAL OF OTHER**

**DAMS AFTER ENVIRONMENTALISTS HAV OVERSOLD THE BENEFITS TO
BE ACCRUED BY BREACHING THOSE DAMS?**

. I will never again support your organization - either by being a member, or in conversations with colleagues. Knee-jerk environmentalism that rushes blithely forward, blind to science, simply is not something I can value.

I TOO AM FOR THE REMOVAL OF DAMS, WHEREVER POSSIBLE. But if you wanted to do some real good, you'd be pressing for the removal of the Elwah dam, which would definitely be a major victory for salmon.

You blew it.

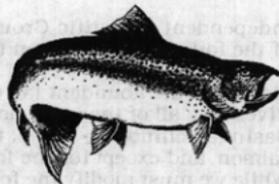
Sincerely,



Peter Karziva

Sierra Club

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February 14, 2000

Peter Kareiva
4722 Latona Ave. N.E.
Seattle, WA 98105

Dear Sir:

This letter responds to your November 15 letter to our Executive Director Carl Pope criticizing the Sierra Club's advertisement in the New York Times which called for the partial removal of the four Lower Snake dams in order to recover the endangered salmon and steelhead of the watershed. We are disturbed by both the substance and tone of your letter, a photocopy of which we have enclosed for your convenience.

In your letter, you state, "The removal of those [four Lower Snake] dams has some chance of doing zero good." Yet in your science papers for the National Marine Fisheries Service (NMFS), you have never supported a value for delayed mortality in juvenile fish barging which would result in any "chance of [these dam removals] doing zero good" for the watershed's salmon and steelhead. Nor have your science papers directly disagreed with the findings of the PATH (Process for Analyzing and Testing Hypotheses) group that partial removal of the four Lower Snake dams gives an 80 percent probability for spring chinook, and a 100 percent probability for fall chinook, of restoring salmon populations to sustainably harvestable numbers.

You ask, "Did you realize that after those 4 dams are removed, the four largest dams remain?" Please you need not insult our collective intelligence. As you are well aware, neither the PATH group analysis (1998) nor the

Independent Scientific Group report (1996) found any reason to remove any of the four federal dams on the Lower Columbia River for fish recovery.

Moreover, the abundant fall chinook of the Hanford Reach of the Columbia River face all of the same downstream impacts as do the threatened Snake Basin fall chinook -- except for an annual targeted harvest on the Hanford salmon, and except for the four Lower Snake dams on the Snake Basin fish. While we must modify the four Lower Columbia dams and reservoirs for safer salmon passage, the four Lower Snake dams clearly take a disproportionate toll on the watershed's salmonids.

You write, "I, too, am for the removal of dams, wherever possible. But if you wanted to do some real good, you'd be pressing for removal of the Elwah [sic] dam which would definitely be a major victory for salmon." Biologically every proposal for a dam removal should stand or fall on its own scientific merits, and without regard whatsoever to decisions on other dams. We know of no reason why partial removal of the four Lower Snake dams is impossible; if you do, you should explain why. Furthermore, the Sierra Club has been in the forefront of conservationists' campaign to remove the Elwha and Glines Canyon Dams on the Olympic Peninsula's Elwha River.

Contrary to your opinion in your letter, Defenders of Wildlife was simply unaware of our ads in the New York Times.

You note that "harvest, habitat degradation, and hatcheries represent huge threats to salmonids." Indeed they are, but a long list of federal, state, and tribal biologists have concluded that the four dams on the Lower Snake and the four dams on the Lower Columbia cause at least 80 percent of the human-inflicted mortalities to Snake Basin salmonids. Neither our New York Times ads nor our Sierra Club publications have ever stated that partial removal of the four Lower Snake dams is the only action necessary to save the Snake Basin fish. But based upon the analyses of numerous federal, state, tribal, and independent biologists, dam removal is necessary for recovery of the watershed's salmonids. Again your science papers for NMFS reach much the same conclusion.

Moreover, for more than 100 years, the Sierra Club has been in the forefront of efforts to protect and restore habitat for wild creatures. Our organization fought very hard for protections of ancient forests and watersheds west of the Cascade Mountains. To the east, we have advocated strong habitat protections in the Interior Columbia Basin Ecosystem Management Plan (ICBEMP) process. In our campaign to save the Snake Basin salmon and steelhead, we have not abandoned this mission to save wildlife habitat.

You ask, "Do you realize that we are still harvesting 20 percent of the reproductively mature adults for two of the listed species?" Data from federal, state, and tribal biologists indicate that the eight mainstem dams

take at least an equal percentage of adult fish. In any event, all harvest of wild Snake Basin salmonids is incidental to catch targeted on hatchery and Hanford Reach fish. The Sierra Club has consistently supported reforms for more selective harvest of hatchery fish with less incidental take of wild salmonids.

You also ask, "Did you know that in the Columbia Basin the number of dams between a spawning ground and the ocean explains less than 10 percent of the variation in recruits per spawner (whereas water quality attributes explain 60 percent of the variation)?" Your statement of fact here is at best controversial, as best evidenced by the Independent Scientific Advisory Board peer review of your NMFS work. In any event, the Sierra Club has not abandoned its work for water quality. Indeed the Sierra Club with several other conservation groups has filed a lawsuit under the Clean Water Act against the U.S. Army Corps of Engineers due to high nitrogen supersaturations and high water temperatures in the four Lower Snake reservoirs.

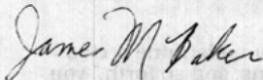
"By placing such focus on dams 'as the solution,' you undermine serious discussions about water pollution, harvest reductions, and so forth," you charge in your letter, and then ask, "What happens when those four dams are removed, and nothing good comes of it? How easy will it be to promote the removal of other dams after environmentalists have oversold the benefits to be accrued by breaching those [Lower Snake] dams?" In our view, it is the other way around. Failure to address the very grave impact of the four Lower Snake dams makes it impossible to deal seriously with water pollution, harvest reforms, habitat protection and restoration, and so forth. People who must bear the brunt of addressing such smaller impacts are loath to enter serious discussions when the dams continue to drive the Snake Basin fish toward extinction. Based upon the large body of scientific opinion by federal, state, tribal, and independent biologists, we are confident that salmon recovery will result from partial removal of the four Lower Snake dams -- combined with necessary efforts for habitat protection and restoration, selective harvest, and reformed hatchery practices. In decisions for other dam removals such as the two Elwha River dams and the Condit Dam on the White Salmon River, conservationists' "track record" has not been an issue.

Finally and most alarming, you opine that "the extinction analysis referred to in that [New York Times] advertisement was stupid and fatally flawed." You further state, "If you have a science advisor, he or she is either ignorant, irresponsible, or uneducated." In all of our New York Times ads, we provided clearly our sources for the biological views expressed -- all of them properly trained and credentialed to provide expert scientific judgment. Do your words in your letter reflect the professional respect appropriate to your colleagues and peers? Moreover, you seem to show open hostility and disrespect to peers who disagree with your scientific judgment. While we

do not dispute your expertise, is this the tone of an objective, unbiased scientist who refrains from advocacy?

In this last regard, your letter is alarming because NMFS has repeatedly assured us that your scientific work for the agency will provide a transparent scientific analysis, and will strictly avoid opinions on public policy. While you directed your letter to the Sierra Club as a private citizen from your personal residence, your letter does state, "I am the NMFS scientist in charge of analyzing the pertinent data." As a result, you have blurred the line between private citizen and public official. Consequently your letter to the Sierra Club raises serious questions about your objectivity and credibility as a scientist for NMFS.

Sincerely,



[for] Bill Arthur
Northwest Regional Director

Jim Baker
Northwest Salmon Campaign Coordinator
Sierra Club

Cc: Will Stelle, National Marine Fisheries Service
Penelope Dalton, National Marine Fisheries Service
William Daley, Department of Commerce
George Frampton, Council on Environmental Quality

Peter Kareiva
4722 Latona Ave NE
Seattle, WA 98105

29 February 2000

Mr. Arthur
Sierra Club
Columbia Basin Field Office
2703 Klemgard Road
Pullman, WA 99163

Dear Mr. Arthur,

I am sorry that my letter of November 15th caused you to question my scientific objectivity and credibility. I was writing strictly as a Sierra Club member (which explains why I wrote ONLY to the Sierra Club, which I am a member of and NOT to any other environmental group supporting the NY Times advertisement to which I referred, and why I wrote with my home address, and why I signed the letter without any official title). As often happens with members of any political party or activist group, I had become upset with how my dues money were being spent, and was announcing my dissatisfaction. It is as simple as that. I guess I should not have mentioned my job for NMFS in the letter, although that fact is well-known and available on the internet from a number of different sources. In no way did I intend that letter to represent my professional views.

Looking back at the letter, I regret letting my passion for conservation get the best of me, and spur me to use words like "stupid" or "ignorant" – words that accomplish nothing (even in a personal letter). Such words are inappropriate – I tell my children to never call anyone stupid, and I should likewise not call any "analysis" stupid (though frankly, I stand by my description of that extinction analysis as "fatally flawed"). I come from a strong university research environment, in which I made a habit of encouraging my graduate students and postdoctoral advisees to call my ideas "stupid" when they warranted such criticism, in the vigorous exchange that accelerates the development of science and the exchange/critiquing of ideas. That academic free-for-all was the dominant aspect of my life for so long (20

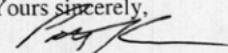
years), that it is a culture I find hard to shake as I now work in
fundamental science.

years), that it is a culture I find hard to shake as I now work in federal circles.

In addition, I apologize if I offended the Sierra Club Science Advisor; perhaps your science advisor does not have access to the same data I have seen, and blame should not be as recklessly assigned as I did in that letter. I do sincerely think the now two NY Times advertisements are misleading in the way they depict data (or "*science*") pertinent to these tough decisions. But letter-writing is not going to accomplish anything – all scientists interested in informing this decision need to write careful scientific papers that can then be peer reviewed and published in scientific journals. Here again is where the "*science*" presented in these advertisements (in particular, the extinction analysis) falls well short of established scientific standards.

I am embarrassed and feel stupid about my "stupid remarks", but I urge you to carefully read peer-reviewed publications about our salmon populations as your best source of information. My decision to drop my membership in Sierra Club holds firm, especially given the second of the NY Times advertisements.

Yours sincerely,



Peter Kareiva



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration

NATIONAL MARINE FISHERIES SERVICE
Northwest Region
7600 Sand Point Way N.E., Bldg. 1
Seattle, WA 98115

MAR 3 2000

Mr. Bill Arthur
Northwest Regional Director
Sierra Club
Columbia Basin Field Office
2703 Klemgard Road
Pullman, WA 99163

Dear Mr. Arthur:

Thank you for providing a copy of your response to Dr. Peter Kareiva's letter of November 15, 1999. In discussing this matter with Dr. Kareiva, he emphasized that his intent was to communicate to you his concerns over your endorsement of the recent New York Times advertisement on dam breaching... not as a NMFS scientist, but as a private citizen and member of the Sierra Club. Obviously, as a high profile federal scientist with major responsibilities for the conduct of risk assessments on Columbia Basin salmon, he should have realized that this distinction would be blurred. I am extremely sorry that this incident occurred.

Further, let me assure you that we have made it clear to Dr. Kareiva that in any future circumstances where there could be any confusion over who he is speaking for, he must follow the usual scientific review to which we subject all NMFS science. Let me also assure you that NMFS has not yet reached a decision on whether to recommend dam breaching and hence Dr. Kareiva's letter does not reflect a NMFS position.

Finally, I would like to strongly emphasize that it is the policy of NMFS to make peer-review the arbiter of science "credibility," and that no one at NMFS escapes this standard. While everyone at NMFS may have personal opinions, ideas, and theories about salmon recovery, it is the peer-review process that is used to make sure that these opinions do not override the science. I hope you share my commitment to the peer-review process as the appropriate way to make sure the best science is made available to inform the difficult decisions facing the Northwest.

Sincerely,

William Stelle, Jr.
Regional Administrator

cc: Penelope Dalton
William Daley
George Frampton

