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Sierra Club

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April 28, 2000

U.S. Army Corps of Engineers
Walla Walla District
ATTN: Lower Snake River Feasibility Study
201 N. Third Ave.
Walla Walla, WA 99362

Transmitted by facsimile:
509-527-7832

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

RE: Comments on Lower Snake draft Environmental Impact Statement

Dear Sirs and Mesdames:

On behalf of our more than 35,000 members in the Pacific Northwest, and 650,000 members nationally of the Sierra Club, this letter comments on the draft "Lower Snake River Juvenile Salmon Migration Feasibility Report / Environmental Impact Statement" (DEIS) prepared by the U.S. Army Corps of Engineers, and released to the public in December, 1999. The Sierra Club is also a signatory to comments submitted by the Save Our WILD Salmon coalition; we incorporate those comments into ours by reference.

The Sierra Club supports the fourth alternative, partial removal of the four Lower Snake dams. We do so because (1) the vast majority of fish biologists agree that partial removal of these dams is necessary to recover Snake Basin salmon and steelhead to sustainably harvestable numbers; (2) strategic investments are feasible and affordable which would protect the regional and local economy from the action's impacts, and would even strengthen the

area economically in the long-term; and (3) salmon recovery is a legal obligation for the United States under multiple federal laws as well as treaties signed with Canada and the sovereign American Indian Tribes. We respectfully urge the Corps to adopt partial dam removal as its preferred alternative in the final EIS.

Over all we find the DEIS incomplete with significant holes and weaknesses in the analysis which the Corps must address in either the final EIS, or a supplemental draft. In these comments, we discuss, in order, the biological, economic, environmental, and finally legal questions raised as well as not discussed in the DEIS.

Biology

1 Three of the four alternatives in the DEIS rely upon juvenile fish transportation in barges and tanker trucks. However, 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 other words, juvenile fish barging and trucking has failed the test of peer-reviewed science. Therefore, only the fourth alternative, partial removal of the four Lower Snake dams, can and will provide the biological benefit needed for the salmon, and to fulfill legal requirements.

2 Particularly in Appendix A - Anadromous Fish, the DEIS argues that prevention of salmon extinction might be possible by taking actions in the three Hs of human-inflicted fish mortalities other than hydropower: habitat, hatcheries, and harvest. Extinction prevention simply is not good enough under federal law. But even if it were, the DEIS must provide a detailed list of proposed actions as well as analyses of the environmental impacts, the cost-effectiveness, and benefits for those measures in the other three Hs. Until the DEIS does explain and study the proposed actions in the other three Hs, the Corps can not consider those measures in choosing a preferred alternative.

3 We strenuously object to the reliance in the DEIS on the Cumulative Risk Initiative (CRI) biological analyses. First, in his 1994 ruling, U.S. District Judge Malcolm Marsh ordered the federal government to conduct its scientific inquiries cooperatively, and in direct participation, with the Northwest states and tribes. While PATH (Process for Analyzing and Testing Hypotheses) provided such a cooperative forum, CRI is a unilateral program operated solely by the National Marine Fisheries Service (NMFS).

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cont. | Second, peer review by the Independent Scientific Advisory Board and others has identified numerous weaknesses and flaws in CRI methods and findings. In this regard, the Sierra Club refers the Corps to, and by reference incorporates into these comments, our comments submitted on March 17, 2000, on the "Conservation of Columbia Basin Fish: Building a Conceptual Recovery Plan" prepared by the federal caucus of which the Corps is a member agency.

Finally, the CRI sets as its standard solely avoidance of salmon extinction -- not recovery to sustainably harvestable numbers as required by law and treaty. In its reports which successfully met the test of peer review, PATH concludes that, for salmon recovery, partial removal of the four Lower Snake dams is an essential action.

Therefore, the Corps must adopt partial dam removal as its preferred action for the Lower Snake River. Because CRI, PATH, and numerous other scientific reports indicate that extinction is an imminent threat for Snake Basin salmon and steelhead, the federal government must proceed with this salmon-saving measure in the immediate- or near-term.

Economics

By far and away the single most important question for people residing near the Lower Snake River, economics receives a surprisingly incomplete analysis in the DEIS. We have identified six key inadequate or missing pieces:

4 | **1. Incomplete Analysis of Tribal Treaty Rights:** The draft document does not address whether or not each alternative will fulfill treaty rights of the Columbia Basin's American Indian tribes. And if an alternative would not meet this test, the DEIS does not explain whether or how the United States would try to make the tribes whole. We believe that only alternative 4 "Partial Dam Removal" can fulfill U.S. obligations to the tribes, and that under the other three alternatives, the U.S. can not make the tribes whole. We suspect that for these reasons, the Corps is silent on this crucial issue.

5 | **2. Geographic Scope of Analysis Too Narrow:** With the sole exception of electricity impacts, the regional and social analyses in the DEIS only tote up benefits and costs in the immediate Lower Snake River corridor. Therefore, the Corps does not count benefits of salmon recovery for tribes, or for fishing communities upstream from Lewiston, or downstream from Pasco.

6 | **3. Incomplete Analysis of Dam Retention Alternatives:** Although the Corps does offer a skimpy overview of technological fixes for the dams proposed under alternative 3 "Major System Improvements," the DEIS does not look

at the range of costs required by retention of the four Lower Snake dams. These include: actions in the other 3 Hs (habitat, hatcheries, and harvest); additional flow augmentation in the Snake and Columbia Rivers; spill for juvenile fish passage at the four Lower Snake and the four Lower Columbia dams; and structural and operational modifications of the four Lower Snake projects in order to comply with the federal Clean Water Act.

6 The DEIS must account for these costs some of which can run to very high dollar numbers. Incentives and enforcement on public and private lands in order to protect and restore fish spawning and rearing habitat can easily reach billions of dollars annually. The DEIS mentions, and then fails to incorporate into the economic analysis, the potential price of just an additional 1 million acre-feet of flow augmentation in the Snake River: up to 650,000 irrigated acres, \$1.3 billion annually, and 6500 jobs lost. The Columbia Basin Forum has estimated that Clean Water Act compliance for the four Lower Snake dams may reach \$900 million.

4. Incomplete Analysis of Impact Mitigation: Out of the thousands of pages in the DEIS, the Corps devotes exactly four to address possible mitigations of economic impacts. Nowhere in those four pages does the draft document investigate what benefits might accrue from those mitigation actions. Nowhere in those four pages does the DEIS construct a level playing field on which partial dam removal can compete with the other three alternatives to make salmon recovery work for both fish and people.

7 Based upon a new report from the Natural Resources Defense Council as well as discussions with Bonneville Power Administration (BPA) staff, we believe that the hydroelectric generation of the four Lower Snake dams can be replaced with a "zero carbon" strategy of clean conservation and renewables, which would make the federal power supply system just as free of air pollution, and more reliable.

Based upon the Eastern Washington Intermodal Transportation Study (EWITS) by Dr. Ken Casavant at Washington State University, we understand that affordable public investments in rail and highway infrastructure to mitigate the loss of the Lower Snake navigation waterway would re-introduce competition into the local area's shipping marketplace, thereby suppressing rates for the long-term. Please see Attachment # 1 to these comments for our analysis of the probable benefits of mitigating loss of the Lower Snake waterway by replacement with truck and train.

8 And frankly we resent the conclusion in the DEIS that all of the agricultural lands irrigated from the Ice Harbor pool would permanently go out of production following partial removal of the dam. Especially when the Corps has engineered a way to keep the irrigation pumping system in operation albeit at a higher cost, the decision on whether to sell their property or remain in production should go to the land owners -- not the Corps.

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5. No Analysis of Imbedded Subsidies: Economists have documented millions of dollar of annual subsidies paid by federal taxpayers to private interests which are imbedded in the operation of the Lower Snake dams for hydroelectric generation, barge navigation, and irrigation pumping. Nevertheless, the DEIS provides no analysis whatsoever of the costs of those subsidies.

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6. No Analysis of Costs of Salmon Extinction: Perhaps the most glaring and dangerous hole in the DEIS is the Corps' failure to analyze the costs of salmon extinction. Because salmon recovery is a legal obligation of the United States under multiple laws and treaties, the cost of extinction will undoubtedly reach tens of billions of dollars. Such a penalty would carry economy-crushing consequences for the Pacific Northwest. Nonetheless, the DEIS does not even mention these potentially staggering costs. Please see Attachment #2 to these comments for our discussion of the worst-case scenario that is salmon extinction.

Environment

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The DEIS contains several flaws in its treatment of environmental impacts and benefits. Despite a considerable body of evidence that the passive, or existence value of restoring a free-flowing Lower Snake River reaches the billions of dollars, the Corps does not incorporate this benefit into the economic analysis of alternative 4 "Partial Dam Removal." Similarly the DEIS does not properly explain that any contributions to air pollution by partial removal of the four Lower Snake dams are very small, and would become none with appropriate mitigation actions such as replacing the projects' hydroelectric output with clean conservation.

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Particularly muddled is the discussion of sedimentation following partial removal of the four Lower Snake dams. First of all, the Corps does not point out that the predicted sedimentation are well below the fatal levels for salmon and steelhead according to the scientific literature cited in the DEIS. Second, despite crucial implications for salmon survival and water quality, the Corps offers no justification whatsoever for its proposed schedule to partially remove Lower Granite and Little Goose dams first, and then Lower Monumental and Ice Harbor. Partial dam removal should proceed in the opposite order so that all accumulated sediment is transported by the restored river once all the way to its final resting place in the McNary reservoir. Under the Corps' proposed schedule, the largest bed of sediment which lies behind Lower Granite dam would move twice, first to the Lower Monumental pool, and then to the McNary reservoir, thereby degrading water quality for migrating salmon twice.

Legal

While the DEIS does provide a list of applicable laws, binding agreements, and treaties, the Endangered Species Act is the only "yardstick" applied in the biological, economic, and environmental analyses. The National Environmental Policy Act (NEPA) requires that an Environmental Impact Statement provide all relevant information on all potential consequences of a major federal action. In these comments, we have identified numerous inadequacies and omissions in the biological, economic, social, environmental, and legal analyses of the DEIS. Unless corrected in the final document, these failures will result in a violation of NEPA, making it impossible for government officials and the public to make an informed decision on how to save and recover the salmon and steelhead of the Snake River Basin.

Conclusion

Despite many years of staff time in, and many millions of dollars of appropriations for, its preparation, this DEIS (and its companion documents such as the "All-H" science paper) still does not answer the three basic questions driving the salmon crisis in the Columbia Basin. (1) What do the fish really need? (2) How do we meet our legal obligations under law and treaty for salmon recovery? (3) How can we make salmon recovery work for the fish **and** people? By not answering these three essential questions, the Corps has failed the fish and the public trust. The Sierra Club respectfully urges that, because this DEIS is so substantially inadequate and incomplete, the Corps should prepare a supplemental draft Environmental Impact Statement, and submit it to public comment.

Thank you very much for this opportunity to comment on the DEIS.

Sincerely,



Jim Baker
NW Salmon Campaign Coordinator

[for] Edwina Allen
NW Regional Vice-President

[for] Bill Arthur
NW Regional Director
Sierra Club

Attachments (2)

Attachment #1:

"From Barge to Truck
and Train"

Attachment #2:

"Salmon Extinction is the
Expensive Worst-Case"

Investments to Save Salmon and Strengthen the Economy:

FROM BARGE TO TRAIN AND TRUCK

Now that the vast majority of fish biologists have concluded that partial removal of the four federal dams on the Lower Snake River is the only action which gives a high assurance of avoiding extinctions and re-building populations of endangered salmon and steelhead, attention turns to how to take this key fish-saving step while keeping the Pacific Northwest and local economy intact. Clearly partial removal of the four Lower Snake dams will have impacts; the action will completely shut down the operation of the dams' powerhouses and navigation locks.

The question is whether or not there are actions or investments which can properly address or minimize those impacts. Ultimately the human species has demonstrated a practically limitless capacity for finding multiple ways to produce electricity, to ship goods to markets, and to run our economy successfully. However, the scientists are telling us that these fish species have run out of options, that the fish need the river restored, and restored soon.

Salmon advocates believe that the Pacific Northwest can afford to do both — make the investments which will protect and even strengthen our current economy, and save the salmon for posterity. This backgrounder looks at changes and investments in the local economy which address the closure of the barge navigation waterway in the Lower Snake River.

What Will NOT Happen When the Locks Shut Down

There have been many strident and exaggerated claims of local economic catastrophe when the four Lower Snake dams are partially removed. So it is important first to look at what will not happen in eastern Washington and northern Idaho.

- **No shipping rate hikes of 40 cents per bushel.** This widely broadcast prediction of a massive increase in the cost of shipping crops to markets is pure vapor. As we will see below, expert economists see no basis in market realities for this panic-provoking forecast.
- **No loss of the Port of Pasco.** All doomsday scenarios assume that barge navigation will also close on the Columbia River, particularly to the linchpin Port of Pasco in south central Washington State. Although the U.S. Army Corps of Engineers is studying removal of the John Day Dam on the Lower

Columbia, neither fish biologists nor salmon conservationists have called for the action. Under all foreseeable circumstances, the Port of Pasco and other Lower Columbia ports will remain in operation, and likely benefit from an expansion of shipping business.

- **No predatory pricing by railroads.** Because farm producers will have the option to ship their crops on barges accessed at Lower Columbia ports, the railroads which did gouge customers before the construction of the federal waterway will face enough competition to prevent any return to predatory pricing.
- **No 700,000 trucks on the highways.** And because the barges and railroads will compete with each other for shipping customers from local agriculture, partial removal of the four Lower Snake dams will increase truck traffic on the local area's highways, but not to this ridiculously high level predicted by dam defenders.

Why Shipping by Barge Is NOT the Cheapest Mode of Transportation

Another common exaggeration is that shipping by barge is the cheapest mode of transportation available. It is true that since 1975 when the four Lower Columbia and four Lower Snake dams made Lewiston, Idaho a seaport, the barge companies have charged ton-for-ton less than have local railroads. But there is an important reason why and how the barge companies are able to do so: subsidies by the federal government.

By federal law, the barge companies pay nothing — zero — for the operation and maintenance of the federal waterway on the Lower Columbia and Lower Snake Rivers. The federal taxpayers shoulder the entire cost which averages approximately \$30 million annually.

In addition, Northwest ratepayers also take a hit because water which flows through the navigation locks at the eight federal dams does not turn the dams' generators, and therefore, represents a lost revenue to the Bonneville Power Administration (BPA) which wholesales the electricity produced at the Northwest's federal dams. Moreover, BPA — not the barge companies — has repaid the U.S. Treasury for navigation's portion of the dams' original construction costs. Nor have the barge companies contributed to Columbia Basin fish and wildlife recovery efforts; BPA has covered all of those costs, too.

The barge companies do pay a small tax on diesel fuel for tugboats, a tax devoted to construction on the federal waterway such as the new navigation lock at the Bonneville Dam. However, this tax covers less than 10 percent of new construction costs; the taxpayers shell out the rest.

Meanwhile, the railroads long ago de-regulated by the federal government receive no such subsidies. It is instructive of how expensive barge shipping really is on the bottom line that the railroads charge only slightly more. Remove the subsidies to the barge companies, and the railroads offer a substantially lower fare.

All federal subsidies to private interests are under intense political fire in the Congress. Will the other 47 states gladly pay the multi-billion dollar bill for Snake Basin salmon extinctions, and continue to subsidize the federal waterway in Idaho, Oregon, and Washington? Not likely. So saving the Snake Basin salmon and steelhead appears necessary to keep cheap shipping in the Columbia Basin.

How to Invest in the Local Agricultural Economy — NOT Mitigate Impacts

The bulk of the tonnage shipped by barge down the Lower Snake River is wheat and other crops grown on eastern Washington and northern Idaho farms. Dr. Kenneth Casavant of Washington State University is a renowned expert on the economics of shipping crops to markets, and is the director of the comprehensive Eastern Washington Intermodal Transportation Study (EWITS). In a new EWITS analysis (Eric L. Jessup and Kenneth L. Casavant. *Impact of Snake River Drawdown on Transportation of Grains in Eastern Washington: Competitive and Rail Car Constraints*. 1999.), Casavant concludes "that impacts overall will not be catastrophic if river navigation is eliminated above the Tri-Cities," which runs counter to the claims of defenders of river navigation and dams.

Instead of 40 cents per bushel, the Casavant study forecasts "transportation costs increasing on average 1 cent per bushel for wheat." The price impact is so low because the railroads must compete with barge companies operating out of Lower Columbia ports, especially the Port of Pasco. The Casavant study predicts: "As rail and barge companies strategically interact via different pricing strategies, grain shippers adjust their marketing and shipping decisions, substituting rail for barge when barge rates increase and barge for rail when rail rates increase."

"However, it is unlikely," Casavant warns, "in the short term, that rail companies would be able to entirely absorb all grain which changes from barge to rail and would likely experience rail capacity constraints." Due to the competitive advantage of the subsidized barge companies, railroads in eastern Washington and northern Idaho have abandoned and even removed approximately one-third of their tracks since 1975. The local area has also experienced an on-going shortage of hopper cars at rail facilities.

What would it cost to expand rail capacity as well as upgrade highways to Lower Columbia ports? The Washington State Legislative Transportation Committee contracted with HDR Engineering of Bellevue, Washington to answer this crucial question. The report (Lund Consulting and HDR Engineering. *Lower Snake River Drawdown Study: Summary of Transportation Impacts*. 1999.) estimates \$84.1-100.7 million for highway improvements, \$182.4-214.0 million for railroad facilities, which yields a grand total of \$266.5-314.7 million.

(The HDR Engineering study also gives figures for road and bridge repairs required in the aftermath of partial removal of the four Lower Snake dams. However, the U.S. Army Corps of Engineers has already estimated infrastructure repair costs in its Lower Snake Feasibility Study. Moreover, the question here is the cost of railroad and highway improvements.)

The HDR Engineering forecasts are probably on the high end because, for example, the Casavant study predicts a net decrease in road use and wear when wheat producers ship by railroad. The truck hauls from farm to rail terminal are much shorter than from farm to Lower Snake port.

This strategic \$265-315 million one-time investment in transportation infrastructure is vitally necessary to protect the local agricultural economy in the 21st century — regardless of the fate of the four Lower Snake dams. The Casavant study points out: “These results illustrate the importance of rail, especially during a river drawdown, and the value of maintaining or increasing rail capacity. Cooperative investment agreements between grain producers, rail companies and state transportation officials like the Washington Grain Train Project may have long term benefits for shippers and shortline railroads, especially during river drawdowns.”

In a previous report for the Idaho Wheat Commission (Ken Casavant and Eric Jessup, *Transportation Characteristics of Wheat Movement in Idaho*, 1996.), Casavant discovered that northern Idaho grain producers actually have lower costs shipping by train than by truck haul and barge. Nonetheless, nearly every farmer within 50 miles of the Lower Snake River chooses barge for shipping crops to market. Why? Railroad service simply was not available.

This illustrates the major threat to agriculture in eastern Washington and northern Idaho in the next century. As barge shipping continues to force out rail service, eventually the local economy will depend upon eight navigation locks at eight federal dams, and upon one barge company, Tidewater, which controls the bulk of shipping on the Lower Snake. If a lock closes due to accident or mechanical failure as it has in this decade at Ice Harbor and Lower Granite Dams, desperate grain producers will not have rail service ready to step in and move crops to market. Similarly, when rail service dries up entirely in and around the Lower Snake, the barge companies will face no obstacle to imposing predatory rates. Dam defenders who want to keep the dams and their barge navigation waterway as a bulwark against past price gouging by the railroads may find themselves in the not too distant future with no options other than Tidewater which, like the railroads of yesteryear, faces no competition.

Currently the marketplace is moving toward further declines in rail service. As far as is visible on the horizon, public investments as part of Snake Basin salmon recovery appear to offer the only way in which to bring the necessary capital for installing the necessary rail infrastructure which can protect and strengthen the agricultural economy in eastern Washington and northern Idaho.

Therefore, surprising as it may seem, Snake Basin salmon recovery can actually work to protect — not destroy — the local agricultural economy. The investments in rail and road infrastructure which the expert economists have identified in recent research are feasible, affordable, and necessary for a strong agricultural economy in the 21st century. If the Pacific Northwest insists upon keeping the dams and thereby dooming the Snake Basin salmon and steelhead, the prospects for inland agriculture are gloomy — losing federal subsidies for the Lower Snake waterway, and/or facing predatory pricing by barge companies. Salmon recovery is a much better business buy.



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From Barge to Train and Truck was written by Jim Baker of the Sierra Club with editorial assistance by Bill Arthur of the Sierra Club, and Tim Stearns of Save Our WILD Salmon. Funding for production and printing of this publication was provided by the Bullitt, Compton, and Kongsgaard-Goldman Foundations. Sierra Club, April, 1999.

Salmon Extinction Is the Expensive Worst-Case

by *Bill Arthur and Jim Baker, Sierra Club*

Contrary to what some elected officials such as U.S. Sen. Slade Gorton (R-Washington) have claimed publicly, salmon recovery in the Columbia River Basin doesn't cost too much. Salmon extinction does.

Columbia Basin salmon recovery is a legal obligation and duty of the United States not only under the Endangered Species Act, but also the Northwest Power Planning Act, Magnuson-Stevens Fisheries Conservation Act, U.S.-Canada Pacific Salmon Treaty, and the treaties signed in the previous century with the Basin's 13 sovereign American Indian Tribes.

So if these magnificent creatures go extinct violating all these laws and treaties, the dollar-and-cents cost will not equal zero. The cost of salmon extinction will in fact run into the billions of dollars — much more than any proposed or conceivable fish recovery program. And because extinction is forever, this huge bill will linger forever.

Therefore, we in the Pacific Northwest should not reject any recovery program out of hand as Sen. Gorton has done, and we should listen very carefully to the biologists.

According to the National Marine Fisheries Service, Northwest Power Planning Council, Oregon Department of Fish and Wildlife, Idaho Department of Fish and Game, Columbia Basin Fish and Wildlife Authority, and even the Bonneville Power Administration (BPA): the 8 federal dams — 4 on the Lower Snake River, 4 on the Lower Columbia — take not the exclusive, but the largest, at least 80 percent of the human-inflicted toll on endangered salmon and steelhead in the Snake River Basin.

This largest tributary of the mighty Columbia River still holds the largest expanse of productive fish spawning grounds in the entire watershed, and thus the best opportunity to re-build fish numbers. Clearly 80 percent of the recovery effort must go into 80 percent of the problem.

To overcome this fish mortality at the dams and reservoirs, the federal government has relied for nearly 25 years upon loading juvenile salmon into barges and tanker-trucks, and hauling the fingerlings past the dams.

But on such blue-ribbon panels as the Independent Scientific Group (ISG) and PATH (Plan for Analyzing and Testing Hypotheses) process — plus two scientific peer reviews, the biologists have spoken. The federal fish barging program doesn't work, and can't save the fish from extinction.

The same ISG and PATH biologists — plus recent peer review of PATH by 4 world-class biologists from outside the Northwest who have no vested interest other than the good of the fish — have also spoken on what will work.

Re-establishing a river where there is now a 150-mile chain of manmade lakes, partially dismantling the 4 Lower Snake dams — that is, removing the earthen portion of each dam allowing the river to flow freely around the concrete — gives an 80-100 percent probability of restoring Snake Basin salmon runs to harvestable numbers.

Not only will it work but, if the Northwest decides not to restore the river, the fish will just as certainly go extinct.

Given this conclusion by the vast majority of biological experts, and given the very high costs of salmon extinction, the only win-win opportunity for the Pacific Northwest is to partially remove the four Lower Snake dams, while making investments to avoid or lessen the economic impacts.

Contrary to the doomsayers, we can save the fish and protect our economy. Contrary to the naysayers, fish conservationists are trying to prevent extinction of all salmon and steelhead in the Snake Basin; we are not seeking extinction of all dams.

Partially dismantling the four Lower Snake dams obviously will have impacts, but fewer than you might think at first blush. For example, these four dams provide no — zero — flood control.

When you peel away the rhetoric, restoring a free-flowing Lower Snake River would have two impacts: closure of the dams' powerhouses and navigation locks.

There are doable, affordable ways to address these economic impacts. On the power side, the dams generate less than 5 percent of the Northwest's total electricity supply.

An analysis by the Northwest Power Planning Council demonstrates that the federal BPA which sells the output from these 4 and the other 25 federal dams in the Columbia Basin can pay for this salmon recovery program, and cover all of its other costs, and meet its U.S. Treasury payments, and beat the market on its power rates.

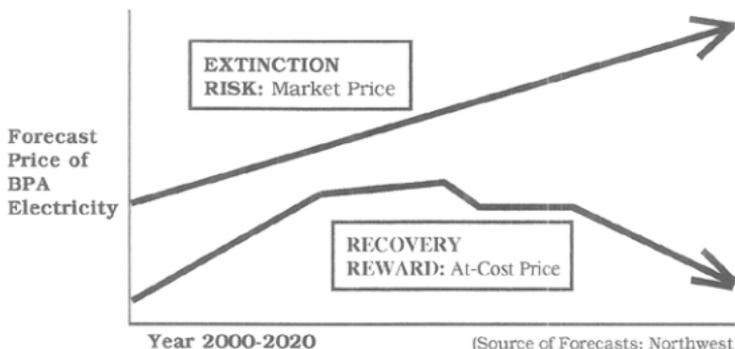
And if BPA replaces the dams' output with clean cost-effective energy efficiencies, the agency tells us that our regional power will actually become

more reliable. Cost to the consumer — less than \$3 per month on the average home electric bill.

As for the closure of the federal waterway, the agricultural economy of the Lower Snake region has become so dependent upon barge shipping of crops to markets that the barge companies are poised to finish off the competition, and go predatory in pricing.

With partial removal of the four dams, and with a strategic public investment in highways and railroads, southeastern Washington and northern Idaho would receive a first-class shipping system using multiple modes of transportation — barge from Pasco, truck, and rail — capable of competing against one another resulting in long-term low prices for agriculture and industry.

Figure 1. Forecast Price of BPA Electricity —
Salmon Recovery vs. Extinction



Salmon and the Cost of Electricity: If salmon recover with the partial removal of the four Lower Snake River dams, we in the Pacific Northwest would reap the reward of continued at-cost electricity from BPA. But if the big fish go extinct because the region keeps the four dams, the rest of the United States would likely force us to pay what they pay for power — market prices.

So the real economic question isn't dams vs. fish. It's how to keep whole, and strengthen the local and regional economy when the Northwest takes the necessary step of partially removing the four Lower Snake dams to save the salmon.

The real economic danger is salmon extinction—a lose-lose proposition in which we in the Pacific Northwest will lose not only our big fish, but our benefits from the dams.

It's not the dams which provide the Northwest with economic benefits; it's special federal laws around the dams. Special laws that give the Northwest "first dibs" on cheap electricity generated at the dams, and priced at cost rather than the much higher market rate.

Special laws that make the nation's taxpayers bear the costs of operation, upkeep, and most of the new construction of the federal barge navigation waterway in the Lower Snake River. The barge companies don't pay a dime for using the dams' locks, they never have.

Will the rest of the U.S. gladly foot the huge bill for salmon extinction, and let the Northwest continue to enjoy electric rates which run one-half and even one-quarter of what they pay? Not likely.

Ironically by fighting to keep these four dams no matter what, Sen. Gorton and other elected officials from our region have succeeded in drawing attention to the Northwest's special deal — this broad stream of federal subsidies which flow from the 29 federal dams in the Columbia Basin.

Those who ardently defend the dams at all cost should seriously ponder that proverbial curse: You should be very careful what you ask for because you may get it.

If we demand to keep these four dams on the Lower Snake River, the Pacific Northwest faces a very real and very grim worst-case outcome: no salmon, no fishing industries, no cheap electricity, no cheap shipping, and no investments to preserve these economic blessings in the next century.

Bill Arthur directs the Sierra Club's Northwest Regional Office in Seattle. Jim Baker serves as the organization's Northwest Salmon Campaign Coordinator based in Pullman, Washington. Funding for this editorial was provided by the Bullitt, Compton, and Kongsgaard-Goldman Foundations.