

Howard Garrett

I support increasing the dissolved gas levels to 125% and the duration of spills to help smolts get downstream, despite the potential cumulative deleterious impacts to all fish downstream that may weaken them, impairing their abilities to function, at least temporarily.

The only real solution is to breach the 4 Snake River dams but that is blocked to sustain the massive federal payouts to the Columbia Basin Federal Caucus that in turn supports the regional economy. Please see attached. Thank you.

February 7, 2019

Dear Orca Recovery Task Force and all concerned,

We appreciate that the Orca Task Force has spent months of incredibly hard work, dedication and collaboration to find ways to help recover these endangered orcas.

To face the task of avoiding the imminent extinction of Southern Resident orcas we must face the reality that we may have already run out of time. Stated bluntly by Kenneth Balcomb, founder and chief scientist at the Center for Whale Research since 1976 and a Task Force member: “There will be extinction with the current trends. We need to change the trends or just write them off... You might have some living whales at the end of this century, but we’re likely to have no reproducing whales at the end of a decade” (The Oregonian, September 14, 2018).

Based on input from the three working groups on the Task Force, the revised draft recommendations for action to recover the Southern Resident orcas include *Recommendation 9: Establish a stakeholder process to discuss potential breaching or removal of the lower Snake River Dams for the benefit of Southern Resident orcas.* This conversation is extremely important to a broad range of Washington citizens.

However, ***this conversation took place 20 years ago through one of the most expensive and expansive public involvement processes the Corps has undertaken.*** Involving hundreds of stakeholders from every conceivable group or organization, the Corps defined mitigation actions and budgets for those who might be impacted. This can all be found in Appendix O of the 2002 lower Snake River Feasibility study and Environmental Impact Statement that is still the operable EIS for the 4 LSRD's. This document can be found on the Corps Walla Walla District website. These mitigation actions and costs have been updated by engineers and economists, in many cases with very large saving, e.g. irrigation modifications actually cost only \$20 million versus \$400 million in 2018 dollars.

A stakeholder process remains important to facilitate the transition to a productive economy after breaching (see below) and to determine the best usage of 20,000 acres of reclaimed bottom lands. Recommendation 9 should be refocused in this manner and be conducted in parallel with immediate breaching. The known updated mitigation actions and costs are ready to be implemented commensurate with breaching and funded as part of the breach cost.

Neither the Southern Resident orcas nor the endangered Snake River spring/summer Chinook have time to replicate previously accomplished processes. Distilling four decades of demographic field studies on this dwindling population, along with combined prey, toxin, and hormone studies conducted since their endangered listing under the ESA in 2005, the scientific consensus agrees that for several years ***J, K, and L pods have been experiencing episodic malnutrition due primarily to steadily decreasing numbers, size and weight of their specialized diet of 80% Chinook salmon,*** which served them well for tens of thousands of years until the past century or so. In 2018 only 67,596 Snake River Spring/Summer Chinook returned to Lower Granite dam, about 40,000 below estimates. In 2019 only 48,100 fish are expected to return.

Compounding the lack of sufficient food, toxin studies have shown that So. Resident orcas are among the most heavily contaminated species known, laden with highly toxic and persistent organochlorine pollutants. Among other debilitating impacts, these endocrine disrupters and other toxins compromise reproductive systems and impair developing fetuses. Hormone studies on So. Residents have revealed that when insufficient caloric intake is available to maintain essential activities to survive, these toxins are flushed into the bloodstream and become active in the orcas' endocrine system. One result is that ***up to 70% of pregnancies end in miscarriages, often late in the 17-month gestation period.***

These hungry orcas have little or no time to wait before they succumb forever to the lethal effects of food deprivation. Only 19 offspring born since January 2009 are still alive, while 34 Southern Resident orcas have died in that time. A birth/death ratio of 19/34 describes a death spiral for the So. Residents.

The immediate benefit of quickly breaching only the first 2 dams is to prevent the death of 4 million Chinook smolts in the first year. When the other two dams are breached the following year another 4 million smolts will survive that are currently killed by the dams and reservoirs. Breaching is by far the fastest way to deliver several hundred thousand adult salmon to Southern Resident habitat within two years of breaching.

Fortunately there is no need to wait an undetermined number of years for the completion of a new NEPA process and the inevitable litigation to follow regardless of whether or not it calls for breaching the dams. Unbeknownst to many, Army Corps protocol specifies a process to begin breaching the dams within months of issuance of a formal Record of Decision, which could be made at any time. According to Jo Ellen Darcy, then Assistant Secretary of the Army for Civil Works: "[The Corps] is also committed to following the guidance in the 2002 FR/EIS as a framework for its actions, which includes ongoing assessments as to the efficacy of the alternatives it has implemented to date; the results of those assessments will inform our next steps while the NEPA process is underway, and the NEPA process itself."

The verifiable facts available show that the dams are in truth not needed for transportation, hydropower, or irrigation. Inexpensive mitigations are readily available in every instance, relative to the massive federal funding required to keep the dams in place.

All of the claims made by dam proponents are either personal opinions or have been amply rebutted with facts and data. Although dam proponents' claims are widely shared by the key federal and state agencies and career and elected officials, and a broad cross-section of interest groups and individuals, they are easily debunked with research and informed sources.

The historically most bountiful high-altitude orca-sustaining wild salmon in the world are being driven to the brink of extinction due to the dams. Snake River Chinook were some of the biggest, fattest fish on the west coast. Today's hatchery Chinook are much smaller. (10-20 lb avg vs 50+ lb avg). It takes more energy for less calories for orcas to catch today's smaller hatchery fish. Opening the 5500 miles of near pristine habitat above the Snake River dams would allow wild Chinook to recolonize those waters, and restore WILD SUSTAINING populations of Chinook, which, in the long run, would be much cheaper to maintain than the current reliance on hatcheries. Instead, these spring and summer salmon runs are steadily going extinct, and as they disappear the So. Resident orcas are starving to extinction.

All of which begs the question: *why do so many trusted authorities adhere so fiercely to so many unverifiable claims to protect the dams?* Pro-dam passions obviously run deep, even though the stated objections to breaching have little merit.

The dams need to be breached or endangered salmon and So. Residents will go extinct, but the majority of the Task Force will not recommend breaching. Why?

The fundamental truth demonstrated by all the objections listed below to breaching is that ***the dams are vital to the economies of local communities in eastern WA, not for their operations but as a conduit for federal money dispersed into the region.***

Taxpayers are spending close to a billion dollars each year for dam maintenance and operations plus required mitigations and restorations to attempt to save endangered salmon that 5 federal court rulings have found are not working. The fish are still going extinct, as seen in consistently below replacement SAR levels (see CBR graphs below).

For most tax payers and rate payers such an unproductive federal expense would be considered another case of pork barrel politics, or a massive boondoggle. But for residents in the region the influx of federal money to agencies and contractors provides the foundations for regional economies, sustaining local development, governments, schools, libraries, etc. Much of those untold \$100s of millions is spent on paychecks in the region to employees at gov't agencies, industries, and bureaucracies, dam operations and maintenance workers, pipefitters, fisheries biologists, mariners, etc. Those employees in turn multiply that money into the regional economy supporting the full range of economic activities, for homes and businesses, etc. Those numbers can't be hard to find by state agencies, but these are the issues that should be examined and described publicly to help plan for the inevitable transitions to life without the dams. Instead, politicians promise and are elected to keep that economic engine in gear, no matter if the dams are no longer producing services or revenues and BPA is unable to produce revenues from the Snake River and is approaching a financial cliff, while salmon and orcas, and so much else, are going extinct as a direct result of the dams. This economic analysis deserves much more examination and emphasis, so that informed decisions can be made.

We can't minimize the financial issues created by the prospect of curtailing this federal influx, though other Army Corps projects, dams, hatcheries, and restoration projects will provide commensurate employment in many cases. ***Our challenge is to examine this wider picture of what happens when dam operations and barging cease.***

The question before us is not really whether to breach the four lower Snake River dams. They are decimating endangered species and return insignificant revenues. The real question is how to close or realign the operations and facilities of the agencies collectively known as the Columbia Basin Federal Caucus, which include the Corps, Reclamation, the U.S. Fish and Wildlife Service, the U.S. Forest Service, NOAA Fisheries and other federal and state agencies whose purpose is to maintain the Snake River dams or mitigate for the harm the dams cause to endangered salmon. ***The economic challenges when the dams are breached are the real reason passions in Eastern Washington are so intense in opposition to breaching the dams, and are the issues that must be addressed.***

The implications of a decision to breach the dams by the Army Corps will be unprecedented in many ways, but the closest parallels may be found in the history of military base closures. Since 1988, more than 350 bases have been closed or realigned. Base closures can represent significant economic challenges for communities. The Base Realignment and Closure process was created in 1988 to reduce political opposition from members of Congress that arise when facilities face closure or reductions. The Office of Economic Adjustment (OEA) works extensively with communities to guide them through the process of organizing to effectively plan and diversify their economies, redevelop sites and lands, and minimize the impact of the closure on the community. Some personnel and employees are transferred, or may take new jobs, and programs are established to facilitate those transitions. A similar process is needed to ameliorate the challenges posed by breaching the dams.

With breaching new economic drivers will emerge, such as the rich bottomland able to return to bountiful orchards and vineyards. Fishing, recreation and tourism opportunities will increase dramatically. According to Earth Economics: "...the benefits obtained in a scenario with breached dams far surpasses that of keeping the dams. Review of the 1934 surveys, historical research and other information contained in the FR/EIS shows that 4-5000 acres could be put back into high value agriculture, (e.g., viniculture and orchards). Riverside recreational opportunities and businesses are also likely to flourish.

The choice before us is whether to plan for the transition to life without these four dams, or to participate in the final extinction of the planet's potentially most abundant high-altitude spring/summer Chinook, and the exquisitely evolved and deeply cherished members of the Southern Resident orca community.

The massive and sustained federal payout to the region is where this conversation needs to begin anew. Now is our time to put aside our differences and unite to give the residents of eastern Washington, the Snake River salmon, and the much beloved and endangered So. Resident orcas, a future they need and deserve.

Sincerely,

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Supplemental notes:

It is often said that only Congress can authorize breaching. This is not correct. Just to clarify and reiterate, the Army Corps, with funding from the BPA drawn from salmon mitigation credits at no cost to tax-payers or rate-payers, has the authority to issue a Record of Decision to select Alternative 4—Dam Breaching from their 2002 FR/EIS: Breach, despite contrary claims.

During the Task Force meeting in Tacoma Oct. 17-18, the points in the hydro fishbowl from those in favor of keeping the dams included the below. Other points have been brought up by others.

- Sedimentation in rivers downstream of Ice Harbor dam could kill salmon or sturgeon, or contaminate the water;
- Infrastructure, such as railways, utilities, and roads are not ready for increased traffic;
- Dams are capacitors for meeting demand during peak;
- Ongoing NEPA process needs to be followed;
- If decision is made to breach, litigation would go on for many years;
- Neighboring states need to be involved;
- Breaching might not produce desired results;
- Breaching would cause harm to local economies;
- Other ACOE projects are more worthwhile, like near-shore restorations, Skykomish, Howard Hanson, dams could be removed, etc
- The dams do not block access for endangered salmon; juvenile fish survival at each of the dams averages 97%, higher than in some undammed rivers. Turbine design, fish ladders, restorations, have resulted in improvements.
- A 15-week closure when barging was not available in 2010-11 caused a 9% increase in CO₂, CO, N, and particulate matter from rail and trucks;
- Drawdown costs would be 100s of millions in corridor improvement costs;
- Over 4.3 million tons of cargo were moved by barge in 2014, which kept 174,400 trucks and 43,610 rail loads off roads already congested;
- Salmon would be stranded along the shores;
- Eastern WA emotions are high; a political Cascade wall would get higher;
- Would remove the food supply that everyone needs to eat;
- Dams are vital to E. WA, to transportation, for farm to market; we depend on agriculture and the dams are part of that;
- No one salmon recovery action on a single river such as breaching the dams on the Snake would itself bring about recovery of SRKWs;
- Not a silver bullet;
- Dams are federal, federally regulated, needed when the wind machines quit producing, the power is needed for these lights. Until at some point we're able to operate without electricity those dams are important;
- Ag is second largest industry in WA. In region Ag is king, and the SR dams are the lifeblood of our community;
- Problems would be created for residents of E WA, but they don't trust gov't to mitigate their problems;
- This conversation is a distraction;
- The cost of dam removal to the local community cannot be swept aside;

- Need to engage local community about how we would actually solve these problems, because they aren't small, while NEPA moves forward;
- Any external process should feed into the NEPA process. Local input should be brought into the NEPA process;
- There is a stable amount of fish coming out of this system now;
- Would actually put short term recovery of SRs at risk if we put this amount of salmon coming out of that system at risk.

The NOAA Fact Sheet "Southern Resident Killer Whales and Snake River Dams" was mentioned often. One key point was that: "Last year's return of Chinook salmon to the Columbia totaled more than 1.3 million fish, the third record year in a row for total Chinook returns." Also, from the Associated Press, NOAA spokesman Michael Milstein said: "returns to the Snake and Columbia rivers have been up in the last 10 years." And: "We do think that the whales have access to the same volume of fish that they would have otherwise," he said. This is clearly false, a fact of which NOAA must be aware.

The available data says 2018 Chinook Adult Passage (Aug-Nov) shows marked decreases with 10-year averages, which itself is a post-dam baseline, as per the CBR data graphs below. ***Multiple sources of unbiased data show that the dams are causing significant lethal effects on migrating salmon, especially smolts.***

The concerns expressed about sediment loads harming salmon are addressed in NOAA's Management Strategies and Actions Recovery Plan November 2017, p. 189: "...if lower Snake River dams are breached...Juvenile travel time through the lower Snake River would be faster; ...and changes in total dissolved gas caused by releasing water through spillways would be eliminated at projects that were breached. Juveniles migrating in the spring would experience highly turbid conditions...Predictions of the effect of increased sediment on the survival of migrating salmon and steelhead would be highly subjective and would depend on flows during the post-dam breaching period." There is no mention of smothering spawning gravels. A positive effect of increased, but temporary, sedimentation would be to obscure smolts from predators, improving smolt survival.

Grain barging on the Snake has steadily decreased for two decades. According to the Idaho Wheat Commission: "Overall, railroads move 36% of Idaho's wheat to market, barges deliver approximately 35% to coastal areas and 29% is trucked directly to end users." Over the past 20 years grain transportation on the Lower Snake River has declined by over 40%, largely because of the unit train loading facilities built by farmer cooperatives in eastern Washington, one close to the Idaho border. A new rail-loading facility for grain in Lewiston will be completed this month (https://www.capitalpress.com/state/idaho/port-of-lewiston-works-to-diversify/article_1416ad8c-025e-11e9-be75-1b62d323ee87.html). Economic analysis pegs the annual cost to taxpayers for LSR freight transportation at a minimum of \$18 Million. Each barge of grain on the Lower Snake River requires a taxpayer subsidy of at least \$24,000 (Lower Snake River Navigation Study, Rocky Mountain Econometrics September, 2015).

The energy produced by the LSRDs does NOT need to be replaced. Since 2000, natural gas and wind power have added 15,382 annual Megawatts (MW) of capacity to the PNW grid, five times the generating capacity of all four LSRDs. *Actual production* from natural gas and wind in 2016 totaled 6,127 MW, more than six times the average annual LSRD production. California, once a major buyer of

BPA energy, plans to produce by 2020 another 4,000 MW of solar energy and, by 2030, an additional 10,000 to 20,000 MW of solar energy. As of March 2018, BPA's "Interconnection Queue" of energy, already scheduled to come on line in BPA's transmission grid, included 2,905 additional MW of wind energy and 2,341 MW of solar energy—more than five times LSRD hydropower production.

All LSRD production is surplus power, much of it sold for prices below the cost of production. Over the past ten years the price of surplus power has declined over 60% and the California market for BPA energy has also declined significantly, leaving BPA on the edge of a financial cliff. During this same time period BPA has raised its wholesale power price 30% (with another 5% projected to result from the next rate case) and has blown through nearly its entire cash reserve of over \$900 million. The agency is \$15 billion in debt and is counting on solving its financial crisis by selling more surplus energy into a shrinking market with falling prices, a questionable business practice. The costs of operating, maintaining, and mitigating for the LSRD does not result in revenues above 15% of investment, further draining the coffers of the struggling BPA.

Road and railway upgrades have been done and more improvements are underway or could be for small expenditures, the hydropower has already been replaced six times over by cheaper, renewable alternatives; and inexpensive irrigation retrofits to draw water from river flows can be installed during winter months for less than \$20 Million. No agricultural interests need to be disrupted.



