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UNITED STATES DISTRICT COURT
DISTRICT OF OREGON, PORTLAND DIVISION

NATIONAL WILDLIFE FEDERATION, *et al.*,
Plaintiffs,
and
STATE OF OREGON,
Intervenor-Plaintiff,
v.
NATIONAL MARINE FISHERIES
SERVICE, *et al.*,
Defendants,
and
NORTHWEST RIVER PARTNERS, *et al.*,
Intervenor-Defendants.

No. 3:01-cv-00640-SI

MOTION FOR LEAVE TO PROCEED
AS *AMICUS CURIAE* AND TO FILE
AN *AMICUS BRIEF*; [PROPOSED]
AMICUS BRIEF

WADDELL MOTION TO PROCEED AS AMICUS
AND AMICUS BRIEF (No. 3:01-cv-00640-SI)

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**MOTION FOR LEAVE TO PROCEED AS AMICUS CURIAE
AND TO FILE AN *AMICUS* BRIEF**

James Waddell, proceeding in Pro Se, respectfully moves the Court, pursuant to its inherent authority, for leave to proceed as *amicus curiae* and to file a brief as *amicus curiae* regarding plaintiffs' motions for injunctive relief. Waddell wishes to inform the Court of the possibility and benefit of proceeding with a two-tiered NEPA EIS approach, which should lead to the federal defendants considering Snake River dam breaching this year. This approach is needed because the Court's current five-year schedule for the NEPA EIS analysis creates a Catch-22 situation for recovering lower Snake River salmon and steelhead. As far back as 2002, NMFS indicated that extinction risks were high enough that to "delay action and study more" carried with it a substantial risk that some populations of spring/summer Chinook might be lost in the interim.¹ The extinction risks are far greater today. The five years that the federal defendants say is required for the system-wide operations review dooms the lower Snake River wild salmon and steelhead, since by the time the NEPA analysis is completed, there will be few, if any, wild salmon or steelhead to recover.

The two-tiered NEPA EIS approach would permit wild fish recovery by using the 2002 *Lower Snake River Juvenile Salmon Migration Feasibility Report/Environmental Impact Statement* ("*Lower Snake River EIS*"). This is still the EIS under which the four lower Snake River dams are operated today. The *Lower Snake River EIS* is important because it already includes the reasonable alternative of breaching the lower Snake River dams—the last reasonable alternative remaining in the EIS to be implemented. The others have failed.

To employ a two-tiered process, the first tier would use the existing EIS for the lower Snake River dams to provide NEPA coverage for those dams. The *Lower Snake River EIS* could be updated and supplemented, if needed, in a matter of months, followed by a short public comment period. Assuming supplementation of the *Lower Snake River EIS*, the breaching

¹ Budy, P., *Analytical Approaches to Assessing Recovery Options for Snake River Chinook Salmon* (2001), p. 5, <http://www.fws.gov/columbiariver/publications/recopt.pdf>

reasonable alternative could begin in December 2017, during the in-water work window. If water temperatures appear to be rising in April or May 2017 to lethal temperatures for salmon, such as the high water temperatures that killed 98% of the Snake River sockeye run in 2015, drawdown of the reservoir behind Lower Granite Dam could begin in May 2017.

The second tier of the two-tiered NEPA EIS approach would address system operations and further mitigation activities throughout the rest of the Columbia River Power System, and would assume that the four lower Snake River dams are breached. Using this two-tiered approach would speed up breaching by at least four years, save wild salmon and steelhead listed under the Endangered Species Act (“ESA”), and reduce capital expenditures on the lower Snake River. It may also save the double crested cormorants, Caspian terns and sea lions that feed on the salmon, since it may be unnecessary to cull them, if the dams were breached.

In addition, if plaintiffs’ requested injunctive relief were granted, spill could continue at each lower Snake River dam until that dam were breached. Expensive capital improvements on the lower Snake River dams could be avoided permanently, since they would not be needed. The money saved could be used for much needed deferred maintenance or capital improvements on other dams throughout the power system.

The two-tiered NEPA EIS approach is the subject of the proposed *amicus* brief that is attached to this motion.

1. DISTRICT COURTS HAVE AUTHORITY TO ACCEPT AMICUS BRIEFS

All federal district courts possess the inherent authority and broad discretion to accept *amicus* briefs. For example, in 2005 Judge Redden noted in this case that: “[t]he Ninth Circuit has held the district court has broad discretion to appoint *amicus*” and that “[t]he classic role of *amicus curiae* . . . [is to assist] in a case of general public interest, supplementing the efforts of counsel, and drawing the court's attention to law that escaped consideration.” *Nat’l Wildlife Fed’n v. Nat’l Marine Fisheries Serv.*, CV 05-23-RE, 2005 U.S. Dist. LEXIS 16657, 14-15 (D. Or. Apr. 8, 2005), citing *Hoptowit v. Ray*, 682 F.2d 1237, 1260 (9th Cir. 1982); *Miller-Wohl Co.*

v. Commissioner of Labor & Industry, 694 F.2d 203, 204 (9th Cir. 1982).

The role of *amici* is to assist the court “in cases of general public interest by making suggestions to the court, by providing supplementary assistance to existing counsel, and by insuring a complete and plenary presentation of difficult issues so that the court may reach a proper decision.” *Newark Branch, N.A.A.C.P. v. Town of Harrison*, N.J., 940 F.2d 792, 808 (3d Cir. 1991). This authority supports the Court’s exercise of its discretion to accept Mr. Waddell’s proposed *amicus curiae* brief.

2. JAMES WADDELL HAS UNIQUE KNOWLEDGE ABOUT THE *LOWER SNAKE RIVER EIS* AND DAMS THAT WILL AID THE COURT IN CONSIDERING THE ISSUES RAISED BY PLAINTIFFS IN THEIR MOTIONS FOR INJUNCTIVE RELIEF

James Waddell retired from a successful 35-year career as a professional engineer with the U.S. Army Corps of Engineers (“Corps”) in 2010. When Waddell retired, the Corps reappointed him three times to work on Corps and Environmental Protection Agency projects, due to his special expertise in sustainable development. Waddell’s assignments spanned many functions of the Corps, ranging from construction management in the field to senior policy work in the Corps Headquarters, the National Science Foundation, the Department of Energy, and the White House Office of Science and Technology Policy.

Waddell acquired unique expertise regarding the lower Snake River dams and issues raised in plaintiffs’ motions for injunctive relief based on: (1) his 35 years of service with the Corps; (2) his service as the Deputy District Engineer for Programs at the Corps’ Walla Walla District for three years starting in 1999, during the development and decision-making process of the *Lower Snake River EIS*; and (3) his recent three year involvement reanalyzing, reevaluating and updating the *Lower Snake River EIS*.

Waddell, as Deputy District Engineer, was in the highest civilian position at Walla Walla. Waddell’s responsibilities ranged from interfacing with elected officials on budget matters to reviewing complex engineering, economic costs and biological data and reports, and providing

programmatic/project oversight of the Corps' 700-person Walla Walla District. Projects included seven large dams on the Columbia, Snake and Clearwater rivers, as well as numerous flood control and environmental restoration projects in the entire Snake River basin. The most important task of Waddell's position was to integrate the broad range of issues noted above from dozens of staff and thousands of pages of input into sound policy decisions and recommendations that met the Federal Objectives.

As Deputy District Engineer, in 2001, after receiving extensive personal input and thousands of pages of critical information from fisheries biologists, and after reviewing the relevant facts and assumptions in the EIS studies, Waddell recommended continuing with breach planning and design to recover wild salmon.

Waddell became involved again in the Snake River dam issues three years ago when he learned the dams were continuing to devastate the wild salmon runs. For the last three years Waddell has reevaluated and reanalyzed major parts of the *Lower Snake River EIS*. He has concluded that the economic projections and cost estimates that made dam breaching seem to be economically infeasible in 2002 were based on errors that he and professional economists have now corrected.

For the foregoing reasons, and so the Court may possess all relevant information it needs, Waddell respectfully requests the Court to grant his motion for leave to proceed as *amicus curiae* and to file an *amicus* brief.

Dated: 8 FEB 2017

Respectfully submitted,


JAMES M. WADDELL
Pro Se

PROPOSED AMICUS BRIEF

I. INTRODUCTION

Plaintiffs' motion for injunctive relief requests the Court to order more "spill" over the Snake and Columbia River dams to increase the survival of ESA-listed juvenile salmon and steelhead migrating downstream to the ocean in the spring. Plaintiffs also seek an injunction to prohibit the Corps from expending additional funds on capital projects without court approval.

James Waddell is filing this Amicus Brief because the Court has not been provided the critical information that even with the amount of spill plaintiffs request, most ESA-listed lower *wild* Snake River salmon and steelhead populations likely will not survive the five-year NEPA process that the Court has ordered, due to an annual 80%+ dilution in their genetic integrity and fecundity (offspring production) on the spawning grounds. As a result of the scarcity of wild fish returning to the Snake River to spawn as adults, the federal agencies are permitting increasing dilution of wild salmon and steelhead genetics, by allowing hatchery fish to spawn "naturally" with wild fish in the rivers and streams. Each generation of fish has fewer and fewer wild genes, as more hatchery fish inundate the spawning grounds. Under the current schedule, even if the federal agencies were to opt for breaching the four lower Snake River dams to recover wild salmon and steelhead, as the Court strongly suggested, the federal agencies would then deem that a separate EIS specifically for the lower Snake River dams would be needed, which would take several more years to complete. Wild Snake River salmon cannot survive this extended process.

II. SNAKE RIVER WILD SALMON GENETIC DIVERSITY IS BEING DEPLETED RAPIDLY, WHICH SPELLS EXTINCTION FOR BOTH WILD AND HATCHERY FISH POPULATIONS

Despite the number of salmon that enter the Columbia River and are counted at Bonneville Dam, the salmon that make it to the spawning grounds and spawn in the Snake River or its tributaries number in the tens, hundreds, or a few thousand, depending on the species, river or stream. Because there is a scarcity of *wild* salmon returning to spawn on the lower Snake

River, genetically inferior hatchery fish are being released to spawn with wild salmon. Of the spawners, 80% to 90% are hatchery fish. Only a small percentage is of wild origin.²

Wild salmon, in contrast to hatchery salmon, are important because they have evolved over millions of years. Each wild salmon population has uniquely adapted genetically to its natal river or stream. The genetic integrity of each population comprises the genetic diversity of wild salmon, which is their strength. It gives them their resilience and ability to adapt to climate change and varying river, stream and ocean conditions, among other adverse conditions. Hatchery fish are inbred and significantly less resilient than wild salmon.³ They cannot replace wild fish in the long term, because they lack genetic diversity and genetic integrity at the population scale level. Hatchery fish production must rely on a certain amount of input of wild fish genes. As discussed, these are becoming progressively diluted. Once the genes of wild salmon and steelhead disappear, the “natural” fish populations (see below) are not far behind, and ultimately will collapse in a few generations.

In fact, the term “wild” salmon has all but disappeared from federal agency reports, and has been replaced increasingly by the term “natural” to describe the high incidence of hatchery fish spawning with wild fish in rivers and streams. The diluted genetics of the “natural” fish are passed on to future generations, when the “natural” fish return to the river to spawn.⁴ This cycle results in further genetic dilution for each generation, and in fewer and fewer wild fish. Moreover, hatchery fish are being allowed to dilute the wild gene pool at a faster rate than in previous decades, which makes wild salmon more susceptible to population crashes. The gene

² Christiansen, C., et al., *Snake River Endangered Salmon White Paper* (2015), p. 2, <http://www.damsense.org/wp-content/uploads/2014/12/1.Snake-River-Endangered-Salmon-White-Paper-11-4-15.pdf>. This document was attached to the Waddell Letter, Docket File No. 2108 in this action.

³ *Id.* See also NOAA Fisheries, West Coast Region, *Proposed ESA Recovery Plan for Snake River Fall Chinook Salmon* (October 2015), pp. 34-36, http://www.westcoast.fisheries.noaa.gov/publications/recovery_planning/salmon_steelhead/domains/interior_columbia/snake/proposed_snake_river_fall_chinook_recovery_plan.pdf.

⁴ See Wild Fish Conservancy Northwest, *Scientific Evidence on Adverse Effects of Steelhead Hatcheries*, <http://wildfishconservancy.org/what-we-do/advocacy/steelhead-hatchery-reform/scientific-evidence-on-adverse-effects-of-steelhead-hatcheries>.

dilution cycle is accelerating because, instead of spending years in the ocean putting on weight and maturing, some salmon spend only months or a year, before returning to spawn. High nutrient, high fat content 60 to 80 pound salmon, formerly common, are rarely, if ever, seen, while an increasing number of earlier “jacks” “mini-jacks” and now “micro-jacks” (8-10 inches) return from the ocean in as little as four or five months. The shorter life cycle leads to ever-smaller fish, with ever-smaller fecundity (offspring production).

Due to the increasingly rapid loss of wild salmon genetics, even if federal agencies were to choose dam breaching as the reasonable mitigation measure necessary for recovering wild Snake River salmon and steelhead, based on the current EIS schedule, in five years there will be few, if any, wild fish left to recover.

III. THE LOWER SNAKE RIVER EIS PROVIDES THE NECESSARY NEPA COVERAGE TO IMPLEMENT DAM BREACHING BEGINNING THIS YEAR

As the court is aware, this case has a long history. In 1994 the Court remanded NMFS’ first Biological Opinion (1992) that concluded the lower Snake River dams would not jeopardize the ESA-listed wild salmon and steelhead. The Court determined—what now has become an oft-repeated refrain—that the Biological Opinion was arbitrary and capricious with respect to the chosen jeopardy standard and the federal agencies’ consideration of reasonable and prudent alternatives to avoid jeopardy. *Idaho Dep’t of Fish & Game v. Nat’l Marine Fisheries Serv.* 850 F. Supp. 888, 900 (D. Or. 1994). The Court’s remand order resulted in the *Lower Snake River EIS*, a seven-year, \$33 million comprehensive feasibility report, that was preceded by a Systems Operation Review, and that includes dam breaching as a reasonable alternative to recover ESA-listed salmonid species. The Corps included breaching as an alternative in this EIS because all available science suggested that dam breaching presented the greatest biological potential for recovering endangered and threatened Snake River salmon and steelhead.⁵

⁵ See Budy, P., *Analytical Approaches to Assessing Recovery Options for Snake River Chinook Salmon*, *supra*, p. 4; *Lower Snake River Juvenile Salmon Migration Feasibility Report* (2002), *Appendix A, Anadromous Fish Modeling*, p. A ES-8, http://www.nww.usace.army.mil/portals/28/docs/environmental/lrstudy/Appendix_A.pdf.

A. The Lower Snake River EIS Established by 2002 that Breaching the Lower Snake River Dams Was Necessary to Recover ESA-Listed Salmon and Steelhead Populations

The seven years of studies that led to the *Lower Snake River EIS* in 2002 established that dam breaching provides the best opportunity to recover the wild salmon and steelhead. The federal agencies admitted this years ago, as shown by the chronology below, which also exposes the federal agencies' unfounded position that the lower Snake River dams need not be breached to recover wild salmon and steelhead.

- In 1999 the National Marine Fisheries Services (NMFS), aka NOAA Fisheries, determined that to recover *S Snake River spring/summer Chinook*, the *most risk averse action* would include dam breaching, a harvest moratorium, and vigorous improvements in habitat and hatcheries. (*Emphasis in original.*)⁶ For *S Snake River fall Chinook and steelhead*, dam breaching by itself would likely lead to recovery.⁷
- In 2001 the Plan for Analyzing and Testing Hypotheses (PATH) analyses, commissioned by the federal agencies, suggested that *breaching was more likely than any other change in the hydropower system to meet survival and recovery criteria for the listed species across the widest range of assumptions and scenarios.*⁸
- The Corps' 2002 *Lower Snake River EIS* revealed that *breaching the dams had the highest probability of meeting the government's salmon survival and recovery criteria. In comparison, implementing the other so-called "reasonable" alternatives in the EIS would be slightly worse than doing nothing.*⁹ Further improvements in spill and bypass systems or in transportation were deemed unlikely to be adequate to rebuild the threatened and endangered Snake River salmonid populations.¹⁰
- In its 2002 *Record of Decision* the Corps relied on the NMFS 2000 Biological Opinion that concluded, despite the science showing that dam breaching through channel bypass was the best option for salmon recovery, *breaching was not necessary at that time. NMFS reserved breaching as a contingency management alternative depending upon the findings in the 2005 and 2008 check-in.*¹¹ There is no evidence that the check-ins

⁶ Budy, P., *Analytical Approaches to Assessing Recovery Options for Snake River Chinook Salmon*, *supra*, p. 5-6.

⁷ *Id.*, p. 6.

⁸ USACE, *Record of Decision, Lower Snake River Juvenile Salmon Migration Feasibility Study* (2002), p. 15, http://www.nww.usace.army.mil/Portals/28/docs/environmental/lrsrstudy/lsr_rod.pdf.

⁹ USACE, *Summary, Improving Salmon Passage, Lower Snake River Juvenile Salmon Migration Feasibility Report* (2002), p. 25, <http://www.nww.usace.army.mil/Portals/28/docs/environmental/lrsrstudy/Summary.pdf>.

¹⁰ *Id.*

¹¹ USACE, *Record of Decision*, *supra*, p. 21. Recovery goals have not been met for any of the ESA-listed runs, yet the Corps has not implemented breaching as a contingency management alternative.

occurred or that, if they occurred, fish recovery goals were met sufficiently to de-list the ESA-listed species.

- In making the decision not to breach in 2002, the Corps announced to the taxpaying public that the dams would not have to be breached, if \$350 million were spent (at least \$900 million has been spent to date) on massive “system improvement” projects (Alternative 3 in the EIS) on the four Snake River dams to permit less hazardous juvenile fish passage. *This would give the region time to determine if salmon survival and recovery could be effected through the non-breaching alternatives.*¹² ***If these efforts did not succeed, the nine involved federal agencies, including NOAA, agreed that EIS Alternative 4, dam breaching, must be considered.***¹³ Ten years was the outside time period allowed for results.¹⁴
- In the intervening years the Corps has also adopted Alternative 2 in the *Lower Snake River EIS*, juvenile fish transport, in addition to Alternative 3, major system improvements, to attempt to halt the decline of wild salmon populations.¹⁵

As set forth above, despite the science showing dam breaching was needed to recover the wild salmon, the Corps implemented the *slightly worse than doing nothing* alternatives—system improvements to dams and fish transport around the dams—trying to improve salmon and steelhead survival rates. The *worse than doing nothing* measures have resulted in the four Snake River ESA-listed **wild** salmon and steelhead runs being in poorer shape today than in 2002, due to the loss of wild genetics, smaller run sizes and smaller fish size, among other things.

In its 2016 proposed recovery plan for spring/summer Chinook, NOAA admits that the ESA-listed salmon and steelhead are not recovering, stating:

NMFS estimates that recovery of the Snake River spring/summer Chinook salmon ESU and steelhead DPS, like recovery for most of the ESA-listed Pacific Northwest salmon and steelhead, could take 50 to 100 years. This recovery plan contains an extensive list of actions *to move* the ESU and DPS *towards viable status*; however, ***“the actions will not get us to recovery.”***¹⁶ *Emphasis added.*

¹² Federal Caucus, *Conservation of Columbia Basin Fish, Final Basinwide Salmon Recovery Strategy*, Vol. 3, (2000), p. 20, http://permanent.access.gpo.gov/lps57088/d3/Final_Strategy_Vol_3.pdf.

¹³ *Id.*

¹⁴ *Lower Snake River Juvenile Salmon Migration Feasibility Report* (2002), Appendix A, *Anadromous Fish Modeling*, p. A ES-8, “It will require anywhere from 2 to 10 years for these studies to provide information about the feasibility of achieving demographic improvements through different management actions.” http://www.nww.usace.army.mil/portals/28/docs/environmental/lrstudy/Appendix_A.pdf.

¹⁵ Alternative 1 in the EIS is “no action.”

¹⁶ NOAA, *Proposed ESA Recovery Plan: Snake River Spring/Summer Salmon and Steelhead* (October 2016), p. 219,

The move “*towards viable status*,” a much lower standard than the “trending toward recovery” standard this Court has rejected, likely will continue unless the dams are breached immediately. Snake River wild salmon runs are forecast to decline further this year.¹⁷

B. If It Were to Choose, the Corps Could Supplement the Lower Snake River EIS in a Matter of Months

The *Lower Snake River EIS* may need to be supplemented pursuant to the White House Council on Environmental Quality guidelines, 40 C.F.R. §§ 1500 et seq. Section 1502.9 provides for supplementing an existing EIS when, among other things, changes in the proposed action or alternatives or new circumstances exist. If supplementation of the *Lower Snake River EIS* is needed, the Corp can supplement it within months with a concerted effort, particularly if ordered to do so by the Court.

For the last three years Waddell has been reviewing, correcting assumptions (the biggest reason for massive errors), and otherwise taking due diligence to update and supplement the *Lower Snake River EIS*. Much of the new or corrected information with document references is posted on <http://damsense.org>, an informational web site. In addition, Waddell has briefed senior Corps leadership, the White House Council for Environmental Quality, and the Office of Management and Budget staff in Washington, D.C., with the supplemented information. He has also briefed BPA and NOAA Fisheries West Coast Region on his work. Thus, the federal agencies are aware that much of the work to supplement the current EIS has been done, and can serve to speed the Corps’ supplementation efforts.

IV. USING THE *LOWER SNAKE RIVER EIS* TO PROVIDE NEPA COVERAGE DOES NOT CONFLICT WITH THIS COURT’S SUMMARY JUDGMENT DECISION

In its May 2016 summary judgment decision, the Court ruled, among other things, that the Corps violated NEPA by failing to prepare a system-wide or programmatic EIS in connection

http://www.westcoast.fisheries.noaa.gov/publications/recovery_planning/salmon_steelhead/domains/interior_columbia/snake/proposed_snake_roll_up_10.25.16.pdf.

¹⁷ *Oregon and Washington Departments of Fish and Wildlife Joint State Report – Winter Fact Sheet* (January 2017), http://www.dfw.state.or.us/fish/OSCRP/CRM/FS/17/17_01_31wfl.pdf.

with the 73 Reasonable and Prudent Alternatives (“RPAs”) described in the 2014 Biological Opinion. The RPAs were proposed to occur throughout the Columbia and Snake River basins, and each one of the RPAs was required to work in order to avoid jeopardy to the 13 ESA-listed salmon and steelhead runs in the entire basin. None of the proposed 73 RPAs included lower Snake River dam breaching. This concerned the Court because it recognized that breaching the lower Snake River dams may be the most reasonable measure to recover the ESA-listed salmon and steelhead, both biologically and economically. *Nat’l Wildlife Fedn v. Nat’l Marine Fisheries Serv.*, 184 F. Supp. 3d 861, 875-876, 942-944 (D. Or. 2016). Breaching also may eliminate the need to cull predators such as double crested cormorants, terns and sea lions. *See id.*, at 940.

Regarding NEPA, the Court correctly observed that while the *Lower Snake River EIS* was relevant to the operation of the hydrosystem, it was “too narrow” to cover the 73 RPAs proposed in the 2014 Biological Opinion. *Id.*, at 937-938. However, the EIS is not too narrow to cover breaching the four lower Snake River dams. It was prepared to plan for fish passage and survival and to mitigate the environmental impacts of the four dams. As discussed earlier, dam breaching is the fourth reasonable alternative set forth in the *Lower Snake River EIS*, the alternative most likely to recover the migratory fish, and the only alternative that has not been tried. Notably, the criticisms leveled at the federal agencies in this case do not apply to the *Lower Snake River EIS*, since it fully discussed the ESA-listed species, and thoroughly studied the dams’ impacts, as well as breaching impacts, on the lower Snake River Basin.

In addition, breaching complies with the intent and spirit of the Court’s summary judgment decision. Indeed, the entire decision points in one direction—that breaching the four lower Snake River dams may well save hundreds of millions of dollars and prevent Snake River salmon extinction. *See id.*, at 875-876. It is precisely “*the reasonable alternative of breaching, bypassing, or removing one or more of the four Lower Snake River Dams,*” on which the Court implored the federal government to act. *See id.*, at 942.

Moreover, returning the lower Snake River to a near natural flow resolves most of the issues created by the four dams. More salmon and steelhead migrating through a free-flowing lower Snake River would result in greater utilization of the high-altitude spawning habitat in Idaho that is the refuge most capable of withstanding the predicted effects of climate change and global warming. Dam breaching best mitigates even the effects of climate change. Emissions of the potent greenhouse gas methane would be reduced both by near natural flows and the elimination of the warm slack water reservoirs.¹⁸ A free flowing river would also restore habitat and would return the lower Snake River to a natural temperature regime under which the salmon evolved and flourished.

V. THE HYDROPOWER GENERATED BY THE SNAKE RIVER DAMS IS NOT NEEDED IN THE PACIFIC NORTHWEST REGION

Each of the Snake River dams was designed to take six turbines, but each of the dams was built with only three turbines initially installed. When the dams were constructed, there was too much power in the Pacific Northwest, so doubling the number of turbines could not be justified. There is still a power surplus in the region. Economists tell us, based on BPA reports, that the Pacific Northwest has a 16% surplus of power that is not going away soon.¹⁹

In addition to surplus power and power oversupply issues, the river flows required to utilize all 24 turbines generally occur only during a few weeks of spring runoff each year. Nonetheless, installation of the twelve remaining turbines into the empty turbine bays began not

¹⁸ See Twa, J., *The Lower Snake River Reservoirs Generate a Significant Amount of Methane Gas* (January 2017), <http://damsense.org/wp-content/uploads/2014/12/Snake-River-Greenhouse-Gas-2.2.17.pdf>; Twa, J., *Transportation Methods, Greenhouse Gas Emissions, and the Lower Snake River Reservoirs* (January 2017), <http://damsense.org/wp-content/uploads/2017/02/LSR-Barge-Emissions-One-Page-012417.pdf>.

¹⁹ See Jones, A., *Rocky Mountain Econometrics, Lower Snake River Dams Alternate Power Costs* (2015), http://www.damsense.org/wp-content/uploads/2014/12/Report_LSD-alt-power-costs.pdf; see also Grace, S., *Decommissioning the Lower Snake River Dams Would Help Resolve the Energy Oversupply Problem In the Pacific Northwest and Save Snake River Wild Salmon from Extinction* (October 2016), <http://damsense.org/wp-content/uploads/2014/12/Pacific-Northwest-Energy-Oversupply-Fact-Sheet-10.14.2016.pdf>.

long after the dams came on line.

The reason the Corps installed the additional turbines was for “spill”—that is, too much “spill” over the spillways that caused dissolved gas levels to exceed state water quality standards for safe salmon and steelhead passage. Gas oversaturation is lethal to salmon and other species, either directly or by impairing them, allowing for easier predation. *This is the operational paradox of the Lower Snake Dams.* To protect salmon from too much spill that would be plunging over spillways creating super-saturation, the Corps added turbines during high flow periods so more water could flow through the turbines, and less over the spillways. This can create a power oversupply in the region and can exacerbate the amount of excess power that BPA must “dump,” and at times reduces the wholesale rate of power for BPA. Indeed, there are occurrences when BPA has paid up to \$6 per megawatt hour at the Northern California intertie to take excess power. This means that sometimes BPA pays California to take energy off the Pacific Northwest grid.

VI. BREACHING THE LOWER SNAKE RIVER DAMS IS BETTER ECONOMICALLY FOR THE REGION AND NATION THAN KEEPING THE DAMS

Earth Economics, a well-reputed environmental economics firm located in Tacoma, Washington, recently performed an economic analysis on the benefits provided by the lower Snake River dams. *Earth Economics* based its analysis on the *Lower Snake River EIS*, the *Planning Guidance for Water Resource Projects*, and the *Corps’ Planning Guidance*. The analysis concludes that the Corps’ decision in 2002 to keep the dams up for economic reasons was unfounded, and in fact confirms the opposite.²⁰ *Earth Economics* efforts expose biases in

²⁰ *Earth Economics, National Economic Analysis of the four lower Snake River Dams, A Review of the 2002 Lower Snake River Feasibility Report/Environmental Impact Statement Economic Appendix (I)*, (2016), <http://www.damsense.org/wp-content/uploads/2014/12/National-Economic-Analysis-of-the-Four-Lower-Snake-River-Dams-2.16.pdf>; *Earth Economics, Regional Economic Analysis of the Four Lower Snake River Dams, A Review of the 2002 Lower Snake River Feasibility Report/Environmental Impact Statement Economic Appendix (I)*, (2016), <http://www.damsense.org/wp-content/uploads/2014/12/Regional-Economic-Dev-Summary-Reevaluation-Lower-Snake-Dams-22-Feb-16.pdf>.

the Corps Northwest Division selection of assumptions, policy guidelines and data leading to misleading projections. *Earth Economics* carefully followed Corps' planning guidelines and used the original staff and consultants' numbers, and concluded that the dams' economic benefits to the region and nation are seriously outweighed by their costs.²¹ *Earth Economics'* analysis establishes that the Corps cherry-picked policies and data in reaching its decision in 2002 to keep the dams. Properly using the *Corps Guidance* yields a benefit to cost ratio today for keeping the dams of .15 to 1—that is 15¢ of economic benefit for each dollar expended.²²

In addition to overstating the economic benefits of keeping the dams and understating the benefits of breaching, the Corps also greatly overstated the costs of breaching the four dams. Waddell's 2016 review of the breach cost estimates, the *Draft Reevaluation of the Lower Snake River Juvenile Salmon Migration Feasibility Report and Supplemental Environmental Impact Statement*, Appendix D, was conducted with Corps' personnel familiar with the four lower Snake River dams costs.²³ This draft reevaluation updates and corrects the *Lower Snake River EIS*. It indicates that the cost of breaching was overestimated in the original EIS by roughly \$500 million.²⁴ Today's corrected total cost to breach the four lower Snake River dams via channel bypass, the approved breach method in the *Lower Snake River EIS*, is roughly \$340 million.²⁵

²¹ *Id.*

²² *Id.*; see also, *Scorecard Lower Snake River Dams*, <http://www.damsense.org/wp-content/uploads/2016/03/Lower-Snake-River-SCORECARD-March-25-2016.pdf>.

²³ Waddell, J., Twa J., *Draft Reevaluation of the Lower Snake River Juvenile Salmon Migration Feasibility Report and Supplemental Environmental Impact Statement*, Appendix D (2016), <http://www.damsense.org/wp-content/uploads/2016/05/4.-Breach-Plan-Estimate-JW-21-Feb-2105.pdf>. In fact, this is a critical document if the *Lower Snake River EIS* were to require supplementing. If used by the Corps either as is or as a guide, it would save the Corps months of analysis. This document was attached to the Waddell Letter, Docket File No. 2108 in this action.

²⁴ *Id.*, Executive Summary, pp. 5-6, Introduction, pp. 6-7.

²⁵ *Id.*, p. 28. Figures such as \$2-\$3 billion from dam proponents are based on an inflated cost for full dam removal, i.e., removing all the structures and concrete, which is not necessary for safe fish passage.

VII. THE CORPS HAS THE INHERENT AUTHORITY TO BREACH THE DAMS

If the Corps were to determine that breaching, the only remaining reasonable alternative in the *Lower Snake River EIS*, should be implemented, it has the authority to carry out its decision. Statements made by the Corps regional office, NOAA and the Bonneville Power Administration (BPA), claim that continued operation of the lower Snake River dams is “mandated” or “directed” by Congress, and therefore only Congress can authorize breaching. This is incorrect, but nevertheless, a view repeated for so long it has become gospel. Public Law 87-874 (1962) establishes the depth and width of the navigation channel. This authority gives the Corps permission to construct and maintain the channel to a maximum set of dimensions, assuming the economic benefits and other governing statutes and policies are met.

As with most Water Resource Authorizations, Public Law 87-874 sets forth limits and conditions by which the Corps can achieve navigation and hydropower that must be met *and maintained* in order to seek authorization for appropriations for the said purposes. In exercising its fiduciary responsibilities to insure that authorized projects are currently economically viable, meet environmental laws/requirements and are technically sound/safe (33 U.S.C. § 549a), the Corps long has used its discretionary authority to place projects into a caretaker or non-operational status for one or more of these reasons. The Corps usually does this without the need for congressional authorization or de-authorization, but is required to inform Congress of its findings and course of action. As one example of this, Congress authorized a five-foot navigation channel from the confluence of the lower Snake and Columbia River to Lewiston, Idaho in the late 1800’s, but the Corps abandoned it in the 1920’s as economically unjustified. A recent example is the Willamette Falls Lock in Portland Oregon, in which the District Commander changed the status from caretaker to non-operational because of low use versus the cost to maintain.²⁶

²⁶ USACE, *Corps Changes Status of Willamette Falls Lock* (December 2011), http://www.nwp.usace.army.mil/Portals/24/docs/locations/willamette/WFL_News_release_11-076.pdf.

Regarding the four lower Snake River dams, the Corps is within its authority to place the dams into a non-operational status by breaching now, since the economic benefits are far below the costs, returning only 15¢ of benefit for every dollar spent and wasting 85¢, as previously discussed, and they are causing harm to the environment.

VIII. THE CORPS WOULD NOT NEED CONGRESSIONAL APPROPRIATIONS TO BREACH THE DAMS, SINCE EXISTING FUNDING SOURCES CAN AND SHOULD BE USED

If the Corps were to reach a breach decision, BPA has the funding resources to implement the decision. BPA is required under the Northwest Power Planning and Conservation Act (PL96-501), § 4(h)(10)(c), (16 U.S.C. §§ 839 et. seq., § 839b(h)(10)(c)) to pay for fish mitigation actions with ratepayer funds. BPA is also authorized under the Act to book a credit against U.S. Treasury debt on the dams for fish mitigation expense allocable to the non-hydropower portion of Federal Columbia River Power System projects.²⁷ BPA also can book this credit at the same proportion to lost hydropower revenue, as a result of fish mitigation actions. Breaching is easily the most cost effective alternative of mitigating the loss of, and affording recovery of listed Snake River salmonids runs.

IX. BREACHING THE DAMS THROUGH CHANNEL BYPASS IS A SIMPLE METHOD THAT REQUIRES MINIMAL PLANNING AND DESIGN

Given the simple method available for breaching the earthen portion of each dam to establish channel bypass of the concrete structures, the cost is kept to a minimum and little design is required. The breach has three basic phases: mechanical removal of the top 60 feet of material by dozer to the downstream side of the embankment, while dewatering over the spillway and turbines; controlled (via turbine wicket gates) hydraulic breaching of the remaining 40 feet; and channel alignment and armoring around the structure and bridge piers/road embankments, if necessary. Thus, the contract is little more than a time and materials or rental

²⁷ BPA's Treasury debt arises largely from its responsibility to repay the U.S. Treasury for approximately 91% of the cost of dam construction, and any operations, maintenance, repairs and fish mitigation costs not directly funded by BPA.

contract for four to five pieces of equipment at any one time. The overall approach is essentially the same as in the *Lower Snake River EIS*.²⁸

X. CONCLUSION

The dams are not just an environmental disaster; they are an economic fiasco as well. The cost of keeping these four dams, and the funds they take away from other more viable dams or public works, simply doesn't pencil out. Using a two-tiered NEPA EIS process could lead to breaching the lower Snake River dams beginning this year. If water temperatures appear to be headed to lethal limits, drawdown of Lower Granite Dam could begin in May, 2017, to allow adult salmon faster flowing, cooler water, as they return to the spawning grounds. If the earlier drawdown is not needed, drawdown could begin at Lower Granite Dam on November 1, 2017, followed by breaching several weeks later. This schedule would result in Lower Granite Dam being fully breached by January 10, 2018. Breaching the remaining three dams (Little Goose, Lower Monumental and Ice Harbor) would follow with one each year starting in the fall of 2018, although a faster schedule is technically possible.

Dated: 8 FEB 2017

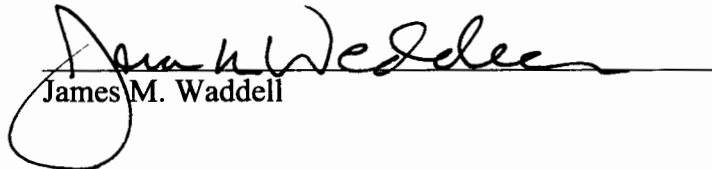
Respectfully submitted,


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²⁸ See fn 25, *supra*.

CERTIFICATE OF SERVICE

I, JAMES M. WADDELL, hereby certify that on February 8 2017 the foregoing Motion for Leave to Proceed as *Amicus Curiae* and to File an *Amicus* Brief; [Proposed] *Amicus* Brief was served by First Class U.S. Mail on the parties at the addresses below.


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