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THE HONORABLE MICHAEL H. SIMON

Pro Se

UNITED STATES DISTRICT COURT
DISTRICT OF OREGON, PORTLAND DIVISION

AMERICAN RIVERS, et al.,

Plaintiffs,

and

STATE OF OREGON, et al.

Intervenor-Plaintiffs,

v.

NATIONAL MARINE FISHERIES SERVICE,
et al.,

Defendants,

and

PUBLIC POWER COUNCIL, et al.,

Intervenor-Defendants.

No. 3:01-cv-00640-SI

DECLARATION OF JAMES WADDELL
IN SUPPORT OF AMICUS CURIAE BRIEF OF
JAMES WADDELL

I, JAMES WADDELL, hereby state and declare as follows:

Education and Relevant Experience

1. I retired from a successful 35-year career as a professional engineer with the U.S. Army Corps of Engineers (“Corps”) in 2010. When I retired, the Corps reappointed me three times to work on Corps and Environmental Protection Agency projects, due to my special

expertise in sustainable development. My 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.

2. I acquired unique expertise regarding the lower Snake River dams based on: (1) my 35 years of service with the Corps; (2) my 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 that resulted in the Lower Snake River Juvenile Salmon Migration Feasibility Report/Environmental Impact Statement, Feb, 2002, available at <https://www.nww.usace.army.mil/Library/2002-LSR-Study/> ("*Lower Snake River Dams FR/EIS*"); and (3) my recent multi-year involvement reanalyzing, reevaluating and updating the *Lower Snake River EIS*.
3. I, as Deputy District Engineer, was in the highest civilian position at Walla Walla. My 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 my 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.
4. 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, I recommended continuing with breach planning and design to recover wild salmon since the Corps own studies showed dam breaching was the best alternative to achieve that objective.

5. Attached hereto as **Exhibit 1** is a true and correct copy of my Resume which illustrates my extensive experience in high level project management with the Corps, including as a detail to the Executive Office of the President. Post-retirement, I founded the organization Dam Sense in order to educate the public about various aspects of dam breaching based on publicly available government information and data.
6. I am also an elected Clallam County Public Utility District Commissioner and have served in that capacity since January 2019. I have done extensive research and exploration into the various trade groups, organizations and agencies that deal with power supply to the state of Washington and the Pacific Northwest region. In my capacity as a Commissioner, I am regularly briefed on, and am an active participant in, hydropower modeling, fish management strategies, and policies that relate to future of hydro-system, in particular the lower Snake River dams. I am providing this declaration and brief in my individual capacity, not as a Commissioner, but include this information insofar as it is relevant to my background and informed perspectives on this issue.

Reevaluation of the *Lower Snake River Dams FR/EIS* Shows Dam Breaching Via Hydraulic Channel Bypass is Feasible and Economical

7. The *Lower Snake River Dams FR/EIS* remains the only comprehensive study specific to feasibility of breaching the lower Snake River dams. In contrast, the 2020 Columbia River System Operations Environmental Impact Statement is much broader and lacks the scope and depth of analysis contained in the EIS specific to the lower Snake River dams. The *Lower Snake River Dams FR/EIS* recognized that dam breaching was the best

method to prevent the extinction of endangered salmon and steelhead, even though the federal agencies did not select dam breaching as the preferred alternative. Review of the *Lower Snake River Dams FR/EIS* is valuable because it contains a detailed description of both how the dams were designed to make breaching feasible and identifies all factors relevant to breaching. Today, there is increasing misconception as to the feasibility of breaching and as to the cost and extent of any necessary mitigation.

8. I became involved again in the Snake River dam issues 9 years ago when I learned the dams were continuing to devastate the wild salmon runs. For the last several years I have reevaluated and reanalyzed major parts of the *Lower Snake River Dams FR/EIS*. I have concluded that the economic projections and cost estimates that made dam breaching seem to be economically infeasible in 2002 were based on errors that I and professional economists have now corrected. Attached hereto as **Exhibit 2** is a true and correct copy of a paper entitled *Lower Snake River Dams Breach Mitigation Plan & Cost*, dated December 2020 (“Breach Mitigation Plan”), explaining the actual cost of breaching with required mitigation, along with the full “REEVALUATION of The Lower Snake River Juvenile Salmon Migration Feasibility Report And SUPPLEMENTAL Environmental Impact Statement, Appendix D Natural River Drawdown Engineering”, Prepared by Jim Waddell, PE/CE, USACE retired, Lead Author John Twa, ME, Technical Support/Editing/Graphics Anon Fisheries Biologists & Planners, February 2016.
9. I used my extensive experience as a program and project manager in the Corps where I specialized in economic analysis and cost estimating for these very types of projects to reach the conclusions set forth in the Breach Mitigation Plan. Breaching will cost less than \$280 million, a fraction of the amount set forth in the CRSO FEIS. This number is

based on the *Lower Snake River Dams FR/EIS* cost estimates, corrected and updated. Mitigation costs for direct impacts of breaching are under \$500 million. Direct mitigation costs associated with breaching all four dams as identified in the Lower Snake River EIS are: Federal - railroad relocations, bridge abutment protection, reservoir embankment protection, drainage structure protection, railroad/roadway damage repair, recreation access modification, reservoir revegetation, cultural resource protection. Non-federal : irrigation system at Ice Harbor reservoir; groundwater wells (all four dams); Potlatch Corporation water intake and effluent diffuser Lower Granite). The \$500 million mitigation costs we identified include corrected federal and non-federal costs as well as off river short line rail upgrades and additional sidings at grain elevators on the river. Mitigation, except for minor rail modifications, can occur simultaneously or post-breach.

10. The Corps' plan, described in the *Lower Snake River Dams FR/EIS*, to remove the earthen berms used hydraulic breaching to wash away the bottom and widest part of the earthen berm. Subsequent engineering shows that notching and removing the entire earthen portion of the lower Snake River dams via controlled hydraulic breaching can be easily done at a much cheaper cost than the original plan estimate, utilizing structures designed in the initial construction.

The Corps Has Inherent Authority to Place the Dams in Non-Operational Status and Breach Them

11. The Corps' has the inherent authority to cease operating the lower Snake River dams and breach them without Congressional authorization.
12. The *River and Harbor Act of 1945*, Pub, L. No. 79-14, 59 Stat. 10, did not mandate or require the construction of the lower Snake River dams. Rather, the Act gave the Corps broad discretion for "the construction of such dams as are necessary . . ." This language

serves to underscore the Corps' broad discretion in determining whether to continue to operate the dams or whether to place the dams in caretaker status for decommissioning.

13. Indeed, it was over a decade before Congress appropriated any funds to start dam construction, illustrating, what should be obvious: that Congress, itself, did not consider the River and Harbor Act of 1945 as requiring any dam construction. Just because the Act's passage enabled the Corps to seek funding to construct the dams, did not mean that it had to do so, nor, for that matter, that Congress would willingly provide it. The mere passage of the Act did not provide any guarantee of sufficient appropriations to carry out the project.
14. This same idea applies to projects even after they are built. Just because a dam or other infrastructure project has been built does not mean that the Corps is obligated to continue to seek sufficient funds to maintain it. To the contrary, the Corps must evaluate projects to determine whether their cost-benefit ratio justifies their continued operation. When a project is no longer justified, whether for economic or environmental reasons or both, the Corps will place it in caretaker or non-operational status. Part of placing a project in such status is to take necessary measures to secure it. Absent such discretion, the Corps would be beholden to Congress – waiting, perhaps decades, for legislative agreement -- in order to avoid wasting billions of taxpayer dollars. This is simply not the case. The Corps frequently secures projects for which it has ceased operations and these same principles apply to breaching and securing the lower Snake River dams.
15. Within the Corps, there are many ways to cease operations and secure a project that is no longer viable. There are many terms to describe the process of ceasing operations including, but not limited to, placing a project in caretaker or non-operational status,

decommissioning, mothballing, retiring, or abandonment. In the context of the lower Snake River dams, any of the recognized means to cease operations leads to the same result – they all require securing of the project which in this case is by breaching the earthen berms for each of the dams.

16. The breach has three basic phases: (1) 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; (2) controlled (via turbine wicket gates) hydraulic breaching of the remaining 40 feet; and (3) 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 contract for four to five pieces of equipment at any one time.
17. It is feasible to start breaching this year. This is possible since: (a) the Corps has all the necessary authority to decommission and breach; (b) BPA has the funding to do it and has enough surplus power to cover the loss of generation at the four dams; (c) there is an existing breach plan in the 2002 EIS which I and a team of professionals have updated to streamline the breach process and reflect present day cost; and (d) the contracting is a simple matter of "time and materials contracting" which does not require any more design than that already covered in the 2002 EIS breach plan as updated. Lower Granite could be breached starting in December 2021 and Little Goose could be breached 45 days later, followed by breaching one dam per year for the last two dams. The timing of the breach is during the "in water work period" in which there is very little salmon or steelhead migration. Simple mitigation measures to shift grain shipments to rail can largely be accomplished in a matter of months. There is sufficient time for mitigation regarding the second two dams to be breached, specifically, for rail relocations at Lower Monumental

and for irrigation modifications on Ice Harbor pool. The “REEVALUATION of The Lower Snake River Juvenile Salmon Migration Feasibility Report And SUPPLEMENTAL Environmental Impact Statement, Appendix D Natural River Drawdown Engineering”, attached as **Exhibit 2**, provides a more in depth discussion.

18. Breaching the earthen berms is the only feasible means of protecting the concrete structure, spillways, locks etc. from continuous river flows for which they were not designed. For instance, spillway basins would erode in a matter of years and then cause structural failure of the spillways themselves. Breaching the dams by removing the earthen embankment is also the sole means of safely securing the project and allowing fish passage while in a caretaker or non-operational status.
19. There is considerable misunderstanding about the difference between a change in a project’s operational status versus a change in a project’s purpose. This has led some to take the erroneous position that placing the lower Snake River dams in non-operational status and securing them by breaching their earthen berms would be an unauthorized change to the project’s purpose. Placing a project in caretaker or non-operational status does not change the purpose for which the project is authorized. The reason is simple – there is no mandate requiring the Corps to continue to operate a particular project. The Corps thus has discretion to cease operating a project. There is no question that this is, and must be, the case. In contrast, a change in *operations* may in some instances, although certainly not all, require an extensive analysis of the Corps’ scope of authority to operate a project in a different way. *See* Memorandum for the Chief of Engineers, June 25, 2012, from Office of Chief Counsel re authority to provide for municipal and industrial water supply from the Buford Dam/Lake Lanier Project, Georgia, available at

https://www.sam.usace.army.mil/Portals/46/docs/planning_environmental/acf/docs/2012_ACF_legalopinion.pdf. No such analysis is required in this instance because the Corps

would not be *operating* the project for another purpose.

20. As a program manager, I was required to allocate funds to projects. In certain cases the decision was made to defund projects, resulting in projects that were either abandoned or no longer operated. This occurs frequently with studies and small projects, such as dredging.
21. The cessation of operations may also occur on a piecemeal basis. Indeed, BPA has done this in the context of the lower Snake River dams. BPA has made the decision to not fund turbine replacement for certain turbines on the lower Snake River dams which is, de facto, decommissioning of a unit. This illustrates how BPA and other federal agencies frequently alter projects to the point of impacting their operations without Congressional authorization.
22. The Corps makes discretionary decisions at all levels about what money goes to which projects and, within a particular project, about what money goes to particular aspects of a project.
23. The Corps participates in an annual budget process for operations and maintenance. From OMB to the Secretary of Army comes budget guidance. OMB tells the Corps that it will get X amount of total dollars for operations and maintenance. Each division headquarters of the Corps then identifies the amount of money for that division. At the field level, each project manager puts in a budget request. Almost always, the request will exceed available funds. Negotiation of budgets then occurs, resulting in a bottom line that goes to Congress for appropriations. The money appropriated then trickles back down to the

field/project level. Program managers in the division headquarters have the discretion to allocate project funds.

24. An update to the Corps' business process regulation, ER 5-1-1, released on July 31, 2018, describes the key tenets of the Corps' decision making policy. Of particular value is the doctrine for Mission-Focused Execution on p. 2 that reads:

USACE team members will make resource decisions based on what is best for the mission, the Nation, and the public, understanding impacts to all stakeholders. Leaders facilitate smart use of resources, technical competency, and innovation across the organization with a focus on mission execution. As public servants, all USACE employees have taken an oath to support and defend the Constitution and, by extension, the interests of the United States and its citizens. Accordingly, all USACE employees must make decisions based on the best interests of the Nation, the Army and the public. Recognition of this preeminent responsibility is critical to properly balancing the many interests that USACE faces in executing its missions.

Available at https://www.publications.usace.army.mil/Portals/76/ER_5-1-11.pdf?ver=2019.

25. This description of the Corps' decision-making process illustrates the Corps discretion in allocating resources and mirrors my experience in the Corps.
26. The Corps has the ability to make discretionary decisions even if the decision will result in the degradation or cessation of all or a portion of a project. If the Corps were unable to exercise this level of discretion, it would impossible for it to effectively manage billions of dollars' worth of projects.
27. The decision to cease operating a project is normally driven by lack of funds, but may also include consideration of other specific circumstances, in particular, a project's environmental and cultural impacts. The Corps must also, of course, give strong consideration to, and abide by federal laws, such as the Endangered Species Act.
28. An example of placing a project into a "non-operational" status is the Willamette Lock and Dam in Portland Oregon; the dam was placed into a caretaker status in 2006, due to low use versus the cost of operations and maintenance.

See <https://www.nwp.usace.army.mil/willamette/locks>. In 2011, the dam was closed to traffic over seismic instability concerns and moved from caretaker status to non-operational status. See,

<https://usace.contentdm.oclc.org/digital/collection/p16021coll7/id/8300>

29. The lower Snake River dams are a prime candidate for placement in caretaker or non-operational status. The scientific evidence shows that they are incompatible with the survival of endangered species. The dams lack justification from an economic (cost-benefit ratio) and power production standpoint. Attached as **Exhibit 3** is an in depth analysis, entitled “*Claims of Sustained Peaking, Ramping, Reserve, Flexibility and Balancing Power from the lower Snake River Dams; What is Feasible?*”, of claims regarding the dams ability to generate sustained peaking power, often incorrectly used as a justification to keep the dams. The paper demonstrates the near infeasibility of a peaking power scenario.

I declare under penalty of perjury that the foregoing is true and correct to the best of my knowledge.

Executed on: October 15, 2021.

/s/ James Waddell

JAMES WADDELL