

THE MISTAKE ON THE SNAKE: THE LOWER SNAKE RIVER DAMS

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ABSTRACT

Congressman Mike Simpson's proposal to remove the four federal dams on the Lower Snake River (LSR) has reenergized the longstanding debate over the future of those dams, their narrow benefits, and their substantial costs, particularly to Endangered Species Act-listed Snake River salmon. This article examines the LSR dams, their history and justification, their role in sending Snake River salmon on a path toward extinction from which they have yet to recover, and their impending liabilities under the Endangered Species and Clean Water Acts. The Simpson proposal, while arresting, is so freighted with spending on replacement power and river navigation improvements, among other things, that its estimated \$33.5 billion price tag seems wholly unrealistic. And its dam license extensions throughout the Columbia Basin and the litigation moratorium it would impose until the mid-21st century have generated such substantial opposition that enactment by Congress, in anything resembling its current form, will have to overcome the longest of odds. Still, given the imperiled nature of Snake River salmon and the considerable economic benefits that restored salmon runs could play in revitalizing the central Idaho economy, the proposal may serve as a beginning for Idaho's elected officials and its public to focus on the advantages that restored Idaho salmon runs could play in revitalizing the central Idaho economy. Anything resembling the Simpson proposal should be welcomed by the Idaho public as a considerable economic stimulus for the region.

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1. *Saving Idaho's Salmon and Steelhead*, IDAHO CONSERVATION LEAGUE, <https://www.idahoconservation.org/our-work/salmon-and-steelhead/>.



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2. *Removing Lower Snake River Dams*, COLUMBIA RIVERKEEPER, <https://www.columbiariverkeeper.org/our-work/saving-salmon/snake-river-dams>.

I. INTRODUCTION

The Snake River rises in the Teton Mountains of western Wyoming, flows through the Snake River Plain in southern Idaho, then forms the Oregon-Idaho border in Hells Canyon and, after traversing the Palouse Hills of eastern Washington, empties into the Columbia River at Tri-Cities, Washington, where it supplies over 30 percent of the Columbia's flow.³ The Snake River was created by Ice-Age flooding events like the Missoula and Bonneville Floods,⁴ is 1078 miles long⁵ and drains some 109,000 square miles in six states: Wyoming, Idaho, Utah, Nevada, Oregon, and Washington.⁶

Native Americans have lived along the Snake below Shoshone Falls (near present-day Twin Falls) for over 11,000 years, harvesting the salmon that were plentiful and a vital source of subsistence, commerce, and culture below Shoshone Falls (the natural limit of salmon migration).⁷ The dominant native groups at the time of Lewis and Clark were the Nez Perce and the Shoshone, whose sign language gave the Snake its name.⁸ By the mid-19th century, the Oregon Trail brought numerous white settlers to the Snake River Basin, and by the end of the century, they began to dam the river for electricity, navigation, and irrigation.⁹ Most of these dams were small ones on the Snake above Hells Canyon.¹⁰

The transformative event for the lower Snake came later in the twentieth century when the Corps of Engineers began studying the lower Snake for federal

3. See Todd Shallat, *Snake River*, OREGON ENCYCLOPEDIA: A PROJECT OF THE OREGON HISTORICAL SOCIETY, https://www.oregonencyclopedia.org/articles/snake_river/#.YJ6ysetlDs0 (last visited Jan 24, 2022).

4. See *id.*

5. See *The River*, SNAKE RIVER WATERKEEPER, <https://snakeriverwaterkeeper.org/the-river> (last visited May 14, 2021).

6. See TIM PALMER, *THE SNAKE RIVER: WINDOW TO THE WEST 3* (Island Press ed., 1991).

7. See THE NATIVE AMERICAN SOURCEBOOK, NATIVE AMERICAN HISTORY 113 (J.E. Luebering ed., Britannica Educ. Publ'g 2011); RIVERS OF NORTH AMERICA 607 (Arthur C. Benke & Colbert E. Cushing, eds., Elsevier Academic Press 2005).

8. White explorers misinterpreted Shoshone sign language for weaving baskets as representing a snake. *Snake River*, 38 IDAHO STATE HISTORICAL SOCIETY REFERENCE SERIES (1964).

9. White settlers who travelled the Oregon Trail began to dam the Snake River in the 1870s and 1880s. Shallat, *supra* note 3. Even before the large dams on the Columbia and the Snake Rivers, steamboat captains navigated the rivers. See BILL GULICK, *STEAMBOATS ON NORTHWEST RIVERS* xiii (Caxton Press 2004). Beginning in the 1850, many of the steamboats brought miners into Hells Canyon. *Id.* at 40. Steamboats could navigate downstream as far as Lewiston, Idaho, now the site of a deep-water port from which barges carry agricultural products to ports downstream. *Id.* at 85.

10. Shallat, *supra* note 3.

development in the 1920s.¹¹ The Corps reports led Congress to rather causally authorize the Lower Snake River (LSR) dams during World War II.¹² The four LSR dams—all of which are located in the state of Washington—would be under construction until the early 1980s, although the last of them, Lower Granite near Lewiston, became operational in 1975.¹³ By the end of the 1980s, the dams would be embroiled in controversy due to the damage they inflicted on salmon migration to and from the central Idaho spawning grounds. In the 1990s, those salmon runs would be listed for protection under the provisions of the Endangered Species Act (ESA).¹⁴

The ESA listings may have saved Idaho-bound salmon from extinction, but they have done little or nothing to recover the species, mostly because the federal agencies charged with interpreting the ESA imposed only relatively small operational changes to the dams.¹⁵ Consequently, considering the desperate condition of the salmon—with most species' returns in the Columbia Basin still predicted to remain lower than the ten-year average¹⁶—calls for more substantial

11. See, e.g., H.R. Doc. No. 308, at 3 (1926) (one of the first reports produced by the Corps, authorized by the River and Harbor Act of 1925).

12. See *infra* notes 32, 33, 37 and accompanying text.

13. Ice Harbor, the first of the LSR dams, went on line in 1962, with three units added in 1976; Lower Monumental was completed in 1969, with three units added in 1981; Little Goose became operational in 1970, with three additional units in 1978; Lower Granite, the last of the LRS dams, was constructed in 1976, with three additional units added in 1978. See *The Four Lower Snake River Dams*, REDFISH BLUEFISH, <http://www.bluefish.org/fourdams.htm> (last visited May 13, 2021).

14. The first listing of Snake River salmon was the Snake River sockeye, listed in 1991. 50 C.F.R. § 224.101 (2019). The salmon runs in the Snake River that are listed as threatened are the spring/summer run of chinook salmon and steelhead. 50 C.F.R. § 223.102 (2019). Sockeye salmon, listed in 1991, is listed as endangered. 50 C.F.R. § 224.101 (2019).

15. See, e.g., Michael C. Blumm, et al., *Practiced at the Art of Deception: The Failure of Columbia Basin Recovery Under the Endangered Species Act*, 36 ENV'T L. 709 (2006).

16. See John Harrison, *With Few Exceptions, Columbia River Salmon and Steelhead Returns Continue Downward Trend*, NW. POWER AND CONSERVATION COUNCIL (Mar. 12, 2021), <https://www.nwcouncil.org/news/few-exceptions-columbia-river-salmon-and-steelhead-returns-continue-downward-trend> (explaining the overall decline in the number of returning salmonids and noting the continual downward trend of all species' returns).

measures, including removing or breaching the dams,¹⁷ have become prominent.¹⁸ But the federal managers of the Columbia Basin hydroelectric system took no substantial action until ordered to do so by a federal judge, who found the federal ESA response to be inadequate and later ordered the institution of increased spills of water at the dams to facilitate downstream salmon migration.¹⁹ Recently,

17. Breaching a dam means that part of the dam would still exist but would be nonfunctional as a lock for navigation and incapable of producing hydroelectric power. In the 2020 environmental impact statement (EIS) that Judge Simon ordered federal operating agencies to prepare, *infra* note 19, the estimated cost of breaching the four dams was roughly \$800 million. NW. DIV., U.S. ARMY CORPS OF ENG'RS, et al., COLUMBIA RIVER SYSTEMS OPERATIONS FINAL ENVIRONMENTAL IMPACT STATEMENT Q-A-8 to 10, tbl.A-1 (2020). This estimate accounts only for the cost of breaching in terms of deconstruction costs, not other costs such as building replacement power to offset the lost electric production or the infrastructure to replace the barge transpiration lost because of the breaching. The Simpson proposal estimated the cost of breaching the dams at \$1.4 billion, about 4% of the multi-billion-dollar plan. U.S. Congressman Mike Simpson, *The Northwest in Transition, Salmon, Dams and Energy, What If?* 12, OFFICE OF THE U.S. REPRESENTATIVE FOR IDAHO, <https://simpson.house.gov/uploadedfiles/websiteslides2.4.pdf> (last visited July 27, 2021) [hereinafter *Northwest in Transition*].

18. See *Why Remove the 4 Lower Snake River Dams?*, SAVE OUR WILD SALMON, <https://www.wildsalmon.org/facts-and-information/why-remove-the-4-lower-snake-river-dams.html> (last visited Jan. 26, 2022); Michael C. Blumm, et. al., *Saving Snake River Water and Salmon: Simultaneously: The Biological, Economic, and Legal Case for Breaching the Lower Snake River Dams, Lowering John Day Reservoir, and Restoring Natural River Flows*, 28 ENV'T. L. 997 (1998) (collecting economic and scientific studies as well as marshalling legal arguments) [hereinafter *Saving Snake River Salmon and Water*]. In 2021, American Rivers named the Snake River “the most endangered river” in the nation. See *America’s Most Endangered Rivers*, AM. RIVERS, 2021, 3 https://www.americanrivers.org/wp-content/uploads/2021/04/MER2021_FINAL_Report_ReducedSize-1-1.pdf; Jeremy P. Jacobs, *Snake River Tops Imperiled List as Group Urges Dam Removal*, E&E NEWS-GREENWIRE (Apr. 13, 2021), <https://subscriber.politicopro.com/article/eenews/1063729845>; Doyle Rice, *The Snake River in the Pacific Northwest Is the Nation’s ‘Most Endangered River’ of 2021*, USA TODAY (Apr. 13, 2021), <https://www.usatoday.com/story/news/nation/2021/04/13/most-endangered-rivers-snake-river-tops-list-american-rivers/7191736002/>.

19. In 2016, federal District Judge Michael Simon ruled that the National Marine Fisheries Service’s 2014 biological opinion (BiOp) on 2014-2018 federal hydroelectric operations violated the ESA because it (1) promised off-site mitigation measures were not reasonably certain to occur; (2) employed an improper method of evaluating species jeopardy; (3) failed to account for low and declining abundance levels of spawning salmon, with an adequate margin of safety; and (4) inadequately considered the effects of ongoing climate change on the promised mitigation measures. The court also

environmental and fishing groups have focused on implementing Clean Water Act requirements which, if successful, could produce material changes in dam operation to lower Columbia Basin water temperatures.²⁰

Congressman Mike Simpson (R-Idaho) waded into this longstanding and complex controversy when, in early 2021, he proposed removing the four LSR dams as part of an arresting \$33.5 billion package that would ensure that no affected economic interest would suffer any pecuniary losses and litigation over the issue

ordered the federal agencies operating the federal hydroelectric system to prepare an EIS on the cumulative effects of operational changes and reasonable alternatives of existing hydroelectric operations that would better promote the recovery of the listed salmon. Nat'l Wildlife Fed'n v. Nat'l Marine Fisheries Serv., 184 F. Supp. 3d 861, 950 (D. Or. 2016); see Michael C. Blumm, at al., *Still Crying Out For a "Major Overhaul" After All These Years—Salmon and Another Failed Biological Opinion on Columbia Basin Hydroelectric Operations*, 47 ENV'T L. 287, 302–31 (2017) (analyzing Judge Simon's 2016 opinion) [hereinafter *Still Crying Out*]. Judge Simon proceeded to order increased spills as an interim in 2017, while the agencies attempted to comply with their BiOp and EIS requirements. See *id.* at 324–26. The Ninth Circuit affirmed the spill decision in 2018. Nat'l Wildlife Fed'n v. Nat'l Marine Fisheries Serv., 886 F.3d at 803; See Michael C. Blumm & Doug DeRoy, *The Fight Over Columbia Basin Salmon Spills and the Future of the Lower Snake River Dams*, 9 WASH. J. ENV'T. L. & POLY. 1, 9–13 (2019) [hereinafter *The Fight Over Salmon Spills*]. In 2020, the federal government's EIS in response to the court's order rejected dam breaching and is now under judicial challenge by environmental groups. See *Fishing, Conservation Groups Take Step to Renew Legal Challenge to Columbia-Snake Hydropower Operations*, EARTHJUSTICE (Oct. 23, 2020), <https://earthjustice.org/news/press/2020/fishing-conservation-groups-take-step-to-renew-legal-challenge-to-columbia-snake-hydropower-operations>.

20. See *infra* section V.

would cease for thirty-five years.²¹ Simpson's proposal drew opposition from both economic and environmental groups²² and scant support in Congress.²³

21. See *infra* section VI; Jeremy P. Jacobs, *Republican Wants to Breach Dams, Reshape Pacific Northwest*, E & E NEWS (Feb. 8, 2021), <https://www.eenews-net.library.lcproxy.org/eedaily/stories/1063724579/>. As of this writing, it's not clear how broadly the litigation moratorium would apply. Jacques Leslie, Opinion, *Listen Up: A Republican Says We Have to Breach the Four Snake River Dams*, LOS ANGELES TIMES (March 10, 2021), <https://www.latimes.com/opinion/story/2021-03-10/snake-river-dams-demolition-mike-simpson-idaho-washington>. See Chuck Thompson, *'The Stars Are Aligned: Rep. Mike Simpson Breaks down Plan to Breach Snake River Dams*, COLUMBIA INSIGHT (Feb. 25, 2021), <https://columbiainsight.org/the-stars-are-aligned-rep-mike-simpson-breaks-down-plan-to-breach-snake-river-dams/> (for an interview with Congressman Simpson about his proposal).

22. Nineteen environmental groups signed a statement opposing the proposal. See *Why Your Organization Needs to Know About the "Simpson Concept" to Breach the Lower Four Snake River Dams*, WILD FISH CONSERVANCY, (Dec. 30, 2020), <https://wildfishconservancy.org/why-your-organization-needs-to-know-about-the-201csimpson-concept201d-to-breach-the-lower-four-snake-river-dams>; see also Annette Carry, *'Risky Proposition.'* *Can \$33 Billion Make Up Loss of Snake River Dams? Tri-Cities Group Leery*, TRI-CITY HERALD (Feb. 7, 2021), <https://www.tricityherald.com/news/local/article248998910.html>; Eric Barker, *Some Environmentalists Raise Objections to Simpson Dam Plan. This is the Biggest Reason*, IDAHO STATESMAN (Apr. 1, 2021), <https://www.eastidahonews.com/2021/03/some-environmentalists-raise-objections-to-simpson-dam-plan-this-is-the-biggest-reason/> (explaining that some environmental groups have opposed the Simpson proposal because of the 35-year moratorium on Clean Water Act (CWA) and Endangered Species Act (ESA) litigation it would impose).

23. As of this writing, Congressman Earl Blumenauer (D-Or.) was the sole member of Congress to voice support for Simpson's proposal. Blumenauer along with Simpson appeared in a virtual town hall to speak on the matter. See Eric Barker, *Idaho Republican, Oregon Democrat Agree on Salmon. 'Let's Put Away Our Pitchforks.'* IDAHO STATESMAN (May 05, 2021), <https://www.idahostatesman.com/article251184424.html>. Oregon Governor Kate Brown (D-Or.) has also expressed her support. Nigel Jaquiss, *Idaho Republican Congressman Lays out Framework for Removal of Four Lower Snake River Dams*, WILLAMETTE WEEK (Feb. 8, 2021), <https://www.wweek.com/news/2021/02/07/idaho-republican-congressman-lays-out-framework-for-removal-of-four-snake-river-dams/>; Jeremy P. Jacobs, *Or. Governor Urges Removal of Four Disputed Dams*, E&E NEWS GREENWIRE (Feb. 18, 2020), <https://subscriber.politicopro.com/article/eenews/1062385429>. Opposition was, however, widespread from Washington's elected officials. Republican Congresswoman Cathy McMorris Rodgers (R-Wash.) and Congressman Dan Newhouse (R-Wash.) opposed the Simpson proposal. See Nicholas K. Geranios,

This paper discusses the origins of the controversy over the LSR dams, the longstanding and ongoing court challenges, and the remarkable Simpson proposal. Section I provides some historical background, beginning with the Corps' river basin studies of the 1920s and continuing through the 1940s congressional authorizations and the completion of the dams in the early 1980s. Section II turns to the adverse effects of the dams on migrating salmon. Sections III and IV explain the attempted restoration efforts under the Northwest Power Act and the ESA over the past forty years, neither of which has been met with much success. Section V discusses ongoing efforts to use the Clean Water Act to lower river temperatures to make streams in the Columbia Basin, especially the Snake River, less lethal for salmon. Section VI examines the Simpson proposal in some detail, including its staggering price tag. The paper concludes that unlike the planned removal of dams in the Klamath River Basin in northern California—seemingly quite possible in the next few years²⁴—removal of the LSR dams faces long odds that will require, at a minimum, widespread recognition by the Idaho public and its elected representatives of the significant economic gains they would experience from the out-of-state LSR dam removal. If the Simpson proposal generates debate among Idahoans of the costs and benefits of LSR dam removal, it will have served a substantial public function.

II. THE CONSTRUCTION OF THE LOWER SNAKE RIVER DAMS

Small dams have been built on the Snake River since white settlers began moving to the region via the Oregon Trail in the nineteenth century.²⁵ But the idea of the federal government damming the Columbia Basin did not surface until a 1931 Army Corps of Engineers report, authorized by the River and Harbor Act of 1925,²⁶

Feud Breaks Out Among GOP Lawmakers over Snake River Dams, OR. PUB. BROAD. (May 6, 2021), <https://www.opb.org/article/2021/05/06/northwest-gop-lawmakers-feud-snake-river-dams/> (representing districts that, combined, contain all four of the LSR dams). Washington's Governor Jay Inslee (D-Wash.) and both of the state's U.S. Senators, Maria Cantwell (D-Wash.) and Patty Murray (D-Wash.), announced their opposition, on the grounds that the plan could not be included in the upcoming infrastructure package working its way through Congress, as well as wanting to see a plan that was the product of a regional coalition. See Lynda V. Mapes, *Gov. Inslee, Washington State's U.S. Senators Reject GOP Congressman's Pitch on Lower Snake River Dam Removal*, SEATTLE TIMES (May 14, 2021), <https://www.seattletimes.com/seattle-news/environment/gov-inslee-washington-states-u-s-senators-reject-gop-congressmans-pitch-on-lower-snake-river-dam-removal/>.

24. See *infra* section VII.

25. See Shallat, *supra* note 3.

26. H.R. Doc. No. 73-103, at 3 (1932) (the reports were completed in 1931 but did not reach the Congressional Record until later). These studies, referred to as "308 reports," after H.R. Doc. No. 69-308, at 3-4 (1926), that called for them, have been periodically updated by the Corps of Engineers.

recommended construction of ten dams on the mainstem Columbia River.²⁷ In the 1930s, after dams became a form of “conservation” favored by Franklin Delano Roosevelt’s New Deal,²⁸ the Corps revised its Columbia Basin plan in 1938 to focus on the Lower Snake River.²⁹ The prodigious Snake River salmon runs, the largest in the Columbia Basin at the time,³⁰ would never be the same after Congress authorized the dams that the Corps’ plan recommended.

The Corps’ 1938 turn from the Columbia to the Snake amounted to a shift from an emphasis on hydropower generation to navigation, in recognition of the apparent lack of markets for the hydropower being generated by the Bonneville Dam and would soon come from the massive Grand Coulee project, and also a response to persistent lobbying by shipping and agricultural interests who sought a slack-water navigation channel linking Lewiston to the ocean.³¹ Their lobbying succeeded perhaps beyond the proponents’ wildest dreams, despite a cost-benefit ratio—by the Corps’ own figures—of fifteen cents on the dollar.³² Congress in 1944

27. For the history of development on the Lower Snake River, see KEITH C. PETERSEN & MARY E. REED, U.S. ARMY CORPS OF ENG’RS, CONTROVERSY, CONFLICT, AND COMPROMISE: A HISTORY OF LOWER SNAKE RIVER DEVELOPMENT (1994). See also KEITH C. PETERSEN, RIVER OF LIFE, CHANNEL OF DEATH: FISH AND DAMS ON THE LOWER SNAKE RIVER (2001) (1995); STEPHEN HAWLEY, RECOVERING A LOST RIVER: REMOVING DAMS, REWILDING SALMON, REVITALIZING COMMUNITIES (2011); Michael C. Blumm, *Hydropower vs. Salmon: The Struggle of the Pacific Northwest’s Anadromous Fish for a Peaceful Coexistence with the Federal Columbia River Power System*, 11 ENVTL. L. 211, 224–26 (1981) [hereinafter *Hydropower vs. Salmon*].

28. See DOUGLAS BRINKLEY, RIGHTFUL HERITAGE: FRANKLIN D. ROOSEVELT AND THE LAND OF AMERICA 571 (2016) (observing that FDR’s affinity for creating dams tarnished his conservation legacy, and that his interest in promoting public power to compete with private utility power caused him to view projects like the Grand Coulee Dam and the Tennessee Valley Authority as “holy causes”), reviewed in Michael C. Blumm, *The Nation’s First Forester-in-Chief: The Overlooked Role of FDR and the Environment*, 33 J. LAND USE & ENVT. L. 25, 58 (2017) (FDR’s “monumental environmental legacy, it is true, is undermined by his attachment to dams and the hydropower and irrigation they brought.”).

29. See BRINKLEY, *supra* note 28, at 229; see also Michael C. Blumm, *Saving Idaho’s Salmon: A History of Failure and a Dubious Future*, 28 IDAHO L. REV. 667, 672 (1992) [hereinafter *Saving Idaho’s Salmon*].

30. See Rocky Barker & Brittany Peterson, *Fate of Pacific Northwest Orca Tied to Having Enough Columbia River Salmon*, IDAHO STATESMAN, <https://www.idahostatesman.com/article160452294.html> (Apr. 25, 2019, 10:58 AM).

31. *Saving Idaho’s Salmon*, *supra* note 29, at 672.

32. See MICHAEL C. BLUMM, SACRIFICING THE SALMON: A LEGAL AND POLICY HISTORY OF THE DECLINE OF COLUMBIA BASIN SALMON SACRIFICING THE SALMON 96–97 (2002) [hereinafter *SACRIFICING THE SALMON*] (citing H.R. Doc. No. 75-704, at 10 (1938)).

decided to authorize “such dams as are necessary” on the Lower Snake,³³ and thereafter funded the construction and operation of the four LSR dams on the basis of an authorization that did not even mention them by name.

The 1944 authorization of the dams not only aimed to provide a navigation channel for agricultural products on the Snake River, it created construction jobs for returning servicemen, thus combatting what Congress feared would be a post-war recession.³⁴ The Corps opted to construct four dams³⁵ which, somewhat astonishingly, made Lewiston, Idaho—465 miles from the Pacific Ocean—a deep-water port, thereby transforming the Lower Snake into a completely artificial environment suited for slack-water barge navigation.

III. THE ONSET OF THE SALMON CRISIS

Even while the LSR dams were under construction, Snake River salmon were going into a tailspin from which they have never recovered.³⁶ Congress was not unaware of the problems that the dams presented for migrating salmon, for the same statute which cavalierly authorized the LSR dams, without actually mentioning them, also authorized construction of McNary Dam, just below the confluence of the Snake and Columbia Rivers. In the McNary authorization, Congress stipulated that the Corps “[i]n the design, construction, and operation of the dam adequate provision shall be made for the protection of anadromous fish

33. River and Harbor Act of 1945, ch. 19, § 2, 59 Stat. 10, 21, *discussed in Saving Idaho’s Salmon*, *supra* note 29, at 672–73.

34. *See Hydropower vs. Salmon*, *supra* note 27, at 223.

35. Construction of the LSR dams, all of which are in Washington, took many years. The Corps completed Ice Harbor Dam, the lowest on the river, near the town of Burbank, in 1961. The agency finished Lower Monumental Dam, situated in a remote area of Walla Walla and Franklin counties, in 1969. Little Goose Dam near the town of Starbuck, came on line in 1970. Finally, Lower Granite, crossing Whitman and Garfield counties, was not operational until 1975, due to budget cuts occasioned by the funding of the Vietnam War. *See SACRIFICING THE SALMON*, *supra* note 32, at 104. However, after going on line, all the dams added generators post-operation, so their construction was not actually completed until the early 1980s. *See REDFISH BLUEFISH*, *supra* note 13.

36. The “smolt to adult return” (SAR) rate, a key reflection of the health of a salmon run, declined precipitously after the dams went online in the 1970s. Whereas SAR rates for wild Snake River spring chinook averaged 4.38% during the late 1960s (1964–69), by the mid-1970s and early 1980s the average SAR rate was 1.2% (1976–83), a decline of over 350%. *See* Howard L. Raymond, *Effects of Hydroelectric Development and Fisheries Enhancement on Spring and Summer Chinook Salmon and Steelhead in the Columbia River Basin*, 8 N. AM. J. FISHERIES MGMT. 1 (1988). Wild Snake River summer chinook SAR rates experienced a similar decline, going from an average of 4.2% in the late 1960s (1964–69) to less than 1.1% in the period 1976–83. *Id.*

by affording free access to their natural spawning grounds and other appropriate means.”³⁷

One might have thought that the Corps would interpret this congressional directive to establish a policy priority for successful fish passage in the operation of not only McNary Dam but dams upstream, like the LSR dams, to ensure vibrant spawning salmon runs. The agency never did. Even though a revised Corps of Engineers’ plan in 1950 expressly promised “[c]onservation of salmon to the maximum practical extent” and “minimum interference . . . with fish and wildlife habitat,”³⁸ these were empty promises, at least in terms of operating the dams to facilitate fish migration. Instead, for decades beginning in the 1950s, the Corps, the principal federal operator of Columbia Basin dams, including the LSR dams, chose to emphasize hydropower production over salmon migration. The operative assumption was that dam-related losses could be offset through hatchery production,³⁹ an assumption that was not only erroneous—hatchery reliance turned out to be a Faustian bargain—but also damaging to wild salmon spawning.⁴⁰ Since the completion of the Lower Snake River dams, every Snake River salmon species has either gone extinct or is threatened with extinction.⁴¹

IV. THE COLUMBIA BASIN FISH AND WILDLIFE PROGRAM

By the 1970s, with Columbia River salmon in severe decline,⁴² the federal National Marine Fisheries Service and the U.S. Fish and Wildlife Service (FWS) began

37. River and Harbor Act of 1945, ch. 19, § 2, 59 Stat. 22 (also directing the U.S. Fish and Wildlife Service to conduct “studies and surveys necessary for fish protection” and required installation of fish protection structures and facilities). See *Hydropower vs. Salmon*, *supra* note 27, at 234.

38. H.R. Doc. No. 81-531, at 41–42. Minimum flows for fish were also mentioned. *Id.* at app. P at 2901 (calling for minimum flows below Hungry Horse Dam). See *Hydropower vs. Salmon*, *supra* note 27, at 232, 236.

39. See *SACRIFICING THE SALMON*, *supra* note 32, at 97.

40. See *SACRIFICING THE SALMON*, *supra* note 32, at 127 (explaining that traditional hatchery operations have been unable to recover lost salmon due to dams and damaging to salmon runs due to a loss of genetic diversity, overuse of remaining habitat, disease, and overharvesting wild salmon in mixed stock fisheries).

41. IDAHO DEP’T OF FISH & GAME, REPORT TO THE DIRECTOR, IDAHO’S ANADROMOUS FISH STOCKS: THEIR STATUS AND RECOVERY OPTIONS 16 (1998).

42. See *Hydropower vs. Salmon*, *supra* note 27, at 215:

a status review of the suitability of Columbia Basin salmon for listing under the Endangered Species Act.⁴³ At the same time, the Northwest was experiencing an electric power crisis, due in large part to poor investments by the Bonneville Power Administration (BPA) in ill-fated nuclear power plants.⁴⁴ The 1980 Northwest congressional delegation succeeded in getting Congress to pass the Northwest Power Act⁴⁵ revising the region's electric policies, creating an interstate council whose plans redirected the region away from nuclear and fossil-fuel electric power and toward conservation and renewable energy, and saving the region billions in the process.⁴⁶ But perhaps even more remarkable was that the statute's provisions called for fish and wildlife restoration "to the extent affected" by the federal system of Columbia Basin dams, including the LSR dams.⁴⁷ This directive led to the Northwest Power and Conservation Council's Columbia Basin Fish and Wildlife Program, a program that remains a significant part of salmon restoration efforts to this day.⁴⁸ The program established a goal of doubling the basin's salmon runs,⁴⁹ a goal that appeared realistic until it became clear in the late 1980s that all the expected run size increases were due to hatchery production, and the adverse

For example, in 1975 upriver spring chinook fishing was prohibited throughout the entire Columbia [River] for the first time in history. That same year, the spring chinook fishery on the Snake was closed. Recreational steelhead fishing on the Columbia and Snake and their tributaries was banned in both 1975 and 1976. The 1979 spring chinook run was the lowest on record, and the summer and fall chinook, coho, sockeye, and steelhead runs were all well below the ten-year average.

43. 43 Fed. Reg. 45,628 (1978). See F. Lorraine Bodi, *Protecting Columbia River Salmon Under the Endangered Species Act*, 10 ENVTL. L. 349 (1980).

44. See SACRIFICING THE SALMON, *supra* note 32, at 103–06 (describing the rise and fall of the so-called Hydro-Thermal Power Program).

45. 16 U.S.C. § 839.

46. The Northwest Power and Conservation Council estimates that ratepayers had saved \$4.44 billion during 1980 to 2018 due to the Northwest Power Act. See *Energy Efficiency*, NW. POWER AND CONSERVATION COUNCIL, <https://www.nwcouncil.org/energy/energy-topics/energy-efficiency> (last visited Jan. 29, 2022).

47. 16 U.S.C. § 839b(h)(10)(A). The story behind the evolution of the fish and wildlife restoration ordered by the statute is briefly explained in SACRIFICING THE SALMON, *supra* note 32, at 131 (discussing the decisive role of Congressman John Dingell).

48. See NW. POWER AND CONSERVATION COUNCIL, 20TH ANNUAL REPORT TO THE NORTHWEST GOVERNORS 4–5 (2021) (noting that in fiscal year 2020, the Columbia Basin Fish and Wildlife Program spent \$238.1 million on direct program costs, and BPA counted \$611.5 million in costs, including what the agency considers "foregone benefits" due to measures like spills at dams to facilitate salmon passage; also observing that BPA's fish and wildlife division allegedly consumes 23.8% of BPA's total costs).

49. The Council established the doubling goal in the 1987 amendments to the Columbia Basin program. NW. POWER PLANNING COUNCIL, COLUMBIA RIVER BASIN FISH AND WILDLIFE PROGRAM 34 (1987).

effects of hatchery fish on wild spawning salmon were becoming widely known.⁵⁰ The program has since included genetic standards for its funding of hatcheries,⁵¹ but doubling the numbers of spawning salmon, given existing hydroelectric operations, now appears to be unrealistic.

The Council's program never had much of an effect on federal hydroelectric operations. Although the statute aimed to give the interstate council some authority over the federal agencies operating the hydroelectric system, its enforcement provisions were ambiguous,⁵² and the Council proved unwilling to test those directives in court.⁵³ The upshot was that the Northwest Power Act did not challenge the status quo, causing no major changes in Columbia Basin dam operations, including the LSR dams.⁵⁴

50. Hatchery fish have played a part in many efforts to restore salmon populations with varied results. An early attempt to raise the size of steelhead runs in Washington resulted in a decrease in population. See B. CRAWFORD, *THE ORIGIN AND HISTORY OF TROUT BROOD STOCKS OF THE WASHINGTON DEPARTMENT OF GAME* 10 (1979). A study from the 1980s concluded that the SAR of hatchery fish was four to five times lower than that of their wild counterparts. J. MULLAN, *STATUS AND PROPAGATION OF CHINOOK SALMON IN THE MID-COLUMBIA RIVER THROUGH 1985* 94 (1987). For an analysis of early studies of the issues with hatchery fish, see Michael L. Goodman, *Preserving the Genetic Diversity of Salmonid Stocks: A Call for Federal Regulation of Hatchery Programs*, 20 ENVTL. L. 111 (1990).

51. NW. POWER AND CONSERVATION COUNCIL, *COLUMBIA RIVER BASIN FISH AND WILDLIFE PROGRAM 2014: 2020 ADDENDUM 17–20*, 29 (2020).

52. 16 U.S.C. § 839b(h)(10)(A) (the Bonneville Power Administration must act "consistent" with the Council's program); § 839b(h)(11)(a)(ii) (federal water management agencies must "take the program into account to the maximum extent feasible"); § 839b(h)(11)(A)(i) (federal water agencies must act in a manner that gives "equitable treatment" to both the fish and the hydropower).

53. See *SACRIFICING THE SALMON*, *supra* note 32, at 139, 144–45 (discussing some institutional limitations of the interstate Council, a body of politically-appointed state officials). There was some litigation over the Council's program. Environmentalists sued the Council's program, as amended in 1991, for deviating from recommended measures submitted by regional fish and wildlife agencies and Indian tribes. The Ninth Circuit agreed, ruling that the Council impermissibly failed to defer to recommended measures concerning setting biological objectives and establishing river flows, and instead continuing to rely on the Corps of Engineers trucking and barging program for juvenile salmon. See *SACRIFICING THE SALMON*, *supra* note 32, at 146–48 (discussing *Northwest Information Center v. Northwest Power Planning Council*, 35 F.3d 1371, 1389 (9th Cir. 1994)) (ruling that the Council could not reject a recommended fish and wildlife measure "solely because it will result in power losses and economic costs . . .").

54. See *SACRIFICING THE SALMON*, *supra* note 32, at 134–40 (discussing, among other things, the Council's "water budget," which was routinely ignored or undermined by federal operating agencies).

V. THE ENDANGERED SPECIES SALMON LISTINGS

One response to the Columbia Basin Program's inability to restructure river flows and hydroelectric operations were petitions filed by the Shoshone-Bannock tribe and others to list several salmon species under the ESA.⁵⁵ The petitions prompted Oregon Sen. Mark Hatfield to, in 1990, convene a so-called "Salmon Summit" among major river users in a fruitless attempt to ward off the listings.⁵⁶ Not surprisingly, the meetings were unable to produce a plan to avert the listings, but they did generate a noteworthy contribution: Idaho Gov. Cecil Andrus proposed seasonal drawdowns of Snake River reservoirs by twenty-five feet or more to facilitate salmon migration.⁵⁷ Congressman Simpson's 2021 proposal is in effect a permanent, not seasonal, reservoir drawdown. Meanwhile, in response to the ESA petitions, the Oregon Department of Fish and Wildlife and the federal NMFS produced an alarming status report that showed, for example, that Salmon River chinook were only at six percent of their run-size thirty years before.⁵⁸ The ESA listings soon followed.⁵⁹

The ESA listings triggered federal consultation procedures to ensure against species jeopardy and prohibitions against the unpermitted takings of listed species.⁶⁰ The chief procedure is a biological opinion (BiOp) from federal fish and wildlife agencies (in the case of salmon, National Marine Fisheries Service (NMFS) is the principal agency), and the ESA era has seen multiple BiOps on federal hydroelectric project operations over the last two decades, all but one of which courts have held violated the ESA.⁶¹ Despite the consistent judicial rebukes, the

55. See *SACRIFICING THE SALMON*, *supra* note 32, at 21–22, 174, 282, 328.

56. See *SACRIFICING THE SALMON*, *supra* note 32, at 22, 174, 282.

57. See *SACRIFICING THE SALMON*, *supra* note 32, at 174.

58. See *SACRIFICING THE SALMON*, *supra* note 32, at 174. In 1991, the American Fisheries Society's Endangered Species Committee published a coastwide status report that revealed a broader salmon crisis, extending considerably beyond the Columbia and Snake Rivers. The report showed 101 species of spawning salmon at "a high rate of extinction." Willa Nehlsen et al., *Pacific Salmon at the Crossroads: Stocks at Risk from California, Oregon, Idaho, and Washington*, 16 *FISHERIES* 2, at 4 (1991).

59. See *SACRIFICING THE SALMON*, *supra* note 32, at 175; *SACRIFICING THE SALMON*, *supra* note 32, at 177 (noting the importance of citizen petitions in triggering the ESA listing process).

60. See, e.g., Katherine Renshaw, *Leaving the Fox to Guard the Henhouse: Bringing Accountability to Consultation Under the Endangered Species Act*, 32 *COLUM. J. ENVTL. L.* 161, 177–85 (2007) (outlining the consultation process under the ESA, including jeopardy avoidance, takings prohibition, and the production of BiOps from consulting agencies like FWS and NMFS).

61. The sorry tale is told in a series of articles; two of the latest were: Michael C. Blumm et al., *Practiced at the Art of Deception: The Failure of Columbia Basin Salmon Recovery Under the Endangered Species Act*, 36 *ENV'T L.* 709 (2006) (reviewing four hydroelectric BiOps issued between 1992 and 2004, with detailed analysis of the 2004 BiOp and some associated federal actions that undermined salmon recovery); *Still Crying Out*, *supra* note 19, at 302–18 (reviewing the 2008 BiOp, as amended in 2010, and the 2014 BiOp).

federal agencies operating the dams made remarkably few operational changes before 2017. Then, Judge Michael Simon ordered increased interim spills to increase salmon passage at the federal dams, including at the LSR dams.⁶² The federal dam operators challenged that directive in the Ninth Circuit, but that court quickly affirmed Judge Simon's injunction.⁶³ The result was the biggest change in the federal hydroelectric system that the ESA produced since the listings a quarter-century earlier.

62. See *Still Crying Out*, *supra* note 19, at 324–26 (discussing Judge Simon's spill decision).

63. See *supra* note 19 (discussing the Ninth Circuit's affirmation of Judge Simon's spill decision). Judge Simon also ordered the federal operating agencies to examine the effects of current dam operations and reasonable alternatives in a programmatic environmental impact statement (EIS). *Nat'l Wildlife Fed'n, v. Nat'l Marine Fisheries Serv.*, 184 F.Supp.3d 861, 937–48 (D. Or. 2016). But in the ensuing 2020 EIS, the agencies rejected dam breaching or substantial changes in project operations. See Jeremy P. Jacobs, *Pacific Northwest Salmon Review Is 'Groundhog Day' to Greens*, E&E NEWS (Feb. 28, 2020), <https://www.wildsalmon.org/news-and-media/news/e-e-news-pacific-northwest-salmon-review-is-groundhog-day-to-greens.html>.

VI. THE CLEAN WATER ACT

Increased spill increases the cost of status quo hydroelectric operations.⁶⁴ So will implementation of the Clean Water Act,⁶⁵ an emerging issue of some significance. The statute requires establishment of water quality standards to, among other things, protect the propagation of fish and wildlife.⁶⁶ One of the chief means of achieving this goal in salmon country is through the setting and enforcing temperature standards, since water temperatures in the LSR reservoirs are often lethal for salmon and increasing due to climate change.⁶⁷ Enforcing water quality standards is, however, complicated, requiring the establishment of “total maximum daily loads” (TMDLs), which then can be applied to discrete dischargers like federal dams.⁶⁸ States are the primary vehicles for establishing TMDLs, but the states of Oregon and Washington declined to do so for the Columbia and Snake Rivers, so

64. In late 2018, BPA, BoR, the Corps, Oregon, and Washington reached an agreement as to how to manage the court ordered spills, which Judge Simon approved. See *Save Our Wild Salmon, CBB: NOAA Releases New 2019 BiOp for Columbia Basin Salmon/Steelhead; Includes Flexible Spill* (Apr. 2, 2019), <https://www.wildsalmon.org/news-and-media/news/cbb-noaa-releases-new-2019-biop-for-columbia-basin-salmon-steelhead-includes-flexible-spill.html> (noting the filing of the agreement to Judge Simon’s court); U.S. ARMY CORPS OF ENG’RS ET AL., 2019-2021 SPILL OPERATION AGREEMENT (2018) (the agreement itself, which notes that the plaintiffs will not challenge it unless circumstances change or the agreement is broken). The basic premise of the agreement was that sixteen-hour spills would occur when power demand was low, but when prices were higher, less water was spilled to increase power demands. The agreement sought to keep average costs the same for ratepayers, and not to exceed \$40 million. See *Federal Agencies Spill Record Amount of Water at Dams*, BONNEVILLE POWER ADMIN., (June 9, 2020), <https://www.bpa.gov/news/newsroom/Pages/Federal%20agencies%20spill%20record%20amount%20of%20water%20at%20dams.aspx>. In spring 2020, this arrangement meant that when spills occurred, the LSR dams spilled 80–90% of water flowing downriver, while their lower Columbia River counterparts spilled 40–75%. *Id.* During the first two years of the agreement, BPA increased revenues by \$4.7 million, although it is not clear that this magnitude of savings can be sustained into the future. See *Hydro Review Content Directors, 2019-2021 Flexible Spill Agreement for Pacific Northwest Dams Was Successful*, HYDRO REV. (Jan. 11, 2021), https://www.hydroreview.com/environmental/2019-2021-flexible-spill-agreement-for-pacific-northwest-dams-was-successful/#gref_

65. 33 U.S.C. §§ 1251, 1313(c)(1).

66. *Id.* § 1313(c)(1); 40 C.F.R. § 130.3; see EPA, *WATER QUALITY STANDARDS HANDBOOK, CHAPTER 3: WATER QUALITY CRITERIA* 14–15, 24–25 (2017), <https://www.epa.gov/sites/production/files/2014-10/documents/handbook-chapter3.pdf>.

67. See Michael C. Blumm & Michael Benjamin Smith, *Salmon and the Clean Water Act: An Unfinished Agenda*, 51 ENVTL. L. REP. (ELI) 10109, 10110–12 (2021) [hereinafter *Salmon and Clean Water*].

68. Dams discharge oil and other lubricants. See *infra* note 95 and accompanying text.

the federal EPA was forced to do so under court order.⁶⁹ The resulting TMDL in 2020 revealed that temperatures in the Columbia and Snake Rivers were far in excess of water quality standards in both states, as much as 5.8 F in the Snake.⁷⁰ Since the TMDL limited the collective increase of 0.18 F, the dams had exceeded the TMDL considerably.

Enforceable water quality standards through TMDLs could thus significantly improve prospects for salmon recovery by requiring substantial changes in hydroelectric operations. But enforcement is complex, as TMDL limits are not enforceable directly, absent a discharge from a point source. Although the EPA exempted dam operations from permit requirements long ago, dams in fact discharge hundreds of gallons of oils and other lubricants, and those discharges trigger permit requirements.⁷¹ Federally issued permits, in turn, require certification of compliance with state water quality standards under section 401 of the Clean Water Act.⁷² However, in response to Washington's 401 certification requiring compliance with the temperature TMDL, the Trump Administration challenged the TMDL, claiming it was inconsistent with federal law requiring the dams to be operated to fulfill their authorized purposes.⁷³ The Biden Administration decided to revise the 401 certification rule, however,⁷⁴ leaving the fate of this challenge uncertain.

69. *Columbia River Riverkeeper v. Wheeler*, 944 F.3d 1204, 1207–08 (9th Cir. 2019) (where the states failed to develop a temperature TMDL, EPA had a duty to do so, rejecting the argument that the states could evade the duty to promulgate a TMDL through inaction). See *Salmon and Clean Water supra* note 67, at 10112. Washington complained that EPA's TMDL was like EPA telling the dam operators to diet, but without prescribing a specific diet. See Kelly Ferron & Stacy Gallagher, *EPA Plan for Washington and Oregon Rivers Leaves Salmon in Hot Water*, WASH/ STATE DEP'T OF ECOLOGY (Aug. 19, 2020) <https://ecology.wa.gov/Blog/Posts/August-2020/EPA-plan-for-Washington-and-Oregon-rivers-leaves-s>. The Corps operated dams in Washington were 401-certified with the inclusion of EPA's TMDL standards, however the Corps has appealed these certifications objecting to the inclusion of the TMDL. See *id.*

70. See *Salmon and Clean Water, supra* note 67, at 10112.

71. See *Salmon and Clean Water, supra* note 67, at 10113 (discussing settlement agreements between Columbia Riverkeeper and federal dam operators).

72. 33 U.S.C. § 1341.

73. See *U.S. Army Corps of Eng'rs v. Wash. Dep't of Ecology*, No. P20-043c (Wash. Pollution Control Hearings Bd. June 8, 2020), discussed in *Salmon and Clean Water, supra* note 67, at 10114.

74. Notice of Intention to Reconsider and Revise the Clean Water Act Section 401 Certification Rule, 86 Fed. Reg. 29,541–29,544 (Aug. 2, 2021). The impetus for the Trump Administration's changes

Enforceable water quality standards, when combined with increased spills to facilitate salmon passage at the dams, may make it so expensive to operate projects like the LSR dams that it will become considerably cheaper to simply breach or remove the dams rather than maintain them in compliance with existing federal laws. Breaching the LSR dams may thus become more overtly a taxpayer subsidy issue.

VII. THE SIMPSON PROPOSAL

Congressman Mike Simpson's \$33.5 billion plan to breach the LSR dams, released in February 2021, reignited the debate over breaching the dams.⁷⁵ Although the idea of breaching the dams is at least a quarter-century old,⁷⁶ the Simpson proposal began in 2018 with a series of meetings with regional

to section 401 regulations began with the denial by Washington of water quality certification for a coal export terminal, the Millennium Bulk Terminal-Longview project, in 2017. In the Matter of Denying Section 401 Water Certification to Millennium Bulk Terminal-Longview, LLC, Order #15417 (State of Washington Dep't of Ecology 2017). In response to this denial, as well as other high-profile denials by other states, President Trump issued an executive order calling for the Administrator of EPA to release new regulations on section 401 certifications. See Exec. Order No. 13868, 84 Fed. Reg. 15,495 (Apr. 10, 2019). EPA promulgated new rules in 2020. See Clean Water Act Section 401 Certification Rule, 85 Fed. Reg. 42,210 (July 13, 2020) (to be codified at 40 C.F.R. pt. 121). The new Trump rules limited the time frame for a state 401 certification decision from the state to one year, applied the certification to only "discharges" into navigable waters, not to "activities," and limited a state's ability to impose conditions to state and tribal regulations. See Peter Kalicki, *Section 401 of the Clean Water Act from Trump to Biden*, HARV. ENV'T & ENERGY L. PROGRAM (Jan. 25, 2021), <https://eelp.law.harvard.edu/2021/01/section-401-of-the-clean-water-act-from-trump-to-biden/>. The new 401 rules drew several lawsuits. See, e.g., *Am. Rivers v. Wheeler*, No. 20-04636 (N.D. Cal. filed Jul. 13, 2020). However, the Biden Administration intends to reverse the Trump 401 rule changes, perhaps mooted the litigation. See Hannah Northay, *EPA to Redo Trump Rule Curbing State Say on Energy Projects*, E&E NEWS (May 27, 2021), <https://www.eenews.net/stories/1063733711>. As for the Millennium Bulk Terminal project, that appears to be dead after a lawsuit by Montana and Wyoming challenging the 401 certification denial failed to obtain a writ of certiorari from the Supreme Court, and the company sponsoring the project having gone bankrupt in the interim. See Mead Gruver, *Justices Deny Wyoming, Montana Coal Suit against Washington State*, SEATTLE TIMES (June 28, 2021), <https://www.seattletimes.com/seattle-news/northwest/supreme-court-denies-wyoming-montana-lawsuit-against-longview-coal-terminal/>.

75. See *Northwest in Transition*, *supra* note 17, at 9. Although Rep. Simpson expressed interest in having the plan be a part of the Biden Administration's proposed trillion-dollar infrastructure bill working through Congress, the plan was not included in the bipartisan agreement reached in late June 2021 and seems unlikely to be included in the future without bipartisan agreement among Northwest congressional representatives, among whom there is substantial Republican opposition. See *infra* note 79.

76. See *Saving Snake River Salmon and Water*, *supra* note 18.

stakeholders, including federal and state agencies, tribes, and interest groups.⁷⁷ In all, Simpson held over 300 meetings.⁷⁸ Nonetheless, some regional politicians have claimed their opposition to his proposal is based on a lack of public outreach.⁷⁹ On the other hand, tribes have been pressuring other regional politicians and President Biden to support the measure.⁸⁰

This section briefly outlines the principal elements of the Simpson proposal. These include (1) breaching the dams and associated river improvements; (2) replacement of lost power; (3) community compensation and development; and (4) extended hydroelectric licenses, management changes, and a lawsuit moratorium.

A. Breaching the LSR Dams and Associated River Improvements

The Simpson plan is headlined by the breaching of the four LSR dams. The plan would establish a \$33.5 billion “Columbia Basin Fund” to carry out the various programs and other projects for which the plan calls.⁸¹ A special administrator in the federal Department of Energy, headquartered in the Pacific Northwest National Laboratory in Richland, Washington, would distribute the money.⁸²

The plan envisions breaching the dams in 2030 and 2031 at an estimated cost of \$1.4 billion,⁸³ only about four percent of the \$33.5 billion total price tag of the Simpson proposal. Simpson envisions numerous post-breaching projects,

77. See *Northwest in Transition*, *supra* note 17, at 2.

78. See *Northwest in Transition*, *supra* note 17, at 2.

79. A March 2021 joint statement by Reps. Cliff Bentz (R-Or.), Dan Newhouse (R-Wash.), and Cathy McMorris Rodgers (R-Wash.) accused Simpson of working with Oregon Governor Kate Brown’s (D-Or.) office “under wraps and out of the public eye.” See Orion Donovan-Smith, *Newhouse, McMorris Rodgers Slam Simpson for Coordinating with Oregon Governor on Dam-Breaching Proposal*, THE SPOKESMAN-REVIEW (May 6, 2021), <https://www.spokesman.com/stories/2021/may/06/newhouse-mcmorris-rodgers-slam-simpson-for-coordin/>. Newhouse and McMorris Rodgers have introduced a bill that would modernize dams, including the LSR dams, in response to Simpson’s plan. See Courtney Flatt, *Dan Newhouse, Cathy McMorris Rodgers Seek to Boost Hydropower after Idaho Rep’s Dam Removal Idea*, NW NEWS NETWORK (Mar. 5, 2021), <https://www.nwnewsnetwork.org/energy/2021-03-05/dan-newhouse-cathy-mcmorris-rodgers-seek-to-boost-hydropower-after-idaho-reps-dam-removal-idea>.

80. See Lynda V. Mapes, *Historic Summit of Tribes across Pacific Northwest Presses Dam Removal on Insee, Biden, Congress*, SEATTLE TIMES (Jul. 9, 2021), <https://www.seattletimes.com/seattle-news/environment/historic-summit-of-tribes-across-pacific-northwest-presses-dam-removal-on-inslee-biden-congress/> (fifteen Northwest tribes endorsed dam removal and called for another summit in Washington, D.C.).

81. See *Northwest in Transition*, *supra* note 17, at 11.

82. See *id.*

83. See *id.* at 12.

including nearly \$400 million for a Corps-administered sediment-control program to mitigate expected damage associated with the downriver release of sediments accumulated over the years behind the dams.⁸⁴ Also proposed is a \$500 million dam indemnification program for other public and private Columbia Basin dam owners who voluntarily remove their dams.⁸⁵ Further, Simpson's plan would establish a \$150 million fund for waterfront restoration in Lewiston and Clarkston, Washington.⁸⁶ There is also \$3 billion in watershed improvement partnership funds set aside for several areas in the Columbia River Basin.⁸⁷

B. Replacement Power

The LSR dams currently produce around four percent of the electric power of the Pacific Northwest.⁸⁸ The Simpson plan proposes to replace the lost power with a variety of sources, calling for a \$10 billion grant program to fund clean power replacements.⁸⁹ Judicially required spills from dams have become a fixture in the ESA litigation over the Columbia Basin dam operations,⁹⁰ during which the dams'

84. *See id.* at 13. In addition to managing damage the sediment caused by releasing the accumulated sediments behind the dams, the Corps would also study how to manage the additional sediments flowing downstream from the river upstream of the LSR dams. *Id.*

85. *See id.* at 18. The plan points to the Enloe dam as an example of a dam that could be removed through this fund. *See Northwest in Transition, supra* note 17, at 18. In 2019, the Okanogan Public Utility District (PUD) voted to abandon the dam, which has not produced electricity since 1958. *See Lynda V. Mapes, A Dam Blocking 348 Miles of Salmon Streams Hasn't Generated Electricity Since 1958. But Who Will Take It Down?*, SEATTLE TIMES (Nov. 8, 2020), <https://www.seattletimes.com/seattle-news/environment/a-dam-blocking-348-miles-of-salmon-streams-hasnt-generated-electricity-since-1958-but-who-will-take-it-down/> (noting that Okanogan PUD cannot afford to remove the inoperative dam to help restore salmon populations in the Similkameen River).

86. *See Northwest in Transition, supra* note 17, at 22. Clarkston, Washington, across the river from Lewiston, is part of the Lewiston metropolitan area.

87. *See Northwest in Transition, supra* note 17, at 19.

88. Anthony Jones & Linwood Laughy, *Bonneville Power Administration and the Lower Snake River Dams: The Folly of Conventional Wisdom*, ROCKY MOUNTAIN ECONOMETRICS 1 (June 2018), <http://www.rmecon.com/examples/BPA%20&%20LSRDs%206-5-18.pdf>.

89. *But see infra* note 92, on the likely inflated cost of replacement power. The proposal defines "clean power" as increased storage, increased transmission lines, or other measures not specified in the plan but approved by BPA or the Northwest Power and Conservation Council. *See Northwest in Transition, supra* note 17, at 14.

90. *See* U.S. ARMY CORPS OF ENG'RS ET AL., 2019-2021 SPILL OPERATION AGREEMENT 6 (2018) (establishing spill levels at the dams as a result of an agreement among the parties in the ESA litigation), as explained *supra* note 64, in the wake of the Ninth Circuit's approval of Judge Simon's spill injunction. *Nat'l Wildlife Fed'n v. Nat'l Marine Fisheries Serv.*, 886 F.3d 803 (9th Cir. 2018), discussed in *The Fight Over Spills, supra* note 19, at 105–13 (explaining the Ninth Circuit's affirmance of Judge Simon's 2016 decision to require spills over the dams to the maximum level allowed by state law).

hydropower production has been curtailed. Simpson would establish a \$4 billion program for BPA or a different entity to replace that power from new “non-carbon” sources to replace the lost hydropower due to salmon spills.⁹¹ In all, the Simpson proposal would include some \$14 billion for energy replacement, an amount ten times the cost of dam removal.⁹²

The proposal would fund an increase to the electric grid’s storage and transmission capabilities, authorizing \$2 billion for transmission line replacements and upgrades to bring the replacement power to market.⁹³ Simpson would also make \$1.25 billion available for Pacific Northwest National Laboratory led research and development of new electric storage capabilities to capture increased power from solar, wind, and hydropower projects.⁹⁴

C. Community Compensation and Development

Breaching the LSR dams would produce varying effects on the communities along the Lower Snake River. Lewiston, Idaho, may be the most affected community, with the lost deep-water port. The Simpson plan envisions a waterfront restoration fund for the Lewiston metropolitan area that would reduce the risk of flooding due Lower Granite dam operations⁹⁵ and also an economic development fund for both the Lewiston area and for Tri-Cities in Washington.⁹⁶ For

91. See *Northwest in Transition*, *supra* note 17, at 15.

92. There is a lack of consensus on how to replace the lost power, and how much would be needed. Simpson’s proposal sets aside \$14 billion for replacement power. See *Northwest in Transition*, *supra* note 17, at 14–15. This figure is almost surely a considerable overestimate perhaps as much as \$10 billion. The Corps’ 2020 EIS estimated the cost of replacement power at between \$1.45–\$2.8 billion, depending on the source of the replacement power. NW. DIV., U.S. ARMY CORPS OF ENG’RS, et al., COLUMBIA RIVER SYSTEMS OPERATIONS FINAL ENVIRONMENTAL IMPACT STATEMENT 3-867, tbl.3-114 (2020). A 2018 study commissioned by the Northwest Energy Coalition estimated the annual cost at between \$396 million to \$1.2 billion, based on the kinds of power infrastructure necessary. NW Energy Coalition, *Lower Snake River Dam Energy Replacement Study*, 76, tbl.16 (2018) https://nwenergy.org/wp-content/uploads/2018/04/LSRD_Report_Full_Final.pdf (exploring a broad range of energy replacement portfolios, such as all gas or a mix of renewables and natural gas and predicting a monthly average increase of \$1-4 to customers’ bills for the replacement energy in all portfolios imagined by the study). However, a 2018 report suggested there is no actual need to replace the lost power because in the dozen years between 2007 and 2018, BPA needed power from the LSR dams for just two hours in 2009 to meet preference customer load demand. Jones & Laughy, *supra* note 88, at 4.

93. See *Northwest in Transition*, *supra* note 17, at 16.

94. See *id.* at 22.

95. The Lewiston flooding is described in Hawley, *supra* note 27, at 101–33 (explaining flooding in Lewiston).

96. See *Northwest in Transition*, *supra* note 17, at 22.

the agriculture industry, Simpson would supply \$1.2 billion in incentives available to dairies, farms, and concentrated animal feeding operations to clean up their waste discharges into rivers.⁹⁷ To spur tourism related to Snake Basin salmon restoration, the plan also calls for \$325 million to create the Lower Snake River National Recreation Area, although the proposal does not establish the boundaries of the proposed NRA.⁹⁸

The Simpson proposal would address the lost barge transport on the Lower Snake by creating \$1.5 billion in incentives for farmers to use rail or road transport, some of which is available now within the river corridor.⁹⁹ Barge traffic will remain available from Tri-Cities, Washington, and the Simpson proposal would allot \$600 million to increase barge capacity there. More improvements in river transport would come from \$300 million for “[r]econfiguration/[a]djustment” of the port in Lewiston¹⁰⁰ and \$1.6 billion for barge transport improvements and backlogged maintenance in the Lower Columbia.¹⁰¹ In all, river transport improvements would cost \$4 billion, nearly three times the cost of removing the dams.

D. License Extensions, Management Changes, and Lawsuit Moratorium

Perhaps the most controversial provisions in the Simpson plan concerns potential legal changes. First are the proposed 35-year extensions of all existing FERC licenses for hydroelectric in the Columbia Basin producing more than five megawatts.¹⁰² It is not clear from the Simpson proposal how many dams would benefit from this categorical extension, but it would certainly seem to include large dams like the five public utility district dams on the mid-Columbia as well as Idaho Power’s numerous Snake Basin dams, including the Hells Canyon complex.¹⁰³

97. See *Northwest in Transition*, *supra* note 17, at 21. Simpson also would provide grants to regional state universities for research on the energy potential of animal waste. *Northwest in Transition*, *supra* note 17, at 21.

98. See *Northwest in Transition*, *supra* note 17, at 23 (calling for the NRA to be administered by the Bureau of Land Management and tribal partners, which would be an unprecedented partnership).

99. See *Northwest in Transition*, *supra* note 17, at 25.

100. See *Northwest in Transition*, *supra* note 17, at 25.

101. See *Northwest in Transition*, *supra* note 17, at 26.

102. See *Northwest in Transition*, *supra* note 17, at 17.

103. The five mid-Columbia FERC-licensed dams are Priest Rapids and Wanapum dams, owned and operated by Grant County PUD, see Public Utility District No. 2 of Grant County, Washington, 123 F.E.R.C. ¶ 61049, 61296 (2008); Rock Island dam, see Public Utility District No. 1 of Chelan County, Washington 46 F.E.R.C. ¶ 61,033, 61,033 (1989); and Rocky Reach dam, see Public Utility District No. 1

Presumably, all these extensions would relieve the operators of fish passage requirements under the Federal Power Act¹⁰⁴ and water quality standards under the Clean Water Act;¹⁰⁵ both statutes have fueled a dam removal era throughout the Pacific Northwest.¹⁰⁶ The justification for these extensions, or their relationship to LSR dam breaching, is hardly clear.

Another substantial legal change would relieve BPA of its fish management responsibilities, which would be welcomed by most salmon advocates.¹⁰⁷ More ambiguous is the proposed elimination of fish responsibilities of the Northwest Power and Conservation Council, which essentially has overseen the formulation of the Columbia Basin Fish and Wildlife Program funded by BPA revenues.¹⁰⁸ Simpson would instead vaguely assign the fish co-management responsibilities to the states and the region's Indian tribes.¹⁰⁹

The 35-year lawsuit moratorium would halt ongoing lawsuits based on the CWA, the ESA, and NEPA concerning salmon in the Columbia Basin for thirty-five

of Chelan County, Washington, 126 F.E.R.C. ¶ 61138, 611775 (2009), operated and owned by Chelan County PUD; and the Wells Dam operated and owned by Douglas County PUD, see Public Utility District No. 1 of Douglas County, Washington, 141 F.E.R.C ¶ 62104, 64263 (2012). Idaho Power Company operates fifteen FERC-licensed hydroelectric power plants in the Snake Basin. All of these FERC-licensed projects would receive new licenses under the Simpson proposal. See *Hydroelectric Plants*, IDAHO POWER COMPANY, <https://www.idahopower.com/energy-environment/energy/energy-sources/hydroelectric/hydroelectric-plants/> (last visited Jul. 12, 2021).

104. 16 U.S.C. § 811 (requiring fishways).

105. 33 U.S.C. § 1313, discussed *supra* note 64 and accompanying text.

106. See Michael C. Blumm & Andrew B. Erickson, *Dam Removal in the Pacific Northwest: Lessons for the Nation*, 42 ENVTL. L. 1043, 1062-66, 1084-96 (2012) [hereinafter *Dam Removal in the Pacific Northwest*] (highlighting how the fish passage requirements of the Federal Power Act and water quality standard requirements of the CWA prompted the first steps in the Klamath River removals); see also *Salmon and Clean Water*, *supra* note 67, at 10109.

107. Ben Goldfarb, *The Great Salmon Compromise*, HIGH COUNTRY NEWS (Dec. 8, 2014), <https://www.hcn.org/issues/46.21/the-great-salmon-compromise> (exploring the Columbia Basin Fish Accords and the objections to them by many conservationists).

108. See *supra* note 48 and accompanying text.

109. See *Northwest in Transition*, *supra* note 17, at 31. In many respects, Snake River restoration is a social justice issue. Recognizing the tribe as co-managers of Snake River restoration would be a considerable advance in the injustice inflicted on tribal salmon harvesters by the construction and operation of the four LSR dams. See Save Our Wild Salmon, *Wild Salmon & Steelhead News* (April 2021), <https://www.wildsalmon.org/news-and-media/newsletters/wild-salmon-steelhead-news-april-2021.html>. On the federal government's co-management responsibilities, see Michael C. Blumm & Lizzy Pennock, *Tribal Consultation: Toward Meaningful Collaboration with the Federal Government*, 33 COLO. ENV'T L.J. 1 (2022).

years.¹¹⁰ This promise, along with the FERC license extensions, is the most controversial aspect of the Simpson plan beyond the dam breaching itself. If Congress were to enact the moratorium in 2022, it would extend to 2057, the equivalent of insulating all Columbia Basin dam operations from change since 1987, before any ESA salmon listings. The prospect of such an unprecedented insulation of dam operations from changing environmental conditions and legal requirements for such a long time is alarming.

VIII. COMPARING THE SIMPSON PROPOSAL TO KLAMATH DAM REMOVALS

The LSR dam removal proposal comes on the heels of another significant environmental remediation effort: the proposed removal of four Klamath Basin dams. This section briefly compares the Klamath removals, which are considerably closer to reality than is the LSR dam removals under the Simpson proposal.

The Klamath River Basin has been nearly as dominated by dams as the Snake River Basin. The Klamath, which flows from the Oregon Cascades into the Pacific Ocean in northern California—was once the largest salmon-producing river south of the Columbia Basin.¹¹¹ The Klamath was the mainstay of several tribes for over 4000 years, producing nearly a million spawning salmon annually and shaping their cultures.¹¹² The nineteenth century brought non-native settlement and pursuit of gold, timber, and farmland, transforming the Klamath Basin environment. The federal Reclamation Act soon followed, providing irrigated agriculture, diminished streamflows, and declining salmon runs. Irrigation canals serving over 200,000 acres of cropland growing potatoes, onions, barley, hay, and alfalfa but blocked salmon migration, reduced water flows, and destroyed spawning habitat. By the late twentieth century, Klamath salmon runs were under seven percent of historic levels and were listed under the Endangered Species Act.¹¹³

110. See *Northwest in Transition*, *supra* note 17, at 17.

111. See Glen Spain, *Dams, Water Reforms, and Endangered Species in the Klamath Basin*, J. ENV'T L. & LITIG. 49, 52 (2007) (natural spawning fish runs are only about 7% of historic numbers, and some other runs were less than 2% of historical numbers).

112. John B. Hamilton et. al., *Distribution of Anadromous Fishes in the Upper Klamath River Watershed Prior to Hydropower Dams—A Synthesis of the Historical Evidence*, 30 FISHERIES 10 (2005) (noting the historical salmon runs of near or over one million salmon); Daniel McCool, *Rivers of the Homeland: River Restoration on Indian Reservations*, 16 CORNELL J.L. & PUB. POL'Y 539, 549–54 (2007) (explaining the history of the Klamath Tribes and their connections to the anadromous fish populations in the Klamath Basin which they have relied on for food and spiritual connections for several thousands of years).

113. See Spain, *supra* note 111, at 51–52 (highlighting that by the 1990s the salmon runs had fallen to around 6% of historical levels); see also Threatened Status for Southern Oregon/Northern California Coast Evolutionarily Significant Unit (ESU) of Coho Salmon, 63 Fed. Reg. 24,588, 24,592–93, 24,609 (May 6, 1997) (codified as amended at 50 C.F.R. § 223.102) (the original listing of Klamath coho salmon was in 1997).

Federally-licensed hydroelectric dams followed the irrigation boom, including several licensed to what today is known as PacifiCorp, a large west-wide utility now controlled by Warren Buffett.¹¹⁴ In 1913, PacifiCorp's predecessor began constructing what became the Klamath Hydroelectric Project by building two dams that completely blocked salmon access to seventy-five miles of the mainstem Klamath.¹¹⁵ Two other dams were constructed in 1958 and 1962, increasing the blocked area to 300 miles.¹¹⁶ Together, the four dams of the Klamath project (there are a total of six dams in the project) supply power to about 1,400 farms and 70,000 residences.¹¹⁷

In 1988, the U.S. Fish and Wildlife Service listed two upper basin fish in the Upper Klamath River—the Lost River sucker and the Shortnose sucker—as endangered species.¹¹⁸ The upshot was that the federal Bureau of Reclamation (BoR) had to store more water in upper basin reservoirs and increase upper basin water flows to improve fish habitat. These requirements, combined with a severe drought in the 1990s, proved catastrophic for the downriver Klamath River coho, which were ESA-listed in 1997.¹¹⁹

In 2001, a Clinton-era Bureau plan that was upheld by a federal court called for operations that would protect both the upper basin fish and the lower basin coho.¹²⁰ But under pressure from local irrigators, the incoming Bush administration

114. Warren Buffett, through his company, Berkshire Hathaway, purchased PacifiCorp in 2005. Heather Timmons & Jad Mouawad, *Buffett Pays \$5.1 Billion for Utility and Promises New Deals*, N.Y. TIMES (May 25, 2005), <https://www.nytimes.com/2005/05/25/business/buffett-pays-51-billion-for-utility-and-promises-more-deals.html>.

115. See GEORGE KRAMER, KLAMATH HYDROELECTRIC PROJECT (FERC No. 2082) HISTORIC CONTEXT STATEMENT 40 (June 2003), https://www.pacificorp.com/content/dam/pcorp/documents/en/pacificorp/energy/hydro/klamath-river/relicensing/klamath-final-license-application/Appendix_E_6D_Historic_Context.pdf.

116. See U.S. BUREAU OF RECLAMATION, DETAILED PLAN FOR REMOVAL – KLAMATH RIVER DAMS, KLAMATH FERC LICENSE HYDROELECTRIC PROJECT NO. 2082, OREGON-CALIFORNIA, 16, 22 (2006).

117. See *Dam Removal in Pacific Northwest*, *supra* note 106, at 1087.

118. See Determination of Endangered Status for the Shortnose Sucker and Lost River Sucker, 53 Fed. Reg. 27130, (July 18, 1988) (codified at 50 C.F.R. § 17.11).

119. Threatened Status for Southern Oregon/Northern California Coast Evolutionarily Significant Unit (ESU) of Coho Salmon, 63 Fed. Reg. 24588, 24592-93, 24609 (May 6, 1997) (codified as amended at 50 C.F.R. § 223.102).

120. *Kandra v. United States*, 145 F. Supp. 2d 1192, 1207 (D. Or. 2001). In 2001, one of the driest years on record, after formal ESA consultation with NMFS and FWS, BoR produced a revised operations

abandoned that plan on grounds of faulty science.¹²¹ A year later, over 30,000 salmon perished in the lower Klamath due low river flows, warm temperatures, and toxic water quality.¹²² The fish kill also caused economic calamity for the northern California and Oregon ocean fishery, as closures produced over \$100 million in losses in 2006 alone.¹²³

In 2004, with the Klamath Hydroelectric Project's federal license about to expire, Klamath Basin tribes, the fishing industry, and environmentalists began a campaign to remove the four hydroelectric dams, which provide no irrigation or flood control benefits. Four years later, the licensee, PacifiCorp, decided that the water quality and fish passage improvements required for relicensing would make the dams uneconomical, and in 2010 agreed to a process that would remove the projects in 2020.¹²⁴ An accompanying settlement, the Klamath Basin Restoration Agreement (KBRA), called for restructuring basin water flows, financed by a hoped-for \$600 million in federal funding, not including the cost of dam removal.¹²⁵

Under the agreement to remove the dams, the utility, ratepayers, and taxpayers would share in the costs of dam removal up to \$495 million; any

plan that cut off water deliveries to irrigators. See U.S. BUREAU OF RECLAMATION, KLAMATH PROJECT 2001 ANNUAL OPERATIONS PLAN (2001). Implementation of the plan drew a lawsuit from irrigators, but the court denied injunctive relief. *Kandra*, 145 F. Supp. 2d at 1211. However, in 2002, the new Bush Administration changed course, and a revised operations plan that restored irrigation deliveries led to the immediate mortalities of an estimated 30,000 Klamath River salmon that same year. See Matthew G. McHenry, *The Worst of Times: A Tale of Two Fishes in the Klamath Basin*, 33 ENV'T L. 1019, 1020, 1028–29 (2003) (explaining the tensions in the region in 2001 and 2002). Today, history seems to be repeating, as the region is facing a drought larger than the one in 2001, with insufficient water to meet the needs of the fish, the tribes, and the farmers. See Anna V. Smith, *Will History Repeat in a Dry Klamath Basin this Summer?*, HIGH COUNTRY NEWS (Jun. 14, 2021), <https://www.hcn.org/articles/north-water-will-history-repeat-in-a-dry-klamath-basin-this-summer>.

121. See McHenry, *supra* note 120, at 1028.

122. See *id.* at 1028–29.

123. Glen Spain, *Why Congress Must Act to Restore the Klamath*, FISHERMEN'S NEWS 1 (March 2013), https://pcffa.org/wp-content/uploads/2016/05/FN0313_PCFFA.pdf.

124. Konrad Fisher, *Klamath River Dam Removal*, WATERKEEPER, Winter 2017, at 30, <https://waterkeeper.org/wp-content/uploads/2017/01/WKWinter17EDITEDPrinter2-1.pdf>. After a series of delays, the dams are now slated for removal in 2023. See Brian Oaster, *Will Klamath Salmon Outlast the Dam Removal Process*, HIGH COUNTRY NEWS, Sept. 2021, at 14. PacifiCorp had experience with dam removal, having agreed to remove the Condit dam on the White Salmon River. See *Dam Removal in the Pacific Northwest*, *supra* note 106, at 1058–66 (discussing the Condit dam removal and the restoration of the White Salmon River).

125. See David N. Allen, *The Klamath Hydroelectric Settlement Agreement: Federal Law, Local Compromise, and the Largest Dam Removal Project in History*, 16 HASTINGS WEST NORTHWEST. J. ENV'T L. & POL'Y, 427, 454 (2010).

additional costs will be provided by the states of California and Oregon.¹²⁶ However, Congress proved decidedly uninterested in funding the \$600 million KBRA, which expired in 2015.¹²⁷

Nonetheless, in 2016, the federal government, the states of California and Oregon, and PacifiCorp agreed to proceed with dam removal, and subsequent studies showed that dam removal would produce substantial ecosystem and economic benefits, including an increase of over 30,000 annual jobs, while opening up some 400 miles of salmon habitat.¹²⁸ In 2020, the Federal Energy Regulatory Commission approved transferring the licenses to the newly established Klamath River Renewal Corporation (which will undertake the removal) and the states of California and Oregon.¹²⁹ Removal of the four dams, which would be the world's largest dam removal project, now seems to be on the horizon.

Although the Klamath dam removal may seem nominally similar to the Simpson proposal, its price tag is not only markedly less costly, it is taking place in a wholly different legal environment, subject to the fish passage requirements of the Federal Power Act—and with the support of the licensee. The LSR removal, were it to occur, would require congressional approval and substantial federal appropriations from a Congress that was unwilling to fund the KBRA.

IX. CONCLUSION

The LSR dam saga is a long and dreary one. The dams should never have been built—and would not have had they had been required to meet anything resembling a sensible cost-benefit ratio.¹³⁰ But the perceived necessity of providing

126. See Gillian Flaccus, *Historic Deal Reached to Remove 4 massive Dams on Lower Klamath River*, OREGONLIVE (Nov. 17, 2020), <https://www.oregonlive.com/environment/2020/11/historic-deal-reached-to-remove-4-massive-dams-on-lower-klamath-river.html>. The agreement was later approved by FERC in 2021. See PacifiCorp, Klamath Renewal Corporation, State of Oregon, State of California, 175 FERC ¶ 61236, at *1, https://klamathrenewal.org/wp-content/uploads/2021/06/21_0617-FERC-Order-Approving-Transfer-of-License.pdf.

127. See Debra Kahn, *Path Forward Murky for Stymied Klamath Agreements*, E&E NEWS (Dec. 24, 2015), <https://www.eenews-net.library.lcproxy.org/greenwire/stories/1060030021/search?keyword=Klamath>.

128. See ROSEMARY KOSAKA, NOAA FISHERIES SERVICE, ECOSYSTEM SERVICE VALUES AND THE KLAMATH RIVER DAM REMOVAL 22 (2017) (estimating that over 50 years, over 30,000 annual jobs could be created by the removal of the dams); see also Klamath River Renewal Corporation, *Benefits of Klamath River Renewal*, <https://www.klamathrenewal.org/benefits/> (last visited July 13, 2021).

129. PacifiCorp, 175 F.E.R.C. ¶ 61236, at *1 (2021) (approving the transfer of licenses to allow for the removal of the Klamath River dams).

130. See SACRIFICING THE SALMON, *supra* note 32 and accompanying text (Corps of Engineers estimate that the dams would return 15 cents of benefits for every federal dollar spent).

post-war employment for returning servicemen, coupled with a badly misguided view that any damage to the great natural resource of the Columbia Basin—its prodigious salmon runs—could be offset through hatcheries, allowed Congress to make what turns out to be a colossal, generational mistake. That mistake has very nearly extirpated Idaho’s salmon.

The transportation benefits of the LSR dams are duplicative of readily available truck and rail transport through the same Columbia Basin corridors that the barges traverse. Because barging enjoys federal subsidies, it has been marginally cheaper for shipping agricultural products like wheat.¹³¹ But the relative economic benefits are small and narrowly focused. The barging industry itself employs very few.¹³² The LSR dams provide marginal power production that can be readily replaced by wind and solar power.¹³³ They offer no flood control, in fact, Lower Granite dam regularly floods the city of Lewiston.¹³⁴ Federal taxpayers, who remain responsible for the costs of dredging and power turbine replacement necessary to maintain dams that should never have been built, must wonder why.

Congress began to recognize the scope of the mistake on the Snake in 1980 when it enacted the Northwest Power Act.¹³⁵ But while the program authorized by that statute has pioneered significant advances in salmon science and has funded important habitat restoration, it was unable to significantly restructure federal Columbia Basin dam operations, which have always favored hydropower production over salmon protection.¹³⁶

131. See ECONORTHWEST, LOWER SNAKE RIVER DAMS: ECONOMIC TRADEOFFS OF REMOVAL 41–60 (2019) (explaining the apparent low cost of barging in compared to rail and truck alternatives as being the result of federal subsidies).

132. The barging industry is quite small in all three states that control barge transport on the Snake and Columbia Rivers. According to data for 2019, in Washington, only about 300 people were employed throughout the year by the “[i]nland water freight industry.” See WASHINGTON EMP. SEC. DEP’T, QCEW ANNUAL AVERAGES 2019, REVISED (2020) [Excel Spreadsheet]. Oregon employed 145 people in 2019 in the category “[i]nland water transportation.” See OREGON EMP. DEP’T, EMP. AND WAGES BY INDUSTRY (QCEW), OREGON ANNUAL 2019, SUMMARY REPORT (2020), <https://www.qualityinfo.org/edewind/?at=1&t1=0~4101000000~00~5~1021~48~00000~2019~00> [table]. In Idaho, only an average of ten people were employed under the category “[w]ater transportation,” in 2016. See IDAHO DEP’T OF LAB., QCEW DASHBOARD: IDAHO – 2016 ANNUAL OWNERSHIP: PRIVATE – TABLE (2020), <https://lmi.idaho.gov/qcew> [table].

133. See *supra* note 92 and accompanying text.

134. See *supra* note 92 and accompanying text.

135. See SACRIFICING THE SALMON, *supra* note 32, at 129–60 (discussing declining salmon runs and the events that led to the passage of the Northwest Power Act).

136. See SACRIFICING THE SALMON, *supra* note 32, at 295–300 (explaining the events leading to the passage of the Northwest Power Act).

The shortcomings of the Northwest Power Act led to the ESA listings of the 1990s.¹³⁷ The ensuing federal biological opinions were routinely rejected by federal courts, as the National Marine Fisheries Service and the federal agencies operating the Columbia Basin hydroelectric system refused to seriously consider substantial changes like sufficient spills, reservoir drawdowns, or dam breaching.¹³⁸ Judicial calls for a “major overhaul” went unheeded.¹³⁹ Two federal judges, James Redden and Michael Simon, ordered spills at the dams.¹⁴⁰ Judge Simon even required a program EIS on the hydroelectric system’s continued effects on the listed salmon.¹⁴¹ But that EIS rejected breaching the LSR dams, and the issue is back in court.¹⁴²

Still on the horizon is the potential application of the Clean Water Act to remedy the lethal and rising water temperatures which the LSR dams exacerbate.¹⁴³ Given the recalcitrance that both the federal and state governments have exhibited over application water quality temperature standards to Columbia Basin dams,¹⁴⁴ enforcement will almost certainly require judicial oversight. The costs of Clean Water Act compliance, coupled with the costs of required spills, may make the alternative of dam breaching more economically attractive.

137. See *SACRIFICING THE SALMON*, *supra* note 32, at 173–75 (discussing how the failure of the Northwest Power Act to achieve its lofty ambitions led to the Columbia Basin ESA salmon listings).

138. *Nat’l Wildlife Fed’n v. Nat’l Marine Fisheries Serv.*, 184 F. Supp. 3d 861, 875–76 (D. Or. 2016) (explaining that NMFS failed to consider several reasonable alternatives, as required by NEPA).

139. *Idaho Dep’t of Fish & Game v. Nat’l Marine Fisheries Serv.*, 850 F. Supp. 886, 900 (D. Or. 1994).

140. See, e.g., *Nat’l Wildlife Fed’n v. Nat’l Marine Fisheries Serv.*, No. CV 01-6940-RE, 2004 WL 1698050, at *6 (D. Or. July 29, 2004) (Judge Redden requiring spills at Ice Harbor Dam); *Nat’l Wildlife Fed’n v. Nat’l Marine Fisheries Serv.*, 886 F.3d 803, 815, 825 (9th Cir. 2018) (affirming injunctive relief granted by Judge Simon to environmentalists that called for spills at several Columbia Basin dams).

141. *Nat’l Wildlife Fed’n v. Nat’l Marine Fisheries Serv.*, 184 F. Supp. 3d 861, 950 (D. Or. 2016).

142. See *Nw. Div., U.S. ARMY CORPS OF ENG’RS, ET AL., COLUMBIA RIVER SYSTEMS OPERATIONS FINAL ENVIRONMENTAL IMPACT STATEMENT 7–2* (2020); see also *Fishing, Conservation Groups Return to Court to Challenge Latest Failed Plan for Columbia-Snake Salmon*, EARTHJUSTICE (Jan. 19, 2021), <https://earthjustice.org/news/press/2021/fishing-conservation-groups-return-to-court-to-challenge-latest-failed-plan-for-columbia-snake-salmon>.

143. See *Columbia, Snake River Dam Operators Must Make Plan to Keep Waters Cold Enough for Salmon Survival*, OREGON LIVE (May, 13, 2020, 8:20 AM), <https://www.oregonlive.com/environment/2020/05/columbia-snake-river-dam-operators-must-make-plan-to-keep-waters-cold-enough-for-salmon-survival.html> (explaining that the Washington Dept. of Ecology issued CWA 401 certifications requiring the Corps to lower water temperatures).

144. See *supra* notes 69, 73 and accompanying text.

Congressman Simpson's arresting breaching proposal,¹⁴⁵ which has occasioned this Idaho Law Review symposium,¹⁴⁶ should be evaluated in light of this decades-long halting of efforts to accommodate salmon recovery in the functioning of a hydroelectric system. The great flexibility of the system to improve the dire condition of Idaho's spawning salmon has been invoked only grudgingly and under court injunctions. The enormous price tag placed on the Simpson proposal makes it quite unlikely that Congress will enact anything resembling the Simpson proposal in its current form. Especially in light of Congress' disinclination to fund the Klamath Basin Restoration Agreement, an estimated cost of \$96 million annually, for riparian restoration and water security for irrigators affected by the planned removal of the four Klamath Basin dams.¹⁴⁷ The cost of the Simpson proposal is exponentially higher, including \$14 billion for replacement power,¹⁴⁸ and thus seems quite unrealistic. Moreover, the premise underlying the estimated price-tag—that no affected interest should suffer any increased cost—is open to considerable question. There is no reason, for example, why those who have received such federal subsidies should expect them to continue in perpetuity.¹⁴⁹ More realistic cost estimates of the LSR dam breaching have suggested that the benefits far exceed the costs.¹⁵⁰

Other objections to the Simpson proposal concern its promised license extensions and its long moratorium on court challenges.¹⁵¹ Of course, some changes during the legislative process are to be expected. But judicial oversight of the hydropower-salmon conflict in the Columbia Basin has always been essential to

145. See *Northwest in Transition*, *supra* note 17.

146. 58 IDAHO L. REV. 1, 1–157 (2022).

147. See U.S. FISH & WILDLIFE SERV., SUMMARY OF KLAMATH BASIN RESTORATION AGREEMENT 9–10 (2007).

148. See *Northwest in Transition*, *supra* note 17, at 14–15.

149. See *supra* note 132 and accompanying text. The barging industry appears to be profitable only because of the subsidies it receives. Therefore, among the cost estimates that might be questioned is the \$4 billion for river transportation improvements. See *supra* notes 99–101 and accompanying text. This estimate is nearly three times what the Simpson proposal set as the cost of breaching the dams. See *Northwest in Transition*, *supra* note 17, at 12.

150. See *Saving Snake River Water and Salmon*, *supra* note 18, at 1023–30 (analyzing several economic reports and concluding the Pacific Northwest would economically benefit from the breaching of the LSR dams); see also NW. DIV., U.S. ARMY CORPS OF ENG'RS, ET AL., COLUMBIA RIVER SYSTEMS OPERATIONS FINAL ENVIRONMENTAL IMPACT STATEMENT 6-1 through 7-243 (2020) (analyzing the effects of breaching the dams under option "MO-3"). Although the EIS did not conclude that breaching the dams was worth the cost (a conclusion that has prompted a lawsuit, see *supra* note 19 and accompanying text), the EIS did highlight several benefits of dam breaching. For example, of the alternatives considered, dam breaching provided the best chance for salmon recovery. NW. DIV., U.S. ARMY CORPS OF ENG'RS, ET AL., EXECUTIVE SUMMARY: COLUMBIA RIVER OPERATIONS AND ENVIRONMENTAL IMPACT STATEMENT 29 (2020). The EIS's rejection of dam breaching was quite tenuous, stating "this EIS is not expected to end the regional conversation about the future of the four lower Snake River dams." *Id.* at 34.

151. See *supra* note 22 and accompanying text.

whatever little progress has been made for salmon migration over the last-half century. To think that court review will be unnecessary for three-and-a-half decades seems unrealistic if Idaho salmon recovery is the goal.

The future of the federal LSR dams, unlike the non-federal Klamath dams, is in the hands of Congress, which so casually authorized them over three-quarters of a century ago.¹⁵² In an era in which there are multiple impediments to congressional action, enacting anything resembling the Simpson proposal will require the active support of the Idahoan citizenry. If Idahoans realize the substantial economic benefits accompanying the restoration of salmon runs to central Idaho—and also understand the marginal benefits provided by the out-of-state LSR dams, whose electric power provides little or no benefit to Idaho consumers—they may come to realize that central Idaho’s exceptional salmon habitat could fuel a vibrant economy built around sustainable salmon harvests.¹⁵³

152. See *supra* note 33 and accompanying text.

153. Among the economic benefits of breaching the LSR dams is salmon-based tourism. A 2005 study estimated that the direct and indirect benefits of salmon restoration would be nearly \$550 million annually. DON C. READING, THE POTENTIAL ECONOMIC IMPACT OF RESTORING SALMON AND STEELHEAD FISHING IN IDAHO 2 (2005), <https://www.wildsalmon.org/images/PDFs/FishingEconReport.05.pdf>. A more recent study suggests that for every 100 salmon above the 1998 returns—a relative banner year—would add 0.68 jobs, \$10,757 in personal income, and almost \$37,000 in business transactions. John R. McKean, Donn M. Johnson & R. Garth Taylor, *Regional Economic Impacts of the Snake River Steelhead and Salmon Recovery*, 24 SOC’Y & NAT. RES. 569, 579 (2011) (also noting that increased salmon returns will produce more travel of anglers to Idaho). There is also the National Recreation Area that the Simpson plan seeks to create. See *supra* note 90 and accompanying text. National Parks provide substantial benefits to nearby communities. See *National Park Visitor Spending Generates Economic Impact of more than \$41 Billion*, U.S. DEP. INTERIOR (Jun. 11, 2020), <https://www.doi.gov/pressreleases/national-park-visitor-spending-generates-economic-impact-more-41-billion> (explaining the high level of tourist spending in gateway communities near national parks); see also Randall Gordy, Kortney Cose & Rituraj Yadav, *Life as We Know It: An Environmental Economic Perspective on Breaching the Snake River Dams*, IDAHO STATESMAN (Mar. 1, 2021), https://www.idahostatejournal.com/freeaccess/life-as-we-know-it-an-environmental-economic-perspective-on-breaching-the-snake-river-dams/article_4bea5a48-94a3-59a9-a216-b0212d195f12.html (referencing a University of Idaho study concluding that breaching the LSR dams would save between \$12 million to \$2 billion in power costs over the first 10 years and \$2 billion to \$5 billion over 20 years and produce a five-fold increase in recreation, generating between \$2 and \$7 billion over ten years).

The salmon resource, so resilient and with such enduring fidelity to place, can, if given the chance, revitalize the central Idaho economy.

X. POSTSCRIPT

During the long gestation period of this article, written in 2020, Governor Jay Inslee (D-Wash.) and Senator Patty Murray (D-Wash.) released *The Lower Snake River Benefit Replacement Report*, the product of a joint federal-state process aimed at determining whether there are reasonable ways to replace the benefits supplied by the four lower Snake dams, including clean energy, navigation, irrigation, recreation, and other economic benefits.¹⁵⁴ Although the 2022 report did not make a recommendation concerning breaching the dams, it did conclude that the economic benefits supplied by the dams could be replaced if Congress decided to breach the dams while acknowledging that some localities and industries would experience fundamental changes. But the report was “adamant” that dam breaching proceed only after pursuit of “replacement and mitigation of [the dams’] benefits.”¹⁵⁵

154. *Lower Snake River Dams Benefit Replacement Report*, LSRADOPTIONS.ORG (Aug. 22, 2022), <https://www.lsrdoptions.org/>.

155. *Id.*; RECOMMENDATIONS OF GOVERNOR INSLEE AND SENATOR MURRAY FOLLOWING THE CONCLUSION OF THE JOINT FEDERAL-STATE PROCESS ON SALMON RECOVERY 2, <https://www.lsrdoptions.org/wp-content/uploads/2022/08/FINAL-Murray-Inslee-Process-Recommendations.pdf> (last visited Sept. 11, 2022). The “process recommendations” explained the stakes and the response the process was pursuing:

To establish breach of the Lower Snake River Dams as a realistic and actionable option, we must focus on short- and medium-term actions to invest in the region’s transportation network and electrical grid. Importantly, we must also aggressively pursue projects and initiatives to restore habitat and support salmon recovery throughout the Columbia River Basin and the Puget Sound.

...

We have also clearly heard the demand for strong action and meaningful steps forward on the issues presented by the Lower Snake River Dams debate -- saving our region’s iconic salmon species, preparing for our region’s clean energy future, addressing the state’s economic challenges and opportunities, preserving our status as one of America’s agricultural and trade leaders, and respecting our Tribal treaty obligations.

The report expressly rejected the contention that breaching would produce “energy scarcity and environmental calamity,” or that breaching would interfere with regional decarbonization goals, terming such a scenario “an oversimplified binary choice,” since clean energy replacement generating resources in the pipeline could replace the dams’ electricity—“several-fold, by some estimates.”¹⁵⁶ The report insisted that replacement measures for the clean energy and other benefits was “not beyond our capability,” especially in light of the fact that the dams provide only 3.4 percent of the generating and transmission facilities that the region must build anyway.¹⁵⁷ Consequently, the report urged the federal and state governments to move aggressively forward with replacing the dams’ benefits, as “action is needed now to make breaching a viable option” because “the status quo is not a responsible option: [salmon] extinction is categorically unacceptable.”¹⁵⁸ Among a list of recommended short- and medium measures to ready the region for breaching was a suggestion that responsibility to implement of Northwest Power and Conservation Council’s Fish and Wildlife Program be shifted from the Bonneville Power Administration to fish and wildlife agency and tribal co-managers.¹⁵⁹

...

We have heard a new willingness to consider changes to the Lower Snake River Dams, in whole or in part, that would have been inconceivable just a few years ago. And we have heard universal recognition that protecting salmon, acting against climate change, strengthening our region’s economy, and addressed the centuries of injustice visited upon the region’s Tribes should be core components of any path forward.

Id. at 1.

156. *Id.* at 2.

157. *Id.* (citing a consultant’s report).

158. *Id.* at 2–3.

159. The report’s recommendations included (1) authorize projects to substantially expand salmon habitat and passage throughout the region (citing a backlog of some \$1 billion in such projects); (2) more efficiently and effectively distribute salmon funding by transferring implementation of the Northwest Power and Conservation Council program from BPA to state and tribal co-managers; (3) improve the Washington state siting process to facilitate clean energy generation and transmission projects like measure to supplement wind, solar, and demand-response practices, in consultation with tribal governments; (4) use the “historic investments” made by the Infrastructure Investment and Jobs Act and the Inflation Reduction Act to support energy replacement, infrastructure enhancement, salmon

Whether opponents of lower Snake River dam breaching will be able to block implementation of these measures,¹⁶⁰ thereby using the report as an impediment to breaching, is not yet clear.

recovery, and habitat restoration; (5) obtain additional funds for research into salmon and marine ecosystem health and the oceanic ecosystem's effects on the salmon lifecycle; (6) support detailed transportation analysis of on potential highway and road effects that would result from the elimination of barging on the lower Snake River; and (7) pursue a state legislative agenda that will include new, robust salmon recovery investments and other actions to improve the health of oceans, coastal areas, and rivers, including the Snake River. *Id.* at 5–6.

160. Among the opponents is a local congressman, Rep. Dan Newhouse (R-Wash), who has claimed that “there is no reasonable replacement for the lower Snake River dams”). Press Release, Congressman Dan Newhouse, Newhouse Denounces Inslee-Murray Goal of Breaching Lower Snake River Dams (Aug. 25, 2022), <https://newhouse.house.gov/media-center/press-releases/newhouse-denounces-inslee-murray-goal-breaching-lower-snake-river-dams>.