

**To:** Subcommittee on Water, Wildlife and Fisheries Republican Members

From: Subcommittee on Water, Wildlife and Fisheries staff: Annick Millerx 58331

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**Date:** Monday, June 26, 2023

Subject: Oversight Field Hearing on "The Northwest at risk: the environmentalist's effort to

destroy navigation, transportation, and access to reliable power."

The Subcommittee on Water, Wildlife and Fisheries will hold an oversight field hearing on "The Northwest at risk: the environmentalist's effort to destroy navigation, transportation, and access to reliable power" on Monday, June 26, 2023, at 1:00 p.m. PDT in the auditorium of Richland High School, located at 930 Long Avenue in Richland, Washington.

Member offices are requested to notify Madeline Bryant (<u>Madeline.Bryant@mail.house.gov</u>) if their Member would like to attend the field hearing.

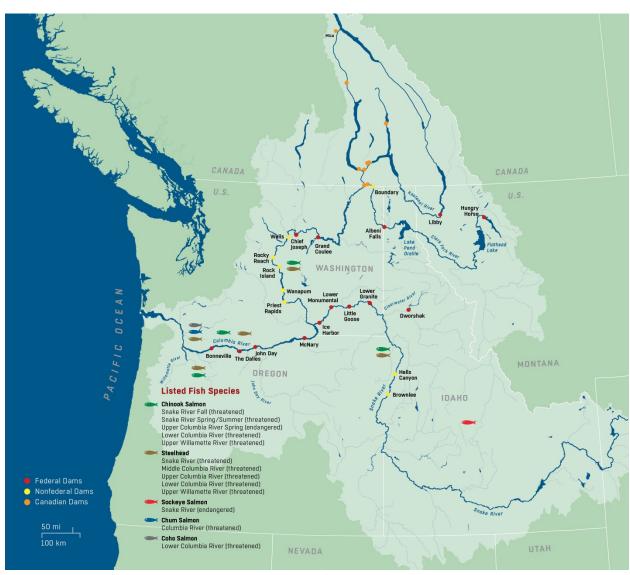
## I. KEY MESSAGES

- The Biden administration, through abuse of the administrative process, use of "sue and settle" tactics, selective use of science to achieve political, rather than biologically sound, solutions, and failure to defend the interests of the Northwest, is advancing an agenda of economic and community destruction while doing nothing to promote the health of fish species.
- The lower Snake River dams have the capacity to supply carbon-free base load energy. During periods of high demand, such as severe heat or a prolonged winter cold snaps, the dams help to keep the Northwest power system reliable, even during emergencies.
- The lower Snake River dams play a critical role in reducing transportation emissions. Between 50 and 60 million tons of cargo are transported through barges along the river each year.

## II. WITNESSES

- *Ms. Jennifer Quan*, West Coast Regional Administrator, National Marine Fisheries Service, National Oceanic and Atmospheric Administration, Seattle, Washington
- *Mr. John Hairston*, Administrator and CEO, Bonneville Power Administration, Portland, Oregon
- *Ms. Beth Coffey*, Director of Programs, Northwestern Division, U.S. Army Corps of Engineers, Portland, Oregon
- Mr. Scott Corbitt, General Manger, Port of Lewiston, Lewiston, Idaho

- *Mr. Rick Dunn*, General Manager, Benton Public Utility District, Kennewick, Washington
- *Ms. Michelle Hennings*, Executive Director, Washington Association of Wheat Growers, Ritzville, Washington
- *Mr. Alex McGregor*, Chairman of the Board of Directors, The McGregor Company, Colfax, Washington
- *Mr. Todd Myers*, Environmental Director, Washington Policy Center, Cle Elum, Washington
- *Dr. David Welch*, President & Founder, Kintama Research Services Ltd., Nanaimo, BC, Canada



Map 1: Columbia River Basin | Source: U.S. Army Corps of Engineers

#### III. BACKGROUND

## History of the Columbia River Basin

The Columbia River is fourth-largest river by volume in North America, with an annual average of 192 million acre-feet at the mouth. The drainage basin covers approximately 259,000 square miles that includes parts of seven States (Idaho, Montana, Nevada, Oregon, Utah, Washington, and Wyoming) and the Canadian province of British Columbia. The headwaters of the Columbia River begin at Columbia Lake, on the west slope of the Rocky Mountain Range in Canada, and the river flows more than 1,200 miles before reaching the Pacific Ocean near Astoria, Oregon. The Snake River (Snake) is the largest tributary of the Columbia River by both length, 1,078 miles, and average annual discharge, 54,830 cubic feet per second, at Ice Harbor Dam. The Snake originates in the southeastern corner of Yellowstone National Park in northwestern Wyoming and flows through Idaho, along the Oregon-Idaho border, and into Washington where it empties into the Columbia River near the Tri-Cities.

# Development of the Columbia River

As agriculture increased throughout the region, the demand on water supplies and need for irrigation projects increased. Many farmers developed small, local irrigation systems throughout the second half of the 19<sup>th</sup> century. <sup>6</sup> The passage of the Reclamation Act of 1902 authorized the federal government to develop water infrastructure projects for small family farms - up to 160 acres of land per landowner throughout the West. However, it was not until the 1920s that the federal government seriously explored developing major infrastructure along the Columbia River. Congress directed the U.S. Army Corps of Engineers (Corps) to study potential development along the Columbia River in the River and Harbors Act of 1925.8 On March



Picture 1: December 6, 1935. Washington Governor Clarence C. Martin placing official first concrete pour at Grand Coulee Dam. | Source: U.S. Bureau of Reclamation

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<sup>&</sup>lt;sup>1</sup> Northwest Power and Conservation Council. *Columbia River History, Columbia River: Description, Creation, and Discovery*. <a href="https://www.nwcouncil.org/reports/columbia-river-history/columbia-river/">https://www.nwcouncil.org/reports/columbia-river-history/columbia-river/</a>.

<sup>2</sup> Id

<sup>&</sup>lt;sup>3</sup> U.S. Army Corps of Engineers. (2020) *Columbia River System Operations, Final Environmental Impact Statement, Executive Summary*. <a href="https://usace.contentdm.oclc.org/utils/getfile/collection/p16021coll7/id/14957">https://usace.contentdm.oclc.org/utils/getfile/collection/p16021coll7/id/14957</a>.

<sup>&</sup>lt;sup>4</sup> Northwest Power and Conservation Council. *Columbia River History, Columbia River: Description, Creation, and Discovery*. https://www.nwcouncil.org/reports/columbia-river-history/columbia-river.

<sup>&</sup>lt;sup>5</sup> Northwest Power and Conservation Council. *Columbia River History, Snake River.* https://www.nwcouncil.org/reports/columbia-river-history/snakeriver/

<sup>&</sup>lt;sup>6</sup> Northwest Power and Conservation Council. *Columbia River History, Irrigation*. <a href="https://www.nwcouncil.org/reports/columbia-river-history/irrigation/">https://www.nwcouncil.org/reports/columbia-river-history/irrigation/</a>.

<sup>&</sup>lt;sup>7</sup> 32 Stat. 388, Ch. 1093

<sup>8 43</sup> Stat. 1186, Ch. 467

29, 1932, the Chief of Engineers for the Corps submitted a report detailing proposed development on the Columbia River. <sup>9</sup> This report proposed ten dams along the mainstem of the Columbia River, beginning with what is now the Bonneville Dam and ending with Grand Coulee Dam. <sup>10</sup>

As the nation sunk into the Great Depression, these plans became the centerpiece of President Franklin Roosevelt's "New Deal". On September 30, 1933, President Roosevelt authorized the construction of Bonneville Dam under the National Industrial Recovery Act. <sup>11</sup> In 1935, Congress authorized the construction of Grand Coulee Dam. <sup>12</sup> The Bonneville and Grand Coulee Dams were completed in 1937 and 1942, respectively. <sup>13</sup>

The Bonneville Project Act of 1937 created a new Federal entity, the Bonneville Power Administration (BPA), to market the electricity from the Bonneville Dam and to construct the transmission system for its delivery throughout the region.<sup>14</sup>

The hydropower produced by these dams powered the United States' war effort throughout World War II, fueling energy intensive industries such as aluminum production and shipbuilding in the Pacific Northwest. <sup>15</sup> President Harry Truman stated in 1948 that "[h]ad we not had that power source [from Bonneville and Grand Coulee Dams], it would have been almost impossible to win this war". <sup>16</sup>

Today, BPA markets wholesale electrical power from 31 federal dams in the Pacific Northwest that are operated by the Corps and the Bureau of Reclamation (Reclamation). <sup>17</sup> Collectively, these are called the Federal Columbia River Power System (FCRPS). The Corps owns 21 of these dams while Reclamation owns ten. <sup>18</sup> FCRPS hydropower projects have a combined

<sup>13</sup> Billington, D. P., Jackson, D. C., & Melosi, M. V. (2005). *The History of Large Federal Dams: Planning, Design, and Construction in the Era of Big Dams*. U.S. Bureau of Reclamation, U.S. Department of the Interior. Denver, Colorado. <a href="https://www.usbr.gov/history/HistoryofLargeDams/LargeFederalDams.pdf">https://www.usbr.gov/history/HistoryofLargeDams/LargeFederalDams.pdf</a>.

<sup>&</sup>lt;sup>9</sup> U.S. House of Representatives, 73<sup>rd</sup> Congress, 1<sup>st</sup> Session, House Document No. 103. *Columbia River and minor tributaries:* Letter from the Secretary of War transmitting pursuant to Section 1 of the River and Harbor Act approved January 21, 1927, a letter from the Chief of Engineers, United States Army, dated March 29, 1932, submitting a report, together with accompanying papers and illustrations, containing a general plan for the improvement of the Columbia River and minor tributaries for the purposes of navigation and efficient development of water-power, the control of floods, and the needs of irrigation. <a href="https://usace.contentdm.oclc.org/digital/collection/p16021coll5/id/172">https://usace.contentdm.oclc.org/digital/collection/p16021coll5/id/172</a>

<sup>&</sup>lt;sup>10</sup> Billington, D. P., Jackson, D. C., & Melosi, M. V. (2005). *The History of Large Federal Dams: Planning, Design, and Construction in the Era of Big Dams*. U.S. Bureau of Reclamation, U.S. Department of the Interior. Denver, Colorado, at 191. https://www.usbr.gov/history/HistoryofLargeDams/LargeFederalDams.pdf.

 <sup>&</sup>lt;sup>11</sup> Id at 194.
 <sup>12</sup> The River and Harbors Act of 1935, 74 Stat. 480.

<sup>&</sup>lt;sup>14</sup> Bonneville Power Administration (2010). *Corridors of Power: The Bonneville Power Administration Transmission Network*. www.bpa.gov/-/media/Aep/environmental-initiatives/cultural-resources/transmission-projects/corridors-of-power.pdf.

 <sup>16</sup> Rear Platform Remarks in Idaho, June 7, 1948. Public Papers: Harry S. Truman 1945-1953. Independence, MO: Harry S.
 Truman Presidential Library & Museum. <a href="https://www.trumanlibrary.gov/library/public-papers/119/rear-platform-remarks-idaho">https://www.trumanlibrary.gov/library/public-papers/119/rear-platform-remarks-idaho</a>.
 17 Bonneville Power Administration, 2022 Annual Report. <a href="https://www.bpa.gov/-/media/Aep/finance/annual-reports/ar2022.pdf">https://www.bpa.gov/-/media/Aep/finance/annual-reports/ar2022.pdf</a>

<sup>&</sup>lt;sup>18</sup> USACE: Bonneville, The Dalles, John Day, McNary, Chief Joseph, Albeni Falls, Libby, Ice Harbor, Lower Monumental, Little Goose, Lower Granite, Dworshak, Big Cliff, Detroit, Foster, Green Peter, Cougar, Dexter, Lookout Point, Hills Creek, Lost Creek. Reclamation: Chandler, Roza, Grand Coulee, Hungry Horse, Black Canyon, Boise River Diversion, Anderson Ranch, Minidoka, Palisades, Green Springs.

generation capacity of 22,458 megawatts (MW). <sup>19</sup> In the Pacific Northwest, hydropower accounts for over 80 percent of the energy in the region. <sup>20</sup>

# Environmental Mitigation and Funding

Since the passage of the Northwest Power Act (P.L. 96-501) in 1980, BPA ratepayers have financed the agency's Fish and Wildlife Program. This program was created to mitigate, protect, and enhance fish and wildlife populations and their habitat in the Columbia Basin. The costs of this program include lost power generation caused by water spillage used for environmental purposes, power purchases to replace lost generation, and on-the-ground work, including structural modifications at dams, habitat protection, research and fish hatcheries. In Fiscal Year 2021 these costs were approximately \$744.5 million. A significant amount of the program's costs are dedicated to salmon protections mandated under the Endangered Species Act (ESA, 16 U.S.C. 1531 et seq.). These costs are passed on to BPA's electricity customers.

Total of \$744.5 million does not reflect \$108.6 million in obligations to capital projects for fish and wildlife projects, software development, and structures at dams, or \$90.6 million federal credits Bonneville receives from the U.S. Treasury

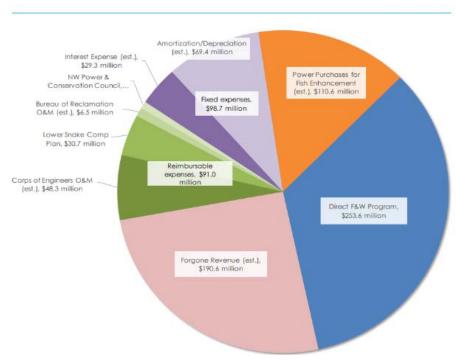


Figure 1: Cost by Major Area, FY2021 |Source: NW Council

<sup>&</sup>lt;sup>19</sup> Testimony from BPA Administrator John Hairston before the House Natural Resources Committee. (2023). <a href="https://naturalresources.house.gov/uploadedfiles/testimony\_hairston.pdf">https://naturalresources.house.gov/uploadedfiles/testimony\_hairston.pdf</a>

<sup>&</sup>lt;sup>20</sup> Bonneville Power Administration, *Fuel Mix Percent Summary – Calendar Year 2022*. <a href="https://www.bpa.gov/media/Aep/power/fuel-mix/2022-bpa-fuel-mix.pdf">https://www.bpa.gov/media/Aep/power/fuel-mix/2022-bpa-fuel-mix.pdf</a>

<sup>&</sup>lt;sup>21</sup> Northwest Power and Conservation Council. *Columbia River History, Northwest Power Act.* <a href="https://www.nwcouncil.org/reports/columbia-river-history/northwestpoweract/">https://www.nwcouncil.org/reports/columbia-river-history/northwestpoweract/</a>

<sup>&</sup>lt;sup>22</sup> Bonneville Power Administration. Fish & Wildlife Program. <a href="https://www.bpa.gov/environmental-initiatives/efw/fish-wildlife-program">https://www.bpa.gov/environmental-initiatives/efw/fish-wildlife-program</a>.

<sup>&</sup>lt;sup>23</sup> Northwest Power and Conservation Council. (2021). 2021 Columbia River Basin Fish and Wildlife Program Costs Report. Northwest Power and Conservation Council, at 9. <a href="https://www.nwcouncil.org/fs/17760/2022-1.pdf">https://www.nwcouncil.org/fs/17760/2022-1.pdf</a>
<sup>24</sup> Id.

#### The Snake River Dams

In 1945, Congress authorized the Corps to construct "such dams as are necessary [on the lower Snake River, and open channel improvement for purposes of providing slack-water navigation and irrigation."<sup>25</sup> The Corps began construction of Ice Harbor Lock and Dam in 1956, of Lower Monumental Dam in 1961, of Little Goose Dam in 1963, and of Lower Granite Dam in 1965.<sup>26</sup> The first dam, Ice Harbor, was completed in 1962 and the last, Lower Granite, was completed in 1975.<sup>27</sup> Initial plans for each dam provided for three power-generating units, a navigation lock, and fish passage facilities for upstream migrating adult salmonid fish. <sup>28</sup> Changes were later made to include bypass systems to allow downstream migrating juvenile salmonids.<sup>29</sup>

Navigation: The inland federal navigation channel is maintained to Pasco, Washington, on the Columbia River and to Lewiston, Idaho, on the Snake River, a total of 465 miles from the Pacific ocean. 30 The Corps maintains these navigation channels and manages the river system to ensure safe navigation throughout.<sup>31</sup> Each dam along the lower Columbia and Snake Rivers has an associated lock to facilitate vessel traffic.

These dams play a critical role in reducing transportation emissions. The river system allows farmers to export grain and other crops to overseas markets; between 50 and 60 million tons of cargo are transported through barges each year. 32 In 2019, it would have taken 150,784 semitrucks or 39,204 rail cars to move the cargo that was barged on the Snake River.<sup>33</sup> According to the Idaho Farm Bureau Federation, "barging is the most cost-effective and environmentally friendly way of getting wheat from Idaho and other states to market and the [river] system is the third largest grain export gateway in the world."<sup>34</sup> According to the Pacific Northwest Waterways Association, replacing barge transportation would increase diesel fuel consumption by 5 million gallons per year, more than 201 unit trains and 23.8 million miles in additional truck activity, increasing CO<sub>2</sub> emissions by more than a million tons per year.<sup>35</sup>

<sup>&</sup>lt;sup>25</sup> River and Harbor Act of 1945, P.L. 79-14

<sup>&</sup>lt;sup>26</sup> U.S. Army Corps of Engineers. Walla Walla District, Lower Snake River Dams: A Value to the Nation. https://www.nww.usace.army.mil/Missions/Lower-Snake-River-Dams/

<sup>&</sup>lt;sup>28</sup> U.S. Army Corps of Engineers. (1975) Walla Walla District, Special Report: Lower Snake River Fish and Wildlife Compensation Plan. https://www.fws.gov/sites/default/files/documents/1A%20-Special%20Report LSRCP\_1975%20with%201985%20Update%20Letter.pdf

<sup>&</sup>lt;sup>30</sup> Northwest Power and Conservation Council. *Columbia River History, Navigation*. https://www.nwcouncil.org/reports/columbia-river-history/navigation/

<sup>&</sup>lt;sup>32</sup> U.S. Army Corps of Engineers. (2020) Columbia River System Operations, Final Environmental Impact Statement, Executive Summary. https://usace.contentdm.oclc.org/utils/getfile/collection/p16021coll7/id/14957

<sup>&</sup>lt;sup>33</sup> Pacific Northwest Waterways Association (2022). Columbia Snake River System Infosheet. https://www.pnwa.net/wpcontent/uploads/2022/01/PNWA Infosheet Final.pdf

34 Idaho Farm Bureau Federation (2021) Farm Bureau strongly opposes dam removal plan. https://www.idahofb.org/news-

room/posts/farm-bureau-strongly-opposes-dam-removal-plan/

<sup>35</sup> Mehaffey, K (2020) Study: Loss of Snake River Barges Would Add CO2, Cost \$2.3 Billion. https://www.newsdata.com/clearing\_up/environment/study-loss-of-snake-river-barges-would-add-co2-cost-2-3billion/article\_76ca29a4-33ef-11ea-a551-5b7353c8f591.html

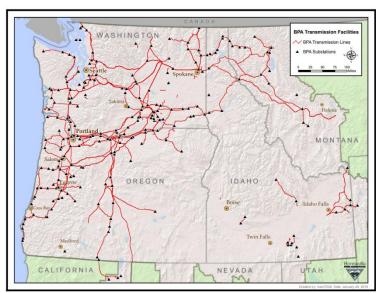
The Columbia River is the top route for wheat, West coast wood, West coast bulk minerals and West coast auto exports. <sup>36</sup> Eleven states export wheat through the river system, and the Columbia/Snake River system accounts for over 60 percent of all wheat exports. <sup>37</sup> The river system also supports a robust tourism industry in the region. In 2019, 25,000 passengers visited the region on cruise ships and contributed approximately \$15 million to the local economy. <sup>38</sup>

In 2020, the Corps, Reclamation and BPA, following a four-year, \$40 million process with extensive public comment and stakeholder input published the final Environmental Impact Statement (EIS) for the Columbia River System. The EIS looked at the environmental and economic impacts of breaching the lower Snake River dams. While it stated that there would be eventual water quality improvements, the shift from low-emission barges to road and rail transport could increase transportation-related emissions by up to 53 percent. <sup>39</sup> In addition, the final EIS states that "the cost to transport wheat, which accounted for 87% of the downbound tonnage on the lower Snake River in 2018, is estimated to increase by \$0.07–\$0.24/bushel. This is equivalent to an increase of 10 to 33% in average transportation costs."

**Power:** The dams have the combined capacity to generate approximately 3,033 MW of electricity. 41 While the average generation is about 1,000 MW, during periods of high demand,

such as the late June heat dome event in 2021 or a prolonged winter cold snap, the dams can provide sustained generation of 2,300 MW, helping to keep the Northwest power system reliable during emergencies. 42

Hydropower has the unique capability to begin generation immediately and without requiring a kickstart from an external power source. Hydropower is also the only renewable energy resource capable of providing base load power – "the minimum amount of electric power delivered or required over a given



Map 2: BPA Transmission Facilities | Source: BPA

<sup>38</sup> Id.

<sup>&</sup>lt;sup>36</sup> Pacific Northwest Waterways Association (2022). *Columbia Snake River System Facts*. <a href="https://www.pnwa.net/wpcontent/uploads/2022/08/CSRS.pdf">https://www.pnwa.net/wpcontent/uploads/2022/08/CSRS.pdf</a>

<sup>&</sup>lt;sup>37</sup> Id.

<sup>&</sup>lt;sup>39</sup> U.S. Army Corps of Engineers. (2020) *Columbia River System Operations, Final Environmental Impact Statement,* Chapter 3, Affected Environment and Environmental Consequences, at page 1058 <a href="https://usace.contentdm.oclc.org/utils/getfile/collection/p16021coll7/id/14959">https://usace.contentdm.oclc.org/utils/getfile/collection/p16021coll7/id/14959</a>

<sup>&</sup>lt;sup>40</sup> U.S. Army Corps of Engineers. (2020) *Columbia River System Operations, Final Environmental Impact Statement, Executive Summary*. https://usace.contentdm.oclc.org/utils/getfile/collection/p16021coll7/id/14957

<sup>&</sup>lt;sup>41</sup> Columbia River basin Federal Caucus, A Northwest energy solution: Regional power benefits of the lower Snake River dams. https://www.salmonrecovery.gov/home/lower-snake-river-dams-power-benefits

<sup>&</sup>lt;sup>42</sup> Energy + Environmental Economics. (2022) *BPA Lower Snake River Dams Power Replacement Study*. <a href="https://www.bpa.gov/media/Aep/power/hydropower-data-studies/e3-bpa-lower-snake-river-dams-power-replacement-study.pdf">https://www.bpa.gov/media/Aep/power/hydropower-data-studies/e3-bpa-lower-snake-river-dams-power-replacement-study.pdf</a>

period of time at a steady rate."<sup>43</sup> Given the intermittent nature of prominent renewable energy resources like solar and wind, emissions-free hydropower serves as an ideal complement to these systems.

**Fish Passage:** All four lower Snake River dams have highly effective fish passage. Ice Harbor has two fish ladders that provide adult fish upstream passage through the dam. <sup>44</sup> In 2005, a spillway weir was installed to improve passage conditions for juvenile salmon downstream outmigration. <sup>45</sup> In addition, new hydroelectric turbines that showed improved fish passage survival have been installed at the facility. <sup>46</sup>

Lower Monumental Lock and Dam also has two fish ladders—one on each shore—to provide a passage route for upstream-migrating fish. <sup>47</sup> Passage routes operated for downstream migrating fish are via the spillway, a spillway weir, and a juvenile bypass system. The 10-year average collection of outgoing juvenile salmon and steelhead for 2011 to 2020 at Lower Monumental was approximately 2.2 million fish with approximately 1.7 million of those transported via truck and barge below Bonneville Dam. <sup>48</sup>

Little Goose Lock and Dam has one fish ladder with entrances on both shores to provide a passage route for upstream-migrating fish.<sup>49</sup> Passage routes operated for downstream-migrating fish are via the spillway, a spillway weir, and a juvenile bypass system. In addition, the juvenile bypass outfall has avian deterrents installed to limit perching near the release location by piscivorous birds. The 10-year average collection of outgoing juvenile salmon and steelhead for

2011 to 2020 at Little Goose was approximately 3.2 million fish with approximately 2.4 million of those transported via truck and barge below Bonneville Dam.<sup>50</sup>

Lower Granite Lock and Dam has one fish ladder for passing migratory fish with entrances on both shores and a fish channel through the dam that connects to the south shore ladder.<sup>51</sup> In addition, in 2016 the Corps installed two pumps to pull cold water from



Picture 2: Picture shows fish ladder at Lower Granite Dam. |Source: Nicholas K. Geranios/Associated Press File

<sup>&</sup>lt;sup>43</sup> U.S. Energy Information Administration. *Glossary: Base load*. <a href="https://www.eia.gov/tools/glossary/?id=B.">https://www.eia.gov/tools/glossary/?id=B.</a>

<sup>&</sup>lt;sup>44</sup> U.S. Army Corps of Engineers. *Ice Harbor Lock and Dam*. <a href="https://www.nww.usace.army.mil/Locations/District-Locks-and-Dams/Ice-Harbor-Lock-and-Dams/">https://www.nww.usace.army.mil/Locations/District-Locks-and-Dams/Ice-Harbor-Lock-and-Dams/</a>

<sup>&</sup>lt;sup>46</sup> Spitz, S. (2022) *New fish passage measures in the works at Ice Harbor Dam.* KEPR. <a href="https://keprtv.com/news/local/new-fish-passage-measures-in-the-works-at-ice-harbor-dam">https://keprtv.com/news/local/new-fish-passage-measures-in-the-works-at-ice-harbor-dam</a>

<sup>&</sup>lt;sup>47</sup> U.S. Army Corps of Engineers. *Lower Monumental Lock and Dam.* <a href="https://www.nww.usace.army.mil/Locations/District-Locks-and-Dams/Lower-Monumental-Lock-and-Dam/4811">https://www.nww.usace.army.mil/Locations/District-Locks-and-Dams/Lower-Monumental-Lock-and-Dam/4811</a>

<sup>&</sup>lt;sup>49</sup> U.S. Army Corps of Engineers. *Little Goose Lock and Dam*. <a href="https://www.nww.usace.army.mil/Locations/District-Locks-and-Dams/Little-Goose-Lock-and-Dams/Little-Goose-Lock-and-Dams/Little-Goose-Lock-and-Dams/5011">https://www.nww.usace.army.mil/Locations/District-Locks-and-Dams/Little-Goose-Lock-and-Dams/District-Locks-and-Dams/Little-Goose-Lock-and-Dams/5011</a>

<sup>&</sup>lt;sup>51</sup> U.S. Army Corps of Engineers. *Lower Granite Lock and Dam*. <a href="https://www.nww.usace.army.mil/Locations/District-Lock-and-Dam/">https://www.nww.usace.army.mil/Locations/District-Lock-and-Dam/</a>

deep in the reservoir to cool the water in the adult fish ladder.<sup>52</sup> The 10-year average collection of outgoing juvenile salmon and steelhead for 2011 to 2020 at Lower Granite was approximately 5.2 million fish with approximately 3 million of those transported via truck and barge below Bonneville Dam.<sup>53</sup>

Despite the continuous improvements to the lower Snake River dams, litigious activist groups continue to focus on removing these four dams. In 2016, BPA estimated that replacing the dams would increase power costs by \$274 million to \$372 million per year. Six years later, in 2022, BPA commissioned a study by the San Francisco environmental consulting firm Energy + Environmental Economics (E3) which said that the cost of replacing the output from these dams would range from \$415 million to \$860 million per year through 2045. More concerning is that under those assumptions up to 1.2 terawatts (or 1,200,000 MWh) would depend on technologies not yet readily available such as hydrogen-fueled combustion turbines.

<u>Fish Predation:</u> Endangered salmon and steelhead are at risk of predation throughout their lifecycle. For juvenile fish, the main predator threats are northern pikeminnow and fish-eating birds, primarily Caspian terns and double-crested cormorants.<sup>57</sup>

For adult fish, the threats are marine mammals, mainly seals and sea lions (pinniped).<sup>58</sup> The abundance of California sea lions in the Columbia River basin alone has increased from less than 500 to around 4,000 animals in the past decade.<sup>59</sup> In recent years, many California sea lions have begun swimming more than 140 miles up the Columbia River to Bonneville Dam to prey on adult spring Chinook salmon, winter steelhead, and white sturgeon in increasing numbers. According to the National Oceanic and Atmospheric Administration (NOAA), studies indicate that sea lions may remove large proportions of migrating salmon and steelhead.<sup>60</sup> In 2002, salmon predation by pinniped increased from .4 percent in 2002 to a high of 5.8 percent in 2016.

To address this issue, in December 2018 Congress passed the Endangered Salmon Predation Prevention Act of 2018 which allows NOAA's National Marine Fisheries Service (NMFS) to authorize the states of Idaho, Oregon and Washington to lethally remove individually identifiable, predatory California Sea Lions in the vicinity of Bonneville Dam that are having a negative impact on the recovery of salmon and steelhead listed under the ESA. However, predation continues to be a problem in the Columbia River Basin. A 2023 analysis by the

<sup>&</sup>lt;sup>52</sup> Id.

<sup>53</sup> Id.

<sup>&</sup>lt;sup>54</sup> Bonneville Power Administration (2016). A Northwest energy solution: Regional power benefits of the lower Snake River dams [Brochure], at 2. <a href="https://www.bpa.gov/-/media/Aep/about/publications/fact-sheets/fs-201603-A-Northwest-energy-solution-Regional-power-benefits-of-the-lower-Snake-River-dams.pdf">https://www.bpa.gov/-/media/Aep/about/publications/fact-sheets/fs-201603-A-Northwest-energy-solution-Regional-power-benefits-of-the-lower-Snake-River-dams.pdf</a>

<sup>&</sup>lt;sup>55</sup> Energy + Environmental Economics. (2022) *BPA Lower Snake River Dams Power Replacement Study*. <a href="https://www.bpa.gov/media/Aep/power/hydropower-data-studies/e3-bpa-lower-snake-river-dams-power-replacement-study.pdf">https://www.bpa.gov/media/Aep/power/hydropower-data-studies/e3-bpa-lower-snake-river-dams-power-replacement-study.pdf</a>
<sup>56</sup> Id.

<sup>&</sup>lt;sup>57</sup> Northwest Power and Conservation Council. *Fish and Wildlife: Predation*. <a href="https://www.nwcouncil.org/fish-and-wildlife/fw-topics/predation/">https://www.nwcouncil.org/fish-and-wildlife/fw-topics/predation/</a>

<sup>&</sup>lt;sup>59</sup> NOAA Fisheries, *Marine Mammal Protection Act Section 120 Pinniped Removal Program*. https://www.fisheries.noaa.gov/west-coast/marine-mammal-protection/marine-mammal-protection-act-section-act

 $<sup>\</sup>frac{\text{https://www.fisheries.noaa.gov/west-coast/marine-mammal-protection/marine-mammal-protection-act-section-120-pinniped-removal}{}$ 

<sup>60</sup> NOAA Fisheries, NOAA Fisheries Authorizes States and Tribes to Remove Sea Lions Preying on Protected Fish. https://www.fisheries.noaa.gov/feature-story/noaa-fisheries-authorizes-states-and-tribes-remove-sea-lions-preying-protected-fish

Washington State Academy of Sciences (WSAS) found that the number of Chinook salmon that fall prey to seals and sea lions is "substantial and has increased steadily." <sup>61</sup> In its analysis, WSAS recommends the State of Washington experiment with reducing seal and sea lion populations at key locations, such as the mouth of the Columbia River, and measure the impact of such reductions on salmon survival.

**Agriculture:** The mainstem Columbia River, lower Snake River, Clearwater River, Kootenai River, Pend Oreille River, and Flathead River (the study rivers) provide water for millions of people and irrigated agriculture in Idaho, Montana, Oregon, and Washington., Idaho, and Montana. 62

The Columbia Basin Project is a multi-purpose, federally authorized Bureau of Reclamation project located in central-eastern Washington. Originally authorized by Congress to irrigate about a million acres, the current infrastructure irrigates about 700,000 acres annually in Adams, Franklin, Grant, and Walla Walla Counties. 63 The primary crops grown include hay, potatoes, corn, wheat, beans, orchard fruits, grapes, herbs, onions, grass seed, and vegetables – all totaled the estimated annual value of these crops is \$2.66 billion.<sup>64</sup>

Non-Federal parties divert water for irrigation at many locations within the Columbia River Basin. Extensive areas of irrigated agriculture have developed near the reservoirs behind the four lower Columbia River dams (Bonneville, John Day, The Dalles, and McNary). 65 On the four lower Snake River dams, there are 67 irrigation and 16 municipal and industrial pumps used for surface water diversions from the four lower Snake River dams. 66 In addition, there are 132 irrigation wells and 134 municipal and industrial groundwater wells within 1 mile of these reservoirs that have the potential to have groundwater connectivity with the water in the reservoirs. 67 That water is used to grow a variety of crops and livestock, including fruit trees, grapes, potatoes, corn, and grains.<sup>68</sup>

# Litigation

ESA requires the Corps, Reclamation, and BPA – the federal operators of the FCRPS (Action Agencies) – to consult with NMFS and the U.S. Fish and Wildlife Service on how project operations may impact listed species. <sup>69</sup> Following consultation, NMFS issues a biological

<sup>&</sup>lt;sup>61</sup> Washington State Academies of Sciences. (2022) Pinniped Predation on Salmonids in the Washington Portions of the Salish Sea and Outer Coast. https://washacad.org/wp-content/uploads/2022/11/Pinniped-Predation-on-Salmonids-in-the-Washington-Portions-of-the-Salish-Sea-and-Outer-Coast-1.pdf

<sup>&</sup>lt;sup>62</sup> U.S. Army Corps of Engineers. (2020) Columbia River System Operations, Final Environmental Impact Statement, Chapter 3, Affected Environment and Environmental Consequences, at page 1058 https://usace.contentdm.oclc.org/utils/getfile/collection/p16021coll7/id/14959

<sup>&</sup>lt;sup>63</sup> Highland Economic, LLC. (2022) Economic Contribution of Irrigated Agriculture Supported by the Columbia Basin Project. https://www.qcbid.org/documents/Economic%20Contribution%20of%20Columbia%20Basin%20Project May%2027 2022.pdf <sup>64</sup> Id.

<sup>65</sup> U.S. Army Corps of Engineers. (2020) Columbia River System Operations, Final Environmental Impact Statement, Chapter 3, Affected Environment and Environmental Consequences, at page 1301-1303. https://usace.contentdm.oclc.org/utils/getfile/collection/p16021coll7/id/14959 <sup>66</sup> Id.

<sup>&</sup>lt;sup>67</sup> Id.

<sup>&</sup>lt;sup>68</sup> Id.

<sup>&</sup>lt;sup>69</sup> Endangered Species Act of 1973. 16 U.S.C. 1536.

opinion (BiOp) specifying either a "jeopardy" or "no-jeopardy" finding for the 13 separate species of salmon and steelhead that NMFS listed beginning in 1991.<sup>70</sup> A finding of jeopardy requires NMFS to develop Reasonable and Prudent Alternatives (RPAs) to the proposed action in order to avoid jeopardy.<sup>71</sup>

NMFS issued the first of three "no jeopardy" BiOps for FCRPS in April 1992.<sup>72</sup> The District Court of Oregon (District Court) in *Idaho Department of Fish and Game v. National Marine Fisheries Service* found both the 1993 and 1994 BiOps to be flawed and ordered NMFS and the Action Agencies to revise the 1994 BiOp. In 1995, NMFS issued the first BiOp (1995 BiOp) which concluded that FCRPS operations jeopardized the continued existence of listed species, and proposed RPAs to avoid this finding.<sup>73</sup>

In December 2000, NMFS issued a BiOp, which again found that the operations of the FCRPS dams were likely to jeopardize the existence of certain listed species, and proposed RPAs to mitigate these impacts. <sup>74</sup> NMFS determined that jeopardy would not be avoided even after implementing the RPAs. Eventually, NMFS determined that the cumulative effect of the RPA – coupled with off-site measures including hatchery and habitat initiatives – was sufficient to warrant a "no-jeopardy" opinion. <sup>75</sup>

In 2003, then-Judge James A. Redden ruled that the 2000 BiOp relied on off-site mitigation measures that were not reasonably certain to occur, and ordered NMFS to issue a new BiOp by 2004. <sup>76</sup> In addition, the district court required the modification of the FCRPS dam operations during the spring and summer of 2006, requiring certain dams to bypass hydroelectric turbines and spill water during this period. <sup>77</sup> Judge Redden would eventually go on to reject the 2004, 2008 and the 2010 Supplemental BiOps issued by NMFS. <sup>78</sup>

In a 2011 decision, Judge Redden wrote:

"No later than January 1, 2014, NOAA Fisheries shall produce a new biological opinion that reevaluates the efficacy of the RPAs in avoiding jeopardy... and considers whether more aggressive actions, such as dam removal and/or additional flow augmentation and reservoir modifications are necessary to avoid jeopardy," 79

<sup>&</sup>lt;sup>70</sup>NOAA Fisheries, West Coast Region. *West Coast Salmon Recovery Planning & Implementation*. http://www.westcoast.fisheries.noaa.gov/protected\_species/salmon\_steelhead/recovery\_planning\_and\_implementation/. <sup>71</sup> 16 U.S.C. 1536(b).

<sup>&</sup>lt;sup>72</sup> NOAA Fisheries (2008). *Executive Summary of the FCRPS 2008 Biological Opinion*. NOAA Fisheries, National Oceanic and Atmospheric Administration, U.S. Department of Commerce, at 12.

http://www.westcoast.fisheries.noaa.gov/publications/hydropower/fcrps/2008fcrps\_execsummary.pdf

<sup>&</sup>lt;sup>73</sup> Crampton, B., & Espenson, B. (2009). Salmon and Hydro: An Account of Litigation over Federal Columbia River Power System Biological Opinions for Salmon and Steelhead, 1991-2009. *Columbia Basin Bulletin*, 1, 5. <a href="http://www.webpages.uidaho.edu/fish510/PDF/salmon hydro\_ebook.pdf">http://www.webpages.uidaho.edu/fish510/PDF/salmon hydro\_ebook.pdf</a>.

<sup>&</sup>lt;sup>74</sup> Id. at 39.

<sup>&</sup>lt;sup>75</sup> National Wildlife Federation v. NMFS

<sup>&</sup>lt;sup>76</sup> National Wildlife Federation v. NMFS, 254 F. Supp. 2d at 1216

<sup>&</sup>lt;sup>77</sup> The Columbia Basin River Basin Federal Caucus. 2000 FCRPS BiOp.

https://www.salmonrecovery.gov/BiologicalOpinions/FCRPSBiOp/2000FCRPSBiOp.aspx.

<sup>&</sup>lt;sup>78</sup> The Columbia Basin River Basin Federal Caucus. *NOAA Fisheries Biological Opinion for the operation of the Federal Columbia River Power System*. <a href="https://www.salmonrecovery.gov/BiologicalOpinions/FCRPSBiOp.aspx">https://www.salmonrecovery.gov/BiologicalOpinions/FCRPSBiOp.aspx</a>.

<sup>&</sup>lt;sup>79</sup> National Wildlife Federation v. NMFS, 839 F. Supp. 2d 1117, 1131

After Judge Redden retired in late 2011, the case was assigned to Judge Michael Simon who found a 2014 Supplemental BiOp issued by NMFS flawed but allowed it to stay in place until a new BiOp can be completed. <sup>80</sup> The 2014 Supplemental BiOp supplements, without replacing, the 2008 and 2010 BiOps. As part of his rejection of the BiOp, Judge Simon charged that the federal government had avoided taking a "hard look" at breaching, bypassing and removal of the dams. <sup>81</sup> This finding is contrary to the more than \$22 million spent for extensive studies by the Army Corps in 1999 and again in 2010 on the impacts of removing dams in the Snake River, weighed against the minor benefit, if not harm, to salmon. <sup>82</sup> In addition, in a 2007 report, the Corps and BPA said more than \$1 billion was invested from the mid-1990s through 2006 in baseline research, development, and testing of prototype improvements, and construction of new fish-passage facilities and upgrades. <sup>83</sup>

In 2017, Judge Simon ordered "tailored injunctive relief" including additional spill of water over the dam, but ordered the federal agencies to test the impacts of this spill before deciding how much would be mandated at each dam in 2018.<sup>84</sup> At the time, BPA expected the spills to cost ratepayers approximately \$40 million annually.<sup>85</sup> In Fiscal Year 2021, the estimated impacts from forgone revenues and power purchases due to spills was \$301.2 million.<sup>86</sup>

In 2020, the Action Agencies released a Record of Decision (ROD), as mandated by the court. The ROD did not endorse dam breaching, stating that while that alternative had the "greatest benefits for some species of ESA-listed fish, it would achieve those benefits at the expense of not meeting the other components of the agencies' Purpose and Need Statement for certain EIS objectives." In particular, these dams have salmon passage and survival rates of between 93 to 99 percent. 88

<sup>81</sup> National Wildlife Federation v. NMFS, United States District Court for the District of Oregon (2016). http://earthjustice.org/sites/default/files/files/1404%202065%20Opinion%20and%20Order.pdf.

From 1999 to 2002, the Army Corps spent \$20.69 million on the impacts of alternatives relating to breaching the Snake River dams. In 2010, the Army Corps spent \$274,254 on a study regarding lower Snake River dam breaching.

<sup>80</sup> Id. at 1121.

<sup>82</sup> Lower Snake River Juvenile Salmon Migration Feasibility Study: Draft Social Analysis Report (1999), Prepared by Foster Wheeler Environmental Corporation for the U.S. Army Corps of Engineers, Walla Walla District. Retrieved from <a href="http://www.nww.usace.army.mil/portals/28/docs/environmental/drew/social.pdf">http://www.nww.usace.army.mil/portals/28/docs/environmental/drew/social.pdf</a>.

<sup>&</sup>lt;sup>83</sup> U.S. Army Corps of Engineers and Bonneville Power Administration. (2007) Structural and Operational Changes at FCRPS Dams to Improve Fish Survival.

https://www.salmonrecovery.gov/Files/BiologicalOpinions/2004/Overhaul of the System final draft%20.pdf

<sup>&</sup>lt;sup>84</sup> Press Release: Court Grants Increased 'Spill' to Aid Endangered Columbia/Snake River Salmon. March 27, 2017. https://earthjustice.org/press/2017/court-grants-increased-spill-to-aid-endangered-columbiasnake-river-salmon

<sup>&</sup>lt;sup>85</sup> Examining the Proposed Fiscal Year 2019 Spending, Priorities and Missions of the Bureau of Reclamation, the U.S. Fish and Wildlife Service, the National Oceanic and Atmospheric Administration, and the Four Power Marketing Administrations: Hearings before the Committee on Natural Resources Subcommittee on Water and Power, House of Representatives, 115<sup>th</sup> Cong. (208) (Testimony of Mr. Elliot Mainzer), at 5. <a href="https://naturalresources.house.gov/uploadedfiles/4.12">https://naturalresources.house.gov/uploadedfiles/4.12</a> testimony mainzer.pdf.

<sup>86</sup> Northwest Power and Conservation Council. (2021). 2021 Columbia River Basin Fish and Wildlife Program Costs Report.
Northwest Power and Conservation Council, at 9. https://www.nwcouncil.org/fs/17760/2022-1.pdf

<sup>\$190.6</sup> million in forgone hydropower sales revenue that results from dam operations that benefit fish but reduce hydropower generation, such as spill.

<sup>\$110.6</sup> million in power purchases during periods when dam operations to protect migrating fish reduce hydropower generation below firm loads, such as by spilling water over dams in the spring or storing it behind dams in winter months in anticipation of increasing spring flows to aid fish passage.

<sup>&</sup>lt;sup>87</sup> Record of Decision; Columbia River System Operations Environmental Impact Statement. 85 Fed. Reg. 63834-63870

<sup>88</sup> Executive Summary CRSO EIS, page 24. https://usace.contentdm.oclc.org/utils/getfile/collection/p16021coll7/id/14957

The National Wildlife Federation and other plaintiffs sued the federal government on the 2020 ROD. In 2021, the federal government, the State of Oregon, the Nez Perce Tribe, and the plaintiffs filed an agreement with the U.S. District Court that outlined how dam operations would be altered in the coming year while allowing for parties to reach further agreement on long-term operations. <sup>89</sup>

Litigation is currently subject to a stay agreement through August 31, 2023, as mediation is underway. However, that approach has been criticized. Of concern for many stakeholders is the Biden administration's apparent push to forgo trying to reach a "consensus" resolution and instead advance a predetermined outcome of dam removal. According to the Inland Ports and Navigation Group and Northwest River Partners:

"Unfortunately, it has become clear that our input is not being heard in the mediation context, leading to more serious concerns that a small group of stakeholders is seeking to prescribe decisions for our entire region regarding our climate response, electricity rates, transportation, grid reliability, food and energy security, and the future of river dependent communities without the full opportunity of affected stakeholders to participate." <sup>90</sup>

White House Council on Environmental Quality (CEQ) Request for Information: On March 28, 2022, CEQ published a blog outlining a "path forward" for the Columbia River Basin following a Nation-to-Nation consultation between agencies and Tribes of the Columbia River Basin. The blog post specifically supported a policy of breaching the four dams on the lower Snake River, but also noted that such a step would require congressional action. It also provided an early opportunity for interested parties to submit comments through a newly established email address, <a href="mailto:salmon@ceq.eop.gov">salmon@ceq.eop.gov</a>. Emails sent to <a href="mailto:salmon@ceq.eop.gov">salmon@ceq.eop.gov</a> were only delivered to CEQ and are not directly available to other parties to the mediation or the public. 92

At the same time, the CEQ engaged the Federal Mediation and Conciliation Service (FMCS) to "mediate and facilitate between the parties in the litigation and the regional sovereigns, including Tribal Nations and states." FMCS, on behalf of CEQ, announced public listening sessions to for the public.

On May 4, 2023, CEQ published a Request for Information (RFI) in the Federal Register encouraging interested parties to submit comments on their views on a range of issues related to what constitutes the restoration of the lower Snake River, considerations that should inform the Federal Government's approach to supporting the Upper Columbia River Tribes' reintroduction

<sup>93</sup> Id.

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<sup>&</sup>lt;sup>89</sup> Press Release: Biden-Harris Administration Announces Steps to Improve Conditions for Salmon in the Columbia River Basin. October 21, 2021. <a href="https://www.doi.gov/pressreleases/biden-harris-administration-announces-steps-improve-conditions-salmon-columbia-river">https://www.doi.gov/pressreleases/biden-harris-administration-announces-steps-improve-conditions-salmon-columbia-river</a>

<sup>90</sup> February 6, 2023 letter from the Inland Ports and Navigation Group (IPNG) and Northwest RiverPartners (NWRP) <a href="https://republicans-naturalresources.house.gov/UploadedFiles/2023-02-06">https://republicans-naturalresources.house.gov/UploadedFiles/2023-02-06</a> Congressional Memo on Mediation - Final.pdf
91 CEQ, Blog Post. (2022) Columbia River Basin Fisheries: Working Together to Develop a Path Forward.
https://www.whitehouse.gov/ceq/news-updates/2022/03/28/columbia-river-basin-fisheries-working-together-to-develop-a-path-forward/

<sup>&</sup>lt;sup>92</sup> CEQ, Request for Information: Columbia River Salmon and Other Native Fish. <a href="https://www.regulations.gov/document/CEQ-2023-0002-0001">https://www.regulations.gov/document/CEQ-2023-0002-0001</a>

plan, considerations that should inform the Federal Government's approach to funding and actions to restore fish populations throughout the Columbia River Basin, and more. <sup>94</sup> Comments for the RFI close the same day as the stay agreement. To date, there have been over 33,000 comments submitted. <sup>95</sup> While it is unclear how CEQ will use the information received, it has stated it will "review the comments received on the docket to inform discussions in the mediation." <sup>96</sup>

<sup>94</sup> Id.

<sup>&</sup>lt;sup>95</sup> Id.

<sup>&</sup>lt;sup>96</sup> Id.