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UNITED STATES DISTRICT COURT
EASTERN DISTRICT OF WASHINGTON

COLUMBIA RIVERKEEPER, Plaintiff, v. UNITED STATES ARMY CORPS OF ENGINEERS; and LIEUTENANT GENERAL SCOTT A. SPELLMON, in his official capacity as the Commanding General and Chief of Engineers of the United States Army Corps of Engineers, Defendants.	No. 4:21-cv-05152 COMPLAINT

I. INTRODUCTION.

1. The Columbia River is one of the West's great river systems. This river supports rich fishing traditions, provides water for communities and agriculture, supports recreation opportunities, and powers hydroelectric dams. The Columbia River is also severely degraded by pollution. Toxic pollution threatens the health of people that eat resident fish and jeopardizes the public's right to eat fish caught locally. Rising water temperatures also threaten the health of salmon and other aquatic life that rely on cool water for survival, as demonstrated in 2015 when water reached temperatures warm enough to kill thousands of migrating sockeye salmon headed to the mid-Columbia and lower Snake Rivers. Scientists estimate that more than 277,000 sockeye, about 55 percent of the total run returning from the ocean to spawn, died in the Columbia and Snake Rivers due to warm water temperatures.

2. Congress passed the Clean Water Act ("CWA") in 1972 in an effort to prevent such occurrences and to otherwise "restore and maintain the chemical, physical, and biological integrity of the Nation's waters." 33 U.S.C. § 1251(a). Central to achieving these objectives is the CWA's prohibition on any discharges of pollutants to waters of the United States unless authorized by a National Pollutant Discharge Elimination System ("NPDES") permit. *See id.* § 1311(a). Such permits restrict any pollution discharges to, *inter alia*, ensure they do not

cause or contribute to violations of water quality standards in the receiving waters. *See id.* § 1311(b)(1)(C); 40 C.F.R. § 122.44(d).

3. The United States Army Corps of Engineers, however, has continued to discharge pollutants, including heated cooling water and oils and greases, from The Dalles Dam, John Day Dam, and McNary Dam (collectively, "Dams")[1] to the Columbia River without obtaining NPDES permits in violation of the CWA since its passage in 1972.

4. Columbia Riverkeeper filed a CWA citizen suit against the United States Army Corps of Engineers for these illegal discharges in 2013. That litigation was resolved with a settlement agreement in 2014 in which the United States Army Corps of Engineers agreed to apply for the necessary permits and take other actions to reduce its water quality impacts, and Columbia Riverkeeper agreed to refrain from further litigation related to these illegal discharges for seven years to allow time for the permitting process. Remarkably, that seven-year period concluded on August 14, 2021, with the Dams continuing to discharge pollutants to the Columbia River without NPDES permits in violation of the CWA. With this

[1] The terms "Dam" and "Dams" as used herein includes the Dam(s) and all associated structures and facilities, including turbines, powerhouses, transformers, spillways, navigation lock systems, fish passage facilities, and cranes.

action, Columbia Riverkeeper seeks to finally bring the Dams into compliance with the CWA.

5. Columbia Riverkeeper brings this civil action for declaratory and injunctive relief to compel defendants the United States Army Corps of Engineers and Lieutenant General Scott A. Spellmon, in his official capacity as the Commanding General and Chief of Engineers of the United States Army Corps of Engineers (collectively, "Corps"), to comply with sections 301(a) and 402 of the CWA, 33 U.S.C. §§ 1311(a) and 1342, by discontinuing unpermitted discharges of pollutants from the Dams to the Columbia River unless and until the Corps obtains NPDES permits authorizing the discharges.

6. This action is a citizen suit brought under section 505 of the CWA as amended, 33 U.S.C. § 1365.

7. The Corps owns and operates the hydroelectric Dams on the Columbia River that discharge pollutants, including oils, greases, other lubricants, and cooling water and the heat associated therewith. These discharges are not authorized by NPDES permits, and therefore violate section 301(a) of the CWA, 33 U.S.C. § 1311(a).

8. Columbia Riverkeeper seeks a declaratory judgment, injunctive relief, and the award of costs, including attorneys' and expert witnesses' fees.

II. JURISDICTION AND VENUE.

9. The Court has subject matter jurisdiction over Columbia Riverkeeper's claims under section 505(a) of the CWA, 33 U.S.C. § 1365(a), 28 U.S.C. § 1331 (federal question), and 28 U.S.C. § 1346(a)(2) (United States as Defendant). Section 505(a) and (d) of the CWA, 33 U.S.C. § 1365(a) and (d), authorizes the requested relief. The requested relief is also proper under 28 U.S.C. § 2201 (declaratory relief) and 28 U.S.C. § 2202 (injunctive relief).

10. Section 505(a) of the CWA, 33 U.S.C. § 1365(a), waives the Corps' sovereign immunity for Columbia Riverkeeper's claims.

11. In accordance with section 505(b)(1)(A) of the CWA, 33 U.S.C. § 1365(b)(1)(A), and 40 C.F.R. § 135.2, Columbia Riverkeeper notified the Corps of its CWA violations and of Columbia Riverkeeper's intent to sue by letter dated August 31, 2021 ("Notice Letter"). A copy of the Notice Letter is attached to this complaint as Exhibit 1. In accordance with section 505(b)(1)(A) of the CWA, 33 U.S.C. § 1365(b)(1)(A), and 40 C.F.R. § 135.2(a)(3), Columbia Riverkeeper provided copies of the Notice Letter to the Administrator of the United States Environmental Protection Agency ("EPA"), the Regional Administrator of Region 10 of the EPA, the Attorney General of the United States, and the Director of the Washington Department of Ecology ("Ecology").

12. At the time of filing this complaint, more than sixty days have passed since the Notice Letter and the copies thereof were issued as described in the preceding paragraph.

13. Neither the EPA nor Ecology has commenced any action constituting diligent prosecution to redress these violations.

14. The violations complained of in the Notice Letter are continuing or are reasonably likely to continue to occur. The Corps is in violation of the CWA.

15. The sources of the violations complained of are located in Klickitat County and Benton County, Washington, within the Eastern District of Washington, and venue is therefore appropriate in the Eastern District of Washington under section 505(c)(1) of the CWA, 33 U.S.C. § 1365(c)(1).[2]

III. PARTIES.

16. Plaintiff Columbia Riverkeeper is suing on behalf of itself and its members. Columbia Riverkeeper is a 501(c)(3) non-profit corporation registered in

[2] John Day Dam and McNary Dam also discharge pollutants to waters within Sherman County, Oregon and Umatilla County, Oregon, respectively. Those discharges are not the subject of this complaint but are the subject of a separate complaint being filed by Columbia Riverkeeper in the District Court for the District of Oregon.

the State of Washington. Columbia Riverkeeper's mission is to restore and protect the water quality of the Columbia River and all life connected to it, from the headwaters to the Pacific Ocean. To achieve these objectives, Columbia Riverkeeper operates scientific, educational, and legal programs aimed at protecting water quality, air quality, and habitat in the Columbia River Basin.

17. Columbia Riverkeeper has representational standing to bring this action. Columbia Riverkeeper has over 16,000 members, many of which reside in Washington near waters affected by the Corps' illegal discharges of pollutants. Members of Columbia Riverkeeper use and enjoy the waters and the surrounding areas that are adversely affected by the Corps' discharges. Columbia Riverkeeper's members use these areas for, *inter alia*, fishing, rafting, hiking, walking, windsurfing, photographing, boating, and observing wildlife. The environmental, health, aesthetic, and recreational interests of Columbia Riverkeeper's members have been, are being, and will be adversely affected by the Corps' illegal discharges of pollutants from the Dams and by the members' reasonable concerns related to the effects of the discharges. The members are further concerned that, because these discharges are not subject to NPDES permits as required by the CWA, there are not sufficient restrictions imposed on, and monitoring and reporting of, the discharges to minimize the adverse water quality impacts of the

discharges. These injuries are fairly traceable to the violations and redressable by the Court.

18. Columbia Riverkeeper has organizational standing to bring this action. Columbia Riverkeeper has been actively engaged in a variety of educational and advocacy efforts to improve water quality and to address sources of water quality degradation in the waters of the Columbia River and its tributaries, including the Snake River. The Corps' failure to obtain NPDES permits for its discharges has deprived Columbia Riverkeeper of information that would be required by the permits' monitoring and reporting conditions and available to Columbia Riverkeeper. This information could assist Columbia Riverkeeper in its efforts to educate and advocate for greater environmental protection. Thus, Columbia Riverkeeper's organizational interests have been adversely affected by the Corps' violations. These injuries are fairly traceable to the violations and redressable by the Court.

19. Defendant United States Army Corps of Engineers is a federal agency within the Department of Defense. The United States Army Corps of Engineers owns and operates the Dams that are the subject of this complaint.

20. Defendant Lieutenant General Scott A. Spellmon is the Commanding General and Chief of Engineers of the United States Army Corps of Engineers. Lieutenant General Spellmon is being sued in his official capacity. As the

Commanding General and Chief of Engineers, Lieutenant General Spellmon is responsible for ensuring the United States Army Corps of Engineers complies with applicable laws.

IV. LEGAL FRAMEWORK.

21. Section 301(a) of the CWA, 33 U.S.C. § 1311(a), makes unlawful the discharge of any pollutant by any person unless authorized by, *inter alia*, a NPDES permit issued pursuant to section 402 of the CWA, 33 U.S.C. § 1342. *See also Comm. To Save Mokelumne River v. E. Bay Mun. Util. Dist.*, 13 F.3d 305, 309 (9th Cir. 1993) ("[T]he [CWA] categorically prohibits any discharge of a pollutant from a point source without a permit.").

22. Section 502(12) of the CWA, 33 U.S.C. § 1362(12), defines "discharge of a pollutant" to include "any addition of any pollutant to navigable waters from any point source."

23. Section 502(7) of the CWA, 33 U.S.C. § 1362(7), defines the term "navigable waters" as "the waters of the United States, including the territorial seas."

24. Section 502(14) of the CWA, 33 U.S.C. § 1362(14), defines "point source" as "any discernible, confined and discrete conveyance, including but not limited to any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container,

rolling stock, concentrated animal feeding operation, or vessel or other floating craft, from which pollutants are or may be discharged."

25. NPDES permits transform generally applicable standards into facility-specific effluent limits. *Env't Prot. Agency v. Nat'l Crushed Stone Ass'n*, 449 U.S. 64, 71 (1980) (quoting *Env't Prot. Agency v. Cal. ex rel. State Water Res. Control Bd.*, 426 U.S. 200, 205 (1976)). NPDES permits may include two types of effluent limits—technology-based standards and, where discharges may contribute to violations of water quality standards in the receiving water, more stringent water quality-based standards designed to ensure that water quality standards are met. 40 C.F.R. § 122.44(a)(1), (d); *see also* 33 U.S.C. § 1311(b)(1)(C); *Nat. Res. Def. Council v. U.S. Env't Prot. Agency*, 915 F.2d 1314, 1316–17 (9th Cir. 1990); *Defs. of Wildlife v. Browner*, 191 F.3d 1159, 1163 (9th Cir. 1999), *amended on other grounds by*, 197 F.3d 1035 (9th Cir. 1999).

26. NPDES permits must also include monitoring and reporting requirements sufficient to confirm the permittee is in compliance with effluent limitations. 40 C.F.R. § 122.48(b); *Food & Water Watch v. U.S. Env't Prot. Agency*, 13 F.4th 896, 904–05 (9th Cir. 2021).

27. Section 303 of the CWA requires the establishment of water quality standards. *See* 33 U.S.C. § 1313(a)–(c). "A water quality standard defines the water quality goals of a water body, or portion thereof, by designating the use or

uses to be made of the water and by setting criteria that protect the designated uses." 40 C.F.R. § 131.2. These standards serve "dual purposes" under the CWA: (1) they set the water quality goals for a specific body of water and thereby provide a reference against which to determine whether the water body is meeting applicable standards; and (2) they serve as the regulatory basis for the establishment of water-quality-based restrictions. *See id.* "[W]ater quality standards should, wherever attainable, provide water quality for the protection and propagation of fish . . . ." *Id.*

28. Section 303(d) of the CWA, 33 U.S.C. § 1313(d), requires that each state identify water bodies within its boundaries that do not meet water quality standards—the result is the "303(d) list." *See* 33 U.S.C. § 1313(d); *Friends of Pinto Creek v. U.S. Env't Prot. Agency*, 504 F.3d 1007, 1011 (9th Cir. 2007). For such "impaired waters," the state is required to submit to EPA a total maximum daily load ("TMDL") that specifies the amount of pollution that can be discharged from each source, referred to as wasteload allocations, while still achieving water quality standards. *See* 33 U.S.C. § 1313(d)(1)(C), (d)(2); *Friends of Pinto Creek*, 504 F.3d at 1011. If the state fails to submit a TMDL to EPA or if EPA rejects the TMDL, then EPA must itself prepare the TMDL. *See* 33 U.S.C. § 1313(d)(2).

29. Water quality standards and TMDLs are not self-implementing, but instead serve as the basis for setting water-quality-based effluent limitations. *See*

40 C.F.R. § 131.2; *Idaho Sportsmen's Coal. v. Browner*, 951 F. Supp. 962, 965–66 (W.D. Wash. 1996); *Anacostia Riverkeeper, Inc. v. Jackson*, 798 F. Supp. 2d 210, 216–17 (D.D.C. 2011).

30. Section 401 of the CWA, 33 U.S.C. § 1341, requires that any applicant for a federal license or permit seeking to conduct an activity that may result in discharges to waters to obtain a certification from the state in which the discharge will occur. *See PUD No. 1 of Jefferson Cnty. v. Wash. Dep't of Ecology*, 511 U.S. 700, 707–08 (1994); 33 U.S.C. § 1341(a).

31. The state certification issued under section 401 of the CWA, 33 U.S.C. § 1341, must "set forth any effluent limitations and other limitations . . . necessary to assure that any applicant for a Federal license or permit will comply with any applicable effluent limitations and other limitations, under [various provisions of the CWA], and with any other appropriate requirement of State law set forth in such certification . . . ." 33 U.S.C. § 1341(d). The limitations and other requirements of the state's CWA section 401 certification become conditions of the Federal license or permit. *Id.*

V. FACTUAL BACKGROUD.

A. <u>The Affected Community & Environment</u>.

32. In 2006, EPA designated the Columbia River Basin a Critical Large Aquatic Ecosystem because toxic contamination and other pollution are so severe.

In 2009, EPA released an in-depth report on toxic pollution in the Columbia, the *Columbia River Basin: State of River Report for Toxics*.[3] EPA's report concluded that harmful pollutants are moving up the food chain, impacting humans, fish, and wildlife. As the report explains, "[i]n 1992, an EPA national survey of contaminants in fish in the United States alerted EPA and others to a potential health threat to tribal and other people who eat fish from the Columbia River Basin."[4] This survey prompted further study on the contaminated fish and the potential impacts on tribal members.

33. In particular, EPA funded four Columbia River tribes, through the Columbia River Inter-Tribal Fish Commission ("CRITFC"), to study contaminant levels in fish caught at traditional fishing sites.[5] The study demonstrated the presence of 92 toxic chemicals in fish consumed by tribal members, resulting in a 50-fold increase in cancer risk among tribal members whose diets rely on river-

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[3] U.S. ENV'T PROT. AGENCY, COLUMBIA RIVER BASIN STATE OF RIVER REPORT FOR TOXICS (2009), https://www.epa.gov/sites/default/files/documents/ columbia_ state_of_the_river_report_jan2009.pdf [hereinafter STATE OF THE RIVER REPORT].

[4] *Id.* at 4.

[5] *Id.*

caught fish.[6] Contaminants found in these fish include PCBs, dioxins, furans, arsenic, mercury, and DDE, a toxic breakdown product of DDT.[7]

34. The CRITFC study is not alone in demonstrating the serious problem of toxic contamination. From 1989 to 1995, the Lower Columbia River Bi-State Water Quality Program ("Bi-State Program") generated substantial evidence showing that water and sediment in the Lower Columbia River and its tributaries have levels of toxic contaminants that are harmful to fish and wildlife.[8] The Bi-State Program concluded that:

- Dioxins and furans, metals, PCBs, PAHs, and pesticides impair the water sediment, and fish and wildlife;

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[6] *Id.* at 5.

[7] *Id.* at 5.

[8] LOWER COLUMBIA RIVER ESTUARY PARTNERSHIP, LOWER COLUMBIA RIVER AND ESTUARY ECOSYSTEM MONITORING: WATER QUALITY AND SALMON SAMPLING REPORT 1 (2007), https://www.estuarypartnership.org/sites/default/files/resource_files/WaterSalmonReport.pdf.

- Arsenic, a human carcinogen, exceeded both EPA ambient water criteria for protection of human health and the EPA human health advisories for drinking water;
- Beneficial uses such as fishing, shellfishing, wildlife, and water sports are impaired;
- Many toxic contaminants are moving up the food chain and accumulating in the bodies of animals and humans that eat fish;
- People who eat fish from the lower Columbia over a long period of time are exposed to health risks from arsenic, PCBs, dioxins and furans, and DDT and its breakdown products.[9]

35. Other studies have confirmed and added to the overwhelming scientific evidence on toxic contamination in the Columbia River Basin.[10]

36. The pollution discharges that are the subject of this complaint contribute to the pollution crisis on the Columbia River. According to the National Oceanic & Atmospheric Administration ("NOAA"):

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[9] *Id.* at 5–6.

[10] *Id.* at 6 (citing studies by U.S. Geological Surv., the U.S. Army Corps of Engineers, Oregon Dept. of Env't Quality, and others); *see generally* STATE OF THE RIVER REPORT.

> Spilled oil can harm living things because its chemical constituents are poisonous. This can affect organisms both from internal exposure to oil through ingestion or inhalation and from external exposure through skin and eye irritation. Oil can also smother some small species of fish or invertebrates and coat feathers and fur, reducing birds' and mammals' ability to maintain their body temperatures.[11]

37. In addition to toxic pollution, the Dams that are the subject of this complaint cause and discharge significant heat pollution into the Columbia River. The Dam's heat pollution severely impacts threatened and endangered populations of salmon and steelhead in the Columbia River basin, as well as the tribal, recreational, and commercial fisheries and economies that Columbia River salmon and steelhead support.

38. Recognizing this problem, Ecology listed the lower Columbia River under section 303(d) of the CWA, 33 U.S.C. § 1313(d), as not meeting water quality standards for temperature needed to support salmon migration.

39. EPA completed a TMDL for the Columbia and Lower Snake Rivers on August 13, 2021. *See* Columbia and Lower Snake Rivers Temperature Total

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[11] NOAA, Office of Response and Restoration, *How Oil Harms Animals and Plants in Marine Environments,* http://response.restoration.noaa.gov/oil-and-chemical-spills/oil-spills/how-oil-harms-animals-and-plants-marine-environments.html.

Maximum Daily Load, EPA Region 10 (Aug. 13, 2021). EPA's TMDL concluded that hydroelectric dams on these rivers are a primary cause of heat pollution in the Columbia River. The TMDL assigns temperature/heat wasteload allocations to nine of the Corps' hydroelectric dams on the Columbia and Snake Rivers, including the Dams that are the subject of this complaint. As discussed above, such wasteload allocations included in a TMDL are not self-implementing but are instead implemented through NPDES permits issued under section 402 of the CWA, 33 U.S.C. § 1342, and/or certifications issued under section 401 of the CWA, 33 U.S.C. § 1341.

40. This last summer of 2021, as in previous years, heat pollution from the hydroelectric dams on the Columbia and Snake Rivers, including the Dams subject to this complaint, caused sockeye salmon to sicken and die prematurely in the Lower Columbia River rather than successfully migrating upstream to their spawning grounds.

41. The vicinity of the Dams subject to this complaint and the Columbia River are used by Washington citizens and visitors, as well as by Columbia Riverkeeper's members, for recreational activities, including boating, biking, fishing, and nature watching. Columbia Riverkeeper's members also derive aesthetic benefits from the receiving waters. Columbia Riverkeeper's members' enjoyment of these activities and waters is diminished by the polluted state of the

receiving waters, shorelines, air, the nearby areas, and by the Corps' contributions to such polluted state.

B. Columbia Riverkeeper's Prior Citizen Suit and the Corps' Response.

42. Columbia Riverkeeper filed three CWA citizen suits, which were subsequently consolidated, against the Corps in 2013 for unpermitted discharges of pollutants from eight hydroelectric dams on the Columbia and Snake Rivers, including the three Dams subject to this complaint. *See* E.D. Wash. No. 2:13-md-02494-LRS. The parties resolved that litigation with a settlement agreement, which the Court approved on August 14, 2014 ("Settlement Agreement"). *See* E.D. Wash. No. 2:13-md-02494-LRS, Settlement Agreement, Dkt. 40 (Aug. 14, 2014). Under the Settlement Agreement, the Corps agreed to seek the required NPDES permits and take other actions to reduce its water quality impacts. *See id.* at pp. 5–9. Columbia Riverkeeper agreed to refrain from further litigation related to the illegal discharges for a seven-year period to allow the Corps time to secure the necessary NPDES permits. *Id.* at pp. 10–11.

43. In 2015, the Corps submitted NPDES permit applications to EPA for the eight hydroelectric dams subject to the Settlement Agreement, including the Dams subject to this complaint; the Corps submitted supplemental application materials in 2018.

44. In March 2020, EPA issued draft NPDES permits for the eight hydroelectric dams subject to the Settlement Agreement, including the Dams subject to this complaint. EPA also requested that Ecology issue certifications under section 401 of the CWA, 33 U.S.C. § 1341, for those NPDES permits.

45. On May 7, 2020, Ecology issued final certifications under section 401 of the CWA, 33 U.S.C. § 1341, for EPA's NPDES permits for the eight hydroelectric dams subject to the Settlement Agreement, including the Dams subject to this complaint. Ecology's certifications require that the Corps' hydroelectric dams meet the temperature wasteload allocations set in the Columbia and Lower Snake Rivers Temperature TMDL.

46. In January 2021, EPA issued revised draft NPDES permits for the eight hydroelectric dams subject to the Settlement Agreement, including the Dams subject to this complaint. Those revised NPDES permits included limits to incorporate the wasteload allocations from the Columbia and Lower Snake Rivers Temperature TMDL, as required by Ecology in its certification issued under section 401 of the CWA, 33 U.S.C. § 1341.

47. On September 30, 2021, EPA issued final NPDES permits for four of the hydroelectric dams subject to the Settlement Agreement—Ice Harbor, Lower Monumental, Little Goose, and Lower Granite Dams. Those NPDES permits require that the Corps meet the wasteload allocations from the Columbia and

Lower Snake Rivers Temperature TMDL, as required by Ecology in its certification issued under section 401 of the CWA, 33 U.S.C. § 1341.

48. EPA has yet to issue final NPDES permits authorizing discharges of pollutants from the Dams subject to this complaint.

C. The Corps' Dams and Discharges of Pollutants.

49. The Corps owns and operates the hydroelectric Dams on the Columbia River.

50. The Dalles Dam is located on the Columbia River approximately two miles east of the city of The Dalles, Oregon. The Dalles Dam is located within Klickitat County, Washington. The discharges of pollutants to the Columbia River from The Dalles Dam that are the subject of this complaint are made to waters located within Klickitat County, Washington. The Columbia River is a navigable water body at the location of The Dalles Dam.

51. John Day Dam is located on the Columbia River near the city of Rufus, Oregon. John Day Dam is partially located within Klickitat County, Washington. The discharges of pollutants to the Columbia River from John Day Dam that are the subject of this complaint are made to waters located within

Klickitat County, Washington.[12] The Columbia River is a navigable water body at the location of the John Day Dam.

52. McNary Dam is located on the Columbia River near the city of Umatilla, Oregon. McNary Dam is partially located within Benton County, Washington. The discharges of pollutants to the Columbia River from McNary Dam that are the subject of this complaint are made to waters located within Benton County, Washington.[13] The Columbia River is a navigable water body at the location of the McNary Dam.

53. The Dams use Kaplan turbines, which have variable pitch blades that can be adjusted to increase efficiency. The shafts and hubs of these turbines are filled with oil or another lubricant. This oil or lubricant leaks to surface waters

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[12] The Corps also discharges pollutants to the Columbia River from John Day Dam to waters located within Sherman County, Oregon. Those discharges are not subject to this complaint but are the subject of a separate complaint being filed by Columbia Riverkeeper in the District Court for the District of Oregon.

[13] The Corps also discharges pollutants to the Columbia River from McNary Dam to waters located within Umatilla County, Oregon. Those discharges are not subject to this complaint but are the subject of a separate complaint being filed by Columbia Riverkeeper in the District Court for the District of Oregon.

from certain locations, including the turbine blade packing/seals, especially when the turbines are not properly maintained and/or operationally controlled. Available information indicates that the Corps has not properly maintained and/or operationally controlled the Kaplan turbines on the Dams in a manner to prevent or minimize discharges.

54. Upon information and belief, the Corps discharges oil or lubricant from each of the Kaplan turbines at the Dams each and every day. These discharges are not authorized by NPDES permits and violate the CWA. These violations of the CWA have occurred each and every day since August 14, 2021 and are continuing to occur or are reasonably likely to reoccur.

55. Wicket gates control the amount of water flowing through the turbines at the Dams. The wicket gate bearings are lubricated with grease or another lubricant. This grease or lubricant is fed continuously into the bearings and discharged into surface waters.

56. Upon information and belief, the Corps discharges grease or another lubricant from the bearings at each of the turbine wicket gates at the Dams each and every day. These discharges are not authorized by NPDES permits and violate the CWA. These violations of the CWA have occurred each and every day since August 14, 2021, and are continuing to occur or are reasonably likely to reoccur.

57. Upon information and belief, the Corps discharges oils, greases, lubricants, and other pollutants at the Dams collected from various sources through sumps, including powerhouse drainage sumps, un-watering sumps, spillway sumps, navigation lock sumps, and other systems. These discharges are not authorized by NPDES permits and violate the CWA. These violations of the CWA have occurred each and every day since August 14, 2021, that the Corps made the discharges and are continuing to occur or are reasonably likely to reoccur.

58. Upon information and belief, the Corps discharges cooling water, and the heat associated therewith, at the Dams that has been used to cool a variety of Dam components and materials, including turbines, generators, transformers, and lubricating oils. These discharges are not authorized by NPDES permits and violate the CWA. These violations of the CWA have occurred each and every day since August 14, 2021, and are continuing to occur or are reasonably likely to reoccur.

59. Upon information and belief, the Corps also discharges oils, greases, lubricants, and other pollutants from the Dams due to spills, equipment failures, operator errors, turbine start-ups, and other similar events. These discharges are not authorized by NPDES permits and violate the CWA. These violations of the CWA have occurred each and every day since August 14, 2021, that the Corp discharged pollutants due to spills, equipment failures, operator errors, turbine start-ups, and

other similar events. Discharges of this nature at the Dams are continuing to occur or are reasonably likely to reoccur.

60. The discharges from the Dams described herein are discharges of pollutants to navigable waters from point sources that violate section 301(a) of the CWA, 33 U.S.C. § 1311(a), if made without the authorization of a NPDES permit.

61. The Corps' violations of the CWA are likely to recur even if the Corps secures NPDES permits for discharges from the Dams. Notably, the Corps has an extensive history of CWA violations at the Dams due to its initial refusal to apply for the necessary NPDES permits, followed by repeated and extended delays in the permitting process which, upon information and belief, are partially attributable to the Corps' conduct. Any NPDES permits issued for discharges from the Dams will be effective for only five years. *See* 33 U.S.C. § 1342(a)(3), (b)(1)(B).

62. In accordance with section 505(c)(3) of the CWA, 33 U.S.C. § 1365(c)(3), and 40 C.F.R. § 135.4, plaintiff Columbia Riverkeeper will mail either filed, date-stamped copies or conformed copies of this complaint after it is filed to the Administrator of the EPA, the Regional Administrator for Region 10 of the EPA, and the Attorney General of the United States.

VI. CAUSE OF ACTION.

63. Columbia Riverkeeper realleges and incorporates by reference each and every allegation set forth in the paragraphs above.

64. The Corps is in violation of section 301(a) of the CWA, 33 U.S.C. § 1311(a), by discharging pollutants to navigable waters from the Dams as described herein without NPDES permits. These violations are violations of an "effluent standard or limitation" as defined by section 505(f) of the CWA, 33 U.S.C. § 1365(f).

65. On information and belief, these violations committed by the Corps are continuing or are reasonably likely to reoccur. Any and all additional violations of the CWA which occur after those described in the Notice Letter but before a final decision in this action should be considered continuing violations subject to this complaint.

VII. RELIEF REQUESTED.

Wherefore, Columbia Riverkeeper respectfully requests that this Court grant the following relief:

A. Issue a declaratory judgment that the Corps has violated and continues to be in violation of section 301(a) of the CWA, 33 U.S.C. § 1311(a), by discharging pollutants from the Dams to the Columbia River without the authorization of NPDES permits as described herein;

B. Issue an injunction enjoining the Corps from discharging pollutants from the Dams to the Columbia River as described herein until such discharges are authorized by NPDES permits;

C. Issue an injunction requiring the Corps to take specific actions to evaluate and remediate the environmental harm caused by its violations;

D. Issue declaratory and/or injunctive relief warranted to insure that, if the Corps secures NPDES permits for discharges from the Dams, the Corps' CWA violations at the Dams will not recur;

E. Grant such other preliminary and/or permanent injunctive relief as Columbia Riverkeeper may from time to time request during the pendency of this case;

F. Award Columbia Riverkeeper its litigation expenses, including reasonable attorneys' and expert witness fees, as authorized by section 505(d) of the CWA, 33 U.S.C. § 1365(d), and any other applicable authorizations; and

G. Grant such additional relief as this Court deems appropriate.

RESPECTFULLY SUBMITTED this 8th day of December 2021.

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EXHIBIT 1

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August 31, 2021

Via CERTIFIED MAIL – Return Receipt Requested
Lieutenant General Scott A. Spellmon
Commanding General & Chief of Engineers
U.S. Army Corps of Engineers
441 G Street N.W.
Washington, D.C. 20314-1000

Re: NOTICE OF INTENT TO SUE THE U.S. ARMY CORPS OF ENGINEERS AND LIEUTENANT GENERAL SCOTT A. SPELLMON UNDER THE CLEAN WATER ACT

Dear Lieutenant General Scott A. Spellmon:

This letter is to provide you with sixty days notice of Columbia Riverkeeper's ("Riverkeeper") intent to file suit against the United States Army Corps of Engineers and Lieutenant General Scott A. Spellmon in his official capacity as the Commanding General and Chief of Engineers of the United States Army Corps of Engineers (collectively, the "Corps") under section 505 of the Clean Water Act ("CWA"), 33 U.S.C. § 1365, for the violations described herein. The CWA prohibits any person from discharging any pollutant to waters of the United States except as authorized by a National Pollutant Discharge Elimination System ("NPDES") permit. Continuing to discharge a pollutant without securing an NPDES permit constitutes an ongoing violation of the CWA.

The Corps has and continues to violate section 301(a) of the CWA, 33 U.S.C. § 1311(a), by discharging pollutants to waters of the United States and to waters of the States of Washington and Oregon from the following Columbia River and Snake River dams and their associated structures and facilities: Bonneville Dam, The Dalles Dam, John Day Dam, McNary Dam, Ice Harbor Dam, Lower Monumental Dam, Little Goose Dam, and Lower Granite Dam (collectively, the "Dams").[1] Specifically, the Corps discharges oils (including transformer and turbine oils), greases, and other lubricants from the Dams without the authorization of

[1] The term "Dam(s)," as used herein, includes the Dam(s) and all associated structures and facilities, including turbines, powerhouses, transformers, spillways, navigation lock systems, fish passage facilities, and cranes. The approximate locations of the Dams are identified in the Appendix attached hereto.

NPDES permits in violation of the CWA.[2] The Dams also discharges heat—through cooling water and due to reservoir heating—to a river system recognized by the United States Environmental Protection Agency ("EPA") as too warm to support designated uses, including salmon habitat.

The Corps has a history of both acute spills and chronic leaks of pollutants into the Columbia River and Snake River, in addition to continuous and regular pollutant discharges. For example, the Corps estimated that in 2017 approximately 1,561 gallons of turbine oil leaked from the Lower Monumental Dam and approximately 720 gallons leaked from Ice Harbor Dam. The Corps reported that around 500 gallons of hydraulic oil was discharged at the Bonneville Dam on March 15, 2020. In 2011 and 2012, the Corps reported discharging over 1,500 gallons of PCB-laden transformer oil at the Ice Harbor Dam on the Snake River. That oil contained PCBs at levels 14,000,000% greater than state and federal chronic water quality standards. According to EPA, PCBs cause cancer, as well as a variety of other adverse health effects on the immune system, reproductive system, nervous system, and endocrine system.[3] These discharges are not isolated problems. As this notice of intent to sue explains, the Corps has a history of discharging oil and other pollution from the Dams without NPDES permits.

This notice of intent to sue is part of Riverkeeper's effort to protect people who rely on the Columbia and Snake Rivers for uses including drinking water, food, and recreation. Riverkeeper's mission is to protect and restore the water quality of the Columbia River and all life connected to it, from the headwaters to the Pacific Ocean. The organization's strategy for protecting the Columbia River and its tributaries includes working in river communities and enforcing laws that protect public health, salmon, and other fish and wildlife.

I. Legal Background.

Oregon and Washington's rivers, and the use of rivers by people, fish, and wildlife, are protected by both federal and state law. In 1972, Congress passed the CWA to "restore and maintain the chemical, physical, and biological integrity of the Nation's waters." 33 U.S.C. § 1251(a). The CWA is the cornerstone of surface water quality protection in the United States. In the nearly fifty years since its passage, the CWA has dramatically increased the number of waterways that are once again safe for fishing and swimming.

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[2] As explained below, the Corps has obtained one NPDES permit for certain oil pollution discharges from one of the Dams. Specifically, the Corps is authorized by the Oregon Department of Environmental Quality to discharge pollution from the oil water separator at Powerhouse 1 at the Bonneville Dam under NPDES Permit No. 102768, EPA Reference No. OR003435-5. The Corps has also secured NPDES permits for certain sewage wastewater discharges. *See* NPDES Permit EPA Reference Nos. OR0022624, WA0026701, WA0022110, and WA0022101. Such discharges are not subject to this notice letter.

[3] U.S. EPA, Basic Information: Polychlorinated Biphenols, https://web-ded.uta.edu/cedwebfiles/eti/OP_Fact_Sheet/TSCA/Sources%20of%20PCBs.pdf.

Despite the great progress in reducing water pollution, many of the Nation's waters still do not meet water quality goals. In fact, the vast majority of rivers and streams in Washington and Oregon fail to meet basic state water quality standards for pollutants such as toxics and temperature.[4] These standards are designed to protect designated uses, including aquatic life, fishing, swimming, and drinking water.

The NPDES permitting program is the primary means by which discharges of pollutants are controlled. At a minimum, NPDES permits must include technology-based effluent limitations, any more-stringent limitations necessary to meet water quality standards, and monitoring and reporting requirements. *See* 33 U.S.C. §§ 1311, 1342, 1318. EPA, and the states of Oregon and Washington, administer hundreds of permits for pollution discharges into the Columbia and Snake Rivers. These include permits that regulate the discharge of toxic pollution, hot water, bacteria, and other pollutants. According to EPA, improvements to the quality of water in our rivers are directly linked to the implementation of the NPDES program and the control of pollutants discharged from both municipal and industrial point sources.[5]

II. The Heavy Toll of Pollution on the Columbia and Snake Rivers.

The Columbia and Snake Rivers are two of the West's great river systems. These rivers support rich fishing traditions, provide water for communities and agriculture, support recreation opportunities, and power hydroelectric dams. The rivers are also severely degraded by pollution. Toxic pollution threatens the health of people that eat resident fish and jeopardizes the public's right to eat fish caught locally. Rising water temperatures also threaten the health of salmon and other aquatic life that rely on cool water for survival.

In 2006, EPA designated the Columbia River Basin, which includes the Snake River, as a Critical Large Aquatic Ecosystem because toxic contamination and other pollution are so severe. In 2009, EPA released an in-depth report on toxic pollution in the Columbia, the *Columbia River Basin: State of River Report for Toxics*.[6] EPA's report concluded that harmful pollutants are moving up the food chain, impacting humans, fish, and wildlife. As the report explains, "[i]n 1992, an EPA national survey of contaminants in fish in the United States alerted EPA and others to a potential health threat to tribal and other people who eat fish from the Columbia River Basin." This survey prompted further study on the contaminated fish and the potential impacts on tribal members.

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[4] *See* State of Washington 303(d) available at: https://ecology.wa.gov/Water-Shorelines/Water-quality/Water-improvement/Assessment-of-state-waters-303d; State of Oregon 303(d) available at: https://www.oregon.gov/deq/wq/Pages/WQ-Assessment.aspx.

[5] U.S. EPA, *Water Permitting 101* at 11, https://www3.epa.gov/npdes/pubs/101pape.pdf.

[6] U.S. EPA, *Columbia River Basin State of River Report for Toxics* (hereafter *State of the River Report*) (January 2009), available at https://www.epa.gov/columbiariver/columbia-river-basin-state-river-report-toxics-january-2009.

In particular, EPA funded four Columbia River tribes, through the Columbia River Intertribal Fish Commission ("CRITFC"), to study contaminant levels in fish caught at traditional fishing sites.[7] The study demonstrated the presence of 92 toxic chemicals in fish consumed by tribal members, resulting in a 50-fold increase in cancer risk among tribal members whose diets rely on river-caught fish. Contaminants found in these fish include PCBs, dioxins, furans, arsenic, mercury, and DDE, a toxic breakdown product of DDT.[8]

The CRITFC study is not alone in demonstrating the serious problem of toxic contamination. From 1989 to 1995, the Lower Columbia River Bi-State Water Quality Program ("Bi-State Program") generated substantial evidence demonstrating that water and sediment in the Lower Columbia River and its tributaries have levels of toxic contaminants that are harmful to fish and wildlife.[9] The Bi-State Program concluded that:

- Dioxins and furans, metals, PCBs, PAHs, and pesticides impair the water sediment, and fish and wildlife;
- Arsenic, a human carcinogen, exceeded both EPA ambient water criteria for protection of human health and the EPA human health advisories for drinking water;
- Beneficial uses such as fishing, shellfishing, wildlife, and water sports are impaired;
- Many toxic contaminants are moving up the food chain and accumulating in the bodies of animals and humans that eat fish; and
- People who eat fish from the lower Columbia over a long period of time are exposed to health risks from arsenic, PCBs, dioxins and furans, and DDT and its breakdown products.[10]

Other studies have confirmed and added to the overwhelming scientific evidence on toxic contamination in the Columbia River Basin.[11] Pollution discharges from the Corps' Dams contribute to the pollution crisis on the Columbia and Snake Rivers. According to the National Oceanic & Atmospheric Administration's ("NOAA"):

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[7] *State of the River Report* at 4.

[8] *Id.* at 19.

[9] Lower Columbia River Estuary Partnership. 2007. *Lower Columbia River and Estuary Ecosystem Monitoring: Water Quality and Salmon Sampling Report* at 1.

[10] *Id.* at 5 - 6.

[11] *Id.* at 6 (citing studies by USGS, the U.S. Army Corps of Engineers, DEQ, and others); *see generally* U.S. EPA, *State of the River Report*.

> Spilled oil can harm living things because its chemical constituents are poisonous. This can affect organisms both from internal exposure to oil through ingestion or inhalation and from external exposure through skin and eye irritation. Oil can also smother some small species of fish or invertebrates and coat feathers and fur, reducing birds' and mammals' ability to maintain their body temperatures.[12]

The impacts of oil pollution are sobering. Yet the Corps discharges oil and other pollution from the Dams without the NPDES permit authorizations required by the CWA. In turn, the Corps fails to monitor and report pollution in a manner that enables the public to fully understand the extent and severity of the problem.

The Dams also discharge heat in the form of cooling water and due to reservoir hearing to a river system recognized by EPA as too warm to support designated uses, including salmon habitat. Salmon need cool water to survive. Nearly two decades ago, federal scientists declared the Columbia River too hot for healthy salmon runs. Hot water pollution from point sources, including the Dams, contributes to elevated water temperatures in the Columbia River. Specifically, the Corps uses water to cool a variety of Dam components and materials, including turbines, generators, transformers, and lubricating oils. The Dams also create reservoirs that absorb excess heat from the sun. The Corps discharges this cooling water and heated reservoir water directly to the Columbia and Snake Rivers.

The devastating impact of hot water pollution on the Columbia River is not hypothetical. Northwest rivers had unreasonably high temperatures in summer 2015, warm enough to kill thousands of migrating sockeye salmon headed to the mid-Columbia and lower Snake Rivers. Scientists estimate that more than 277,000 sockeye, about 55 percent of the total run, returning from the ocean to spawn died in the Columbia and Snake Rivers due to warm water temperatures in 2015. Federal scientists warned that 2021 could be even worse.[13] According to EPA's recent total maximum daily load analysis of temperature pollution (hereinafter, the "temperature TMDL"), the Corps' Dams are the worst sources of heat pollution in the Columbia and Snake rivers.[14] The Corps' Dams routinely cause and contribute to violations of water quality standards that were developed by EPA[15] to protect salmon from hot water.

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[12] NOAA, Office of Response and Restoration, *How Oil Harms Animals and Plants in Marine Environments,* https://response.restoration.noaa.gov/oil-and-chemical-spills/oil-spills/how-oil-harms-animals-and-plants-marine-environments.html.

[13] Rocky Barker, Idaho Statesman, *'This is worse' than 2015: Northwest weather heats rivers, puts Idaho sockeye in danger* (July 1, 2021).

[14] U.S. EPA, *Columbia and Lower Snake River Temperature TMDL*, pp. 47–50 (May 18, 2020).

[15] U.S. EPA, *Issue Paper 5: Summary of Technical Literature Examining the Physiological Effects of Temperature on Salmonids* (2001).

III. Unpermitted Pollutant Discharges from the Dams.

Section 301(a) of the CWA prohibits discharges of oils (including transformer and turbine oils), greases, lubricants, heat associated with cooling water and due to reservoir heating, and other pollutants to the Columbia and Snake Rivers from the Dams without NPDES permit authorization. 33 U.S.C. § 1311(a). Without NPDES permits, the Corps is failing to monitor, report, and reduce pollution discharges pursuant to the CWA and state and federal implementing rules.

The Dams utilize Kaplan turbines, which have variable pitch blades that can be adjusted to increase efficiency. The shaft and hubs of these turbines are filled with turbine oil or another substance. This oil or lubricant leaks to surface waters from certain locations, including the turbine blade packing/seals, especially when the turbines are not properly maintained and/or operationally controlled. Available information indicates that the Corps has not properly maintained and/or operationally controlled the Kaplan turbines on the Dams in a manner to prevent or minimize discharges. Accordingly, based upon such information, the Corps is in violation of section 301(a) of the CWA by discharging oil or lubricant from each of the Kaplan turbines at the Dams each and every day.

Wicket gates control the amount of water flowing through the turbines at the Dams. The wicket gate bearings are lubricated with grease or another lubricant. This grease or lubricant is continuously fed into the bearings and discharged into surface waters. The Corps is in violation of section 301(a) of the CWA by discharging grease or lubricant from the bearings at each of the turbine wicket gates at the Dams each and every day.

The Dams discharge oils, greases, lubricants, and other pollutants collected from various sources through sumps, including powerhouse drainage sumps, un-watering sumps, spillway sumps, navigation lock sumps, and other systems. Of these pollutant discharges, only those from the oil water separator at Powerhouse 1 at the Bonneville Dam are authorized by a NPDES permit. The Corps is in violation of section 301(a) of the CWA by discharging pollutants from these various drainage and/or un-watering sumps and other systems at the Dams. These violations have occurred and continue to occur each and every time the Corps made these discharges. Discharges from the oil water separator at Powerhouse 1 at the Bonneville Dam authorized by NPDES Permit No. 102768 are excluded from this assertion.

The Dams discharge cooling water, and the heat associated therewith, that has been used to cool a variety of Dam components and materials, including turbines, generators, transformers, and lubricating oils. The Corps is in violation of section 301(a) of the CWA by discharging cooling water, and the associated heat, from the Dams each and every day.

The Dams discharge heat generated through reservoir heating. The Dams create reservoirs with surface areas that are significantly larger than would otherwise occur at the river; these reservoirs soak up heat from the sun. That excess heat is discharged to the Columbia and Snake Rivers from the Dams, including from the Dams' turbines, tailraces, and spillways. The

Corps is in violation of section 301(a) of the CWA by discharging this heat from the Dams each and every day.

The Corps violates section 301(a) of the CWA every time it discharges oil, a lubricant, or other pollutants as a result of machinery, equipment, or structural failure or due to operational errors. These violations occur each and every day that such discharge events occur.

Riverkeeper and the Corps entered into a settlement agreement in 2014 to resolve a CWA citizen suit alleging that the Corps is discharging pollutants from the Dams without NPDES permits in violation of section 301(a) of the CWA. As part of that settlement, the Corps committed to seeking NPDES permits for the Dams and Riverkeeper agreed to not sue the Corps for unpermitted discharges for a period of seven years. The Court approved that settlement agreement, thereby making it effective, on August 14, 2014. In accordance with that agreement, Riverkeeper provides notice of its intent to sue the Corps for the unpermitted discharges from the Dams described above that have occurred since August 14, 2021; Riverkeeper does not intend to sue for discharges that occurred on or before that date.

IV. Party Giving Notice of Intent to Sue.

The full name, address, and telephone number of the party giving notice is:

Columbia Riverkeeper
407 Portway Ave., Suite 301
Hood River, OR 97031
(541) 387-3030

V. Attorneys Representing Riverkeeper.

The attorneys representing Riverkeeper in this matter are:

Brian A. Knutsen
Kampmeier & Knutsen, PLLC
1300 SE Stark Street, Suite 202
Portland, OR 97214
(503) 841-6515
brian@kampmeierknutsen.com

Miles Johnson, Senior Attorney
Columbia Riverkeeper
407 Portway Ave., Suite 301
Hood River, OR 97031
(541) 490-0487
miles@columbiariverkeeper.org

VI. Conclusion.

The violations described herein reflect those indicated by the information currently available to Riverkeeper. Riverkeeper intends to sue for all violations, including those yet to be uncovered and those committed after the date of this notice of intent to sue.

Riverkeeper intends to seek injunctive relief to prevent further violations under sections 505(a) and (d) of the CWA, 33 U.S.C. § 1365(a) and (d), and such other relief as is permitted by

law. Columbia Riverkeeper further intends to seek recovery of its litigation expenses as authorized by section 505(d) of the CWA, 33 U.S.C. § 1365(d).

Riverkeeper believes that this notice of intent to sue sufficiently states grounds for filing suit. Riverkeeper intends to file one or more citizen suits against the United States Army Corps of Engineers and Lieutenant General Scott A. Spellmon in his official capacity as the Commanding General and Chief of Engineers of the United States Army Corps of Engineers under section 505(a) of the CWA, 33 U.S.C. § 1365(a), for violations at the expiration of the sixty-day notice period or shortly thereafter.

Riverkeeper is willing to discuss effective remedies for the violations addressed in this letter and appropriate settlement terms during the sixty-day notice period. Riverkeeper does not intend to delay initiating litigation if discussions are continuing when the notice period ends. Please direct all correspondence to Brian A. Knutsen at (503) 841-6515 or brian@kampmeierknutsen.com.

Very truly yours,

KAMPMEIER & KNUTSEN, PLLC

By: _____
Brian A. Knutsen

cc. Miles Johnson, Columbia Riverkeeper Senior Attorney (email only)
Mark A. Nitczynski, U.S. Department of Justice (email only)

CERTIFICATE OF SERVICE

I, Brian A. Knutsen, declare under penalty of perjury of the laws of the United States that I am counsel for Columbia Riverkeeper and that on August 31, 2021, I caused copies of the foregoing Notice of Intent to Sue U.S. Army Corps of Engineers and Lieutenant General Scott A. Spellmon Under the Clean Water Act to be served on the following by depositing them with the United States Postal Service, certified mail, return receipt requested, postage prepaid:

Lieutenant General Scott A. Spellmon
Commanding General & Chief of Engineers
U.S. Army Corps of Engineers
441 G Street N.W.
Washington, D.C. 20314-1000

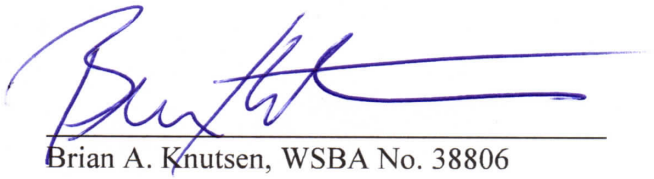
Administrator Michael S. Regan
U.S. Environmental Protection Agency
William Jefferson Clinton Building
1200 Pennsylvania Ave., N.W.
(Mail Code 1101A)
Washington DC 20460

Attorney General Merrick B. Garland
U.S. Department of Justice
950 Pennsylvania Avenue, N.W.
Washington, D.C. 20530-0001

Acting Regional Administrator Michelle Pirzadeh
U.S. Environmental Protection Agency, Region 10
1200 Sixth Avenue, Suite 155
Seattle, WA 98101

Director Laura Watson
Washington Department of Ecology
P.O. Box 47600
Olympia, WA 98504-7600

Director Richard Whitman
Oregon Department of Environmental Quality
700 NE Multnomah Street, Suite 600
Portland, OR 97232-4100



Brian A. Knutsen, WSBA No. 38806

APPENDIX

APPROXIMATE LOCATIONS OF THE DAMS

BONNEVILLE DAM
Latitude: 45°38’39” N
Longitude: 121°56’26” W

THE DALLES DAM
Latitude: 45°36’51” N
Longitude: 121°08’03” W

JOHN DAY DAM
Latitude: 45°42’59” N
Longitude: 120°41’37” W

McNARY DAM
Latitude: 45°56’08” N
Longitude: 119°17’53” W

ICE HARBOR DAM
Latitude: 46°14’58” N
Longitude: 118°52’47” W

LOWER MONUMENTAL DAM
Latitude: 46°33’46” N
Longitude: 118°32’18” W

LITTLE GOOSE DAM
Latitude: 46°35’05” N
Longitude: 118°01’38” W

LOWER GRANITE DAM
Latitude: 46°39’33” N
Longitude: 117°25’47” W