KRISTEN L. BOYLES (CSBA # 158450)
PATTI A. GOLDMAN (WSBA # 24426)
[Pro Hac Vice Admission Pending]
ASHLEY BENNETT (WSBA # 53748)
[Pro Hac Vice Admission Pending]
Earthjustice
705 Second Avenue, Suite 203
Seattle, WA 98104
Ph: (206) 343-7340 | Fax: (206) 343-1526
kboyles@earthjustice.org
pgoldman@earthjustice.org
abennett@earthjustice.org

Attorneys for Plaintiffs Pacific Coast Federation of Fishermen's Associations, Institute for Fisheries Resources, and Yurok Tribe

AMY CORDALIS (CSBA # 321257)
Yurok Tribe
190 Klamath Blvd.
P.O. BOX 1027
Klamath, CA 95548
Ph: (707) 482-1350 | Fax: (707) 482-1377
acordalis@yuroktribe.nsn.us

DANIEL CORDALIS (CSBA #321722)
Cordalis Law, P.C.
2910 Springer Drive
McKinleyville, CA 95519
Ph: (303) 717-4618
dcordalislaw@gmail.com

Attorneys for Plaintiff Yurok Tribe

UNITED STATES DISTRICT COURT
FOR THE NORTHERN DISTRICT OF CALIFORNIA
SAN FRANCISCO DIVISION

YUROK TRIBE, PACIFIC COAST FEDERATION OF FISHERMEN'S ASSOCIATIONS, and INSTITUTE FOR FISHERIES RESOURCES, Plaintiffs, v.	Case No. Related Cases: No. C16-cv-06863-WHO No. C16-cv-04294-WHO COMPLAINT FOR DECLARATORY AND INJUNCTIVE RELIEF

U.S. BUREAU OF RECLAMATION, and NATIONAL MARINE FISHERIES SERVICE, Defendants.	Administrative Procedure Act Case

INTRODUCTION

1. This case presents the latest chapter in a long-running controversy over the impacts of the U.S. Bureau of Reclamation's ("Bureau's") operation of the Klamath Project on Pacific salmon and the communities that depend on the salmon for their livelihood, sustenance, cultural identity, and well-being. This case seeks to protect Southern Oregon/Northern California Coast Coho Salmon ("SONCC Coho" or "Coho"), which are listed as threatened under the Endangered Species Act ("ESA"), from severely diminished Klamath River flows resulting from the Klamath Project's water withdrawals. It also seeks to ensure abundant Klamath River Chinook salmon populations to sustain the Yurok Tribe, which has fished on the lower Klamath River since time immemorial, and endangered Southern Resident Killer Whales ("Southern Residents" or "Orcas"), which depend on Chinook as their prey.

2. Recent litigation compelled the Bureau to reinitiate ESA consultation with the National Marine Fisheries Service ("NMFS") over Klamath Project operations because disease infection rates exceeded what was allowed under the 2013 biological opinion and incidental take statement for the 2013-2023 Klamath Project Operations Plan. *Yurok Tribe v. U.S. Bureau of Reclamation*, 231 F. Supp.3d 450 (N.D. Cal. 2017). As part of that litigation, this Court issued an injunction requiring disease mitigation flows during the reinitiated consultation. ECF 70.[1] On March 29, 2019, the Bureau and NMFS completed the reinitiated consultation with NMFS's

[1] ECF cites are to *Yurok Tribe v. U.S. Bureau of Reclamation*, No. 16-cv-6863 (N.D. Cal.).

Earthjustice
705 Second Ave., Suite 203
Seattle, WA 98104-1711
(206) 343-7340

issuance of a biological opinion ("2019 biological opinion") and incidental take statement for the Bureau's Plan for 2019-2024 Klamath Project operations ("Plan").

3. This action challenges the 2019 biological opinion because: (A) it finds no jeopardy based on the assumption that the Plan will improve conditions for Coho and Chinook Salmon compared to the period of record without determining that the "improved" conditions will avoid jeopardizing Coho and Orca survival and recovery; (B) it signs off on the Bureau's failure to require dilution flows in the event of a disease outbreak contrary to the best available science demonstrating that such measures are necessary and effective; and (C) it finds that the Plan will not adversely modify Coho critical habitat, even though it will reduce the amount of Coho rearing habitat to far less than the standard NMFS has deemed necessary to conserve the species. This action also challenges the incidental take statement because its limit on take allows approximately half the outmigrating salmon to perish, which is an unacceptable amount of take that threatens to cause jeopardy, and it is based on a preliminary draft model that has not undergone peer review, contrary to Bureau policy.

4. This lawsuit also challenges the Bureau's environmental assessment ("EA") and finding of no significant impact ("FONSI") for the 2019-2024 Plan. First, the EA fails to consider an alternative that includes the flows required under this Court's 2017 injunction either as the no-action alternative or another viable alternative. Second, the FONSI concludes that the Plan's effects will not be significant because they will be reduced compared to the no-action alternative, but a reduction in adverse effects is not the same as no significant adverse effects. Third, the Bureau's finding that the Plan will not have significant adverse environmental effects is indefensible because of the fundamental and far-reaching impacts the Plan has on threatened

Earthjustice
705 Second Ave., Suite 203
Seattle, WA 98104-1711
(206) 343-7340

and endangered Coho and Orcas.[2]

5. This action asks the Court to: (1) vacate the 2019 biological opinion, the EA, and the FONSI; (2) remand for the Bureau and NMFS to complete the reinitiated consultation on Klamath Project operations ordered by this Court in 2017; and (3) remand for the Bureau to prepare an environmental impact statement on the 2019-2024 Plan. Vacatur of the 2019 biological opinion would have the effect of reinstating the 2013 biological opinion and 2017 injunction for the duration of the reinitiated consultation. Alternatively, this action seeks injunctive relief to reduce *C. shasta* disease and to ensure sufficient rearing habitat for juvenile salmon.

JURISDICTION, VENUE, AND INTRADISTRICT ASSIGNMENT

6. This action is brought under the Administrative Procedure Act ("APA"), 5 U.S.C. § 706(2)(A). This Court has jurisdiction pursuant to 28 U.S.C. §§ 1331 and 1362.

7. Venue is proper in this Court under 28 U.S.C. § 1391(e) because the Yurok Tribe is located in the district, the commercial fishing and conservation plaintiffs reside in this district, and many of the events and consequences of the defendants' violations of law occurred or will occur in this district.

8. This case is properly assigned to the San Francisco/Oakland Division under Civil L.R. 3-2(c) because plaintiffs are located in Humboldt, Del Norte, and San Francisco counties, and a substantial part of the events or omissions which give rise to this action occurred in

[2] On July 30, 2019, plaintiffs sent a 60-day notice to the Bureau and NMFS pursuant to the ESA, 16 U.S.C. § 1540(g)(2)(A). The notice alleges ESA violations by both agencies for failing to reinitiate consultation when conditions under the first year under the Plan proved to be far worse for salmon than predicted and by the Bureau for failing to ensure the Plan will avoid jeopardizing the survival and recovery of listed species and adversely modifying critical habitat, as it is obligated to do under ESA Section 7. If the violations are not corrected, plaintiffs plan to amend their complaint to add ESA claims under the ESA citizen suit provision. *Id*. § 1540(g).

Earthjustice
705 Second Ave., Suite 203
Seattle, WA 98104-1711
(206) 343-7340

Humboldt and Del Norte counties through which the lower Klamath River flows.

PARTIES

A. Tribal Plaintiff

9. The Yurok Tribe is a sovereign, federally recognized Indian Tribe. By filing this action, the Tribe does not waive its sovereign immunity and does not consent to suit as to any claim, demand, offset, or cause of action of the United States, its agencies, officers, agents, or any other person or entity in this or any other court.

10. With more than 6,400 members, the Yurok Tribe is the largest Indian Tribe in California. Yurok people are fishing people who have lived on the Klamath River since time immemorial.

11. The Tribe's ancestral territory includes the lower Klamath River and the lands surrounding it to the north and south. The Klamath River Reservation was originally created by Executive Order on November 16, 1855. The Reservation extends for one mile on each side of the Klamath River in northern California from the mouth at the Pacific Ocean approximately 45 miles upriver.

12. The Executive Order that created the Yurok Reservation vested the Yurok Tribe with "federally reserved fishing rights." *Parravano v. Masten*, 70 F.3d 539, 541 (9th Cir. 1995). Federally reserved fishing rights are integral to the Yurok way of life for subsistence, commercial, and cultural purposes. Yurok trust species include, but are not limited to, Coho and Chinook Salmon, Steelhead Trout, lamprey, sturgeon, and eulachon. The Tribe dedicates a significant share of its financial and human resources to manage and regulate Klamath River fisheries. The Tribe employs approximately 75 employees for fisheries, water quality, and watershed restoration activities specifically, while nearly all departments directly or indirectly work on fisheries-related issues. The Klamath River and its fishery are "not much less necessary

Earthjustice
705 Second Ave., Suite 203
Seattle, WA 98104-1711
(206) 343-7340

to the existence of the [Yurok] than the atmosphere they breathe[.]" *Blake v. Arnett*, 663 F.2d 906, 909 (9th Cir. 1981) (quoting *United States v. Winans*, 198 U.S. 371, 381 (1905)).

13. Mismanagement of the Klamath Project has severely diminished the Tribe's ability to exercise its reserved fishing rights. Tragedy struck in 2002 when Project water diversions led to a massive outbreak of fish disease that killed as many as 78,000 adult salmon before they could spawn, all within the Yurok Reservation. The 2002 fish kill is one of the darkest events in Yurok history. Releasing pulse flows from the Trinity River in the summer has largely prevented a recurrence of that disaster.

14. Tragedy struck again in 2014 and 2015 when monitoring revealed that outmigrating juvenile infection rates of *C. shasta*, a fish disease that is often fatal, reached 81% and 91% respectively. The few salmon that survived to return as adults in 2016 and 2017 came back in near-record low numbers, shutting down commercial and Tribal fisheries, leading to another fisheries disaster. 2017 was the first year in history that the Yurok Tribal Council closed its subsistence fishery and Yurok people did not gill net for subsistence purposes on the lower Klamath River. It was the second consecutive year that the Yurok Tribe cancelled its commercial fishery due to low salmon returns. The Tribe and its members rely on salmon as a healthy food source. Fishing for salmon provides food for Yurok families, economic opportunity, and the fabric of the community, bringing people together to fish, connect with each other and their heritage, and anchor themselves to their fishing culture. If anything, salmon have become even more important as the community is plagued with poverty, a suicide crisis, and lack of economic opportunities. Indeed, just months after the Tribal Council voted to close the fishery for conservation purposes, it declared a suicide emergency due to a Reservation-wide epidemic of suicides by Tribal members under the age of 30. Without a fishery, the Tribe's

Earthjustice
705 Second Ave., Suite 203
Seattle, WA 98104-1711
(206) 343-7340

traditional way of life is disrupted, and hope is lost.

15. In the development of the 2019-2024 Plan, the Bureau failed to provide the Tribe with sufficient information about the proposed plan for the Tribe to assess the impacts and provide comprehensive input. The Tribe's fears materialized in the first two months under the new operations plan. Even though the water year has been average to above average, and Upper Klamath Lake has been full or nearly full throughout the spring, spring flows in the Klamath River below Iron Gate Dam were extremely low at critical times when disease risks were high. Spore counts reached 100 spores per liter the second week of May, and prevalence of infection of *C. shasta* in sampled fish reached 83%, 87%, and 88% in the first three weeks of May. At the same time, flows below Iron Gate Dam approached extreme minimums during the third week of May, despite a full Upper Klamath Lake and tributary flows throughout the Klamath Basin that were near or above average.

B. Commercial Fishing Plaintiffs

16. Pacific Coast Federation of Fishermen's Associations ("PCFFA") is the largest organization of commercial fishing families on the west coast, with member organizations from San Diego to Washington State collectively representing the interests of thousands of men and women in the Pacific ocean commercial salmon fishing fleet. Many of PCFFA's members are fishermen and fisherwomen whose livelihoods depend upon harvesting and marketing salmon, including those from the Klamath River, which, until recent fisheries closures, generated hundreds of millions of dollars per year in personal income in the region. PCFFA has its main office in San Francisco, California, and a Northwest regional office in Eugene, Oregon.

17. Institute for Fisheries Resources ("IFR") is a non-profit corporation that constitutes the conservation arm of PCFFA and shares PCFFA's offices in San Francisco, California, and Eugene, Oregon. IFR, although legally and financially independent of PCFFA,

Earthjustice
705 Second Ave., Suite 203
Seattle, WA 98104-1711
(206) 343-7340

was originally formed by PCFFA and from within the fishing industry, and today serves as the science, resource conservation and restoration arm of PCFFA, implementing and funding a number of PCFFA projects to recover and restore many now ecologically damaged but once productive salmon-bearing watersheds throughout the U.S. west coast

18. The financial and livelihood interests of PCFFA, IFR, and their members (and the fishing-dependent communities those members live in) will be severely impaired if the Klamath Project operations are managed under the Plan. The 2002 fish kill subsequently contributed to a massive 2006 commercial ocean salmon fishery shutdown, driven by Klamath losses under weak stock management. When multiple salmon stocks from different rivers mingle together at sea, the weakest (*i.e.*, least numerous) of these stocks is the limiting factor in opening and closing the whole ocean salmon fishery. In 2006, by far the weakest salmon stock was the Klamath fall-run Chinook returning as adults. This weak stock had to be placed in a "zero harvest" mode, which triggered the closure of all other ocean salmon fisheries, however abundant, over 700 miles of coastline in order to prevent the total collapse of Klamath Chinook. That fishery closure cost west-coast ocean salmon fishing communities at least $200 million.

19. Salmon fishing declined again in recent years due, in part, to *C. shasta* infection outbreaks. In 2016, allocable catches of Klamath fall Chinook in ocean fisheries were reduced significantly due to very low adult returns. In 2017, this ocean salmon fishery was closed due to low adult returns, and in-river fishing for Klamath Chinook Salmon was prohibited, due to the lowest projected abundance since forecasting began in the mid-1980s. The losses to commercial fishing families were devastating, with less than 10% of the average revenues for the preceding five years. These losses had ripple effects on the fish processors, fishing equipment retailers, marine repair and moorage businesses, and other businesses that depend on healthy salmon

Earthjustice
705 Second Ave., Suite 203
Seattle, WA 98104-1711
(206) 343-7340

fisheries.

20. Both the Yurok Tribe and the commercial fishing plaintiffs have been and will continue to be irreparably harmed by defendants' disregard of their statutory duties and by the unlawful injuries imposed on Klamath River Coho and Chinook Salmon by Klamath Project operations. The interests of the plaintiffs in the survival and recovery of Klamath River salmon have been, are being, and, unless the relief prayed for is granted, will continue to be directly and adversely affected by the failure of defendants to comply with the law.

C. Federal Defendants

21. Defendant United States Bureau of Reclamation is an agency of the United States Department of the Interior that constructs and operates federal water projects throughout the United States. The Bureau has primary management authority over the Klamath Project.

22. Defendant National Marine Fisheries Service is an agency of the United States Department of Commerce. The Department has delegated to NMFS its responsibility for administering the ESA with regard to threatened and endangered marine species, including threatened Coho that live in the Klamath River basin and endangered Orcas.

BACKGROUND

I. THE KLAMATH RIVER AND THE DECLINE OF ITS FISHERIES

A. Salmon

23. The Klamath River basin straddles northern California and southern Oregon. The Klamath River was once the third most productive salmon-producing river in the continental United States. Several species of anadromous fish inhabit the Klamath River and its tributaries, including Chinook and Coho. In 1940, SONCC Coho Salmon, a population that includes Klamath River Coho, were estimated to range between 150,000 and 400,000 naturally spawning fish annually. 62 Fed. Reg. 24,588 (May 6, 1997). A multitude of factors, including water

Earthjustice
705 Second Ave., Suite 203
Seattle, WA 98104-1711
(206) 343-7340

diversions, contributed to drastic declines of Coho.

24. Coho have a three-year life cycle, spending half their lives in fresh water and half in salt water. After the eggs hatch in the winter, the Coho fry spend up to 15 months in freshwater. They out-migrate to the sea between mid-February and mid-June, which makes them especially sensitive to changes in river flows. At about three-years old, they return in September through December to the same stream where they were born to spawn and die.

25. In 1997, NMFS listed SONCC Coho under the ESA as threatened. It found that the Coho populations "are very depressed, currently numbering approximately 10,000 naturally produced adults." 62 Fed. Reg. 24,588 (May 6, 1997). NMFS noted that "water diversions" and "water withdrawals" for irrigation were "major activities responsible for the decline of coho salmon in Oregon and California." *Id*. at 24,592.

26. NMFS designated critical habitat for SONCC Coho in 1999 and included most of the Klamath River below Iron Gate Dam in the designation. 64 Fed. Reg. 24,049 (May 5, 1999). NMFS found that irrigation water withdrawals and dam operations were "[a]ctivities that may require special management considerations" for juvenile Coho. *Id.* at 24,059.

27. In its five-year status review completed in 2016, NMFS found that Coho continue to be at high risk of extinction and noted heightened risk to Coho persistence since 2011 from increased water withdrawals and unprecedented drought conditions in four of the previous five years that likely resulted in reduced juvenile survival and stressful rearing conditions in nearly all parts of the range. Five-Year SONCC Coho Review at 47-49 (2016).

28. The status review identified *C. shasta* as one of the most significant threats to Coho due to its prevalence and impacts on juvenile Coho. *Id.* at 34. *C. shasta* infects Coho and Chinook juveniles. Signs of infected salmon include necrosis of intestinal tissue that can be

Earthjustice
705 Second Ave., Suite 203
Seattle, WA 98104-1711
(206) 343-7340

accompanied by a severe inflammatory reaction and subsequent death. Infection rates increase when densities of *C. shasta* spores are high and when the polychaete worms that host the parasite are abundant. Low flows lead to higher water temperatures and increases in salmon mortalities from *C. shasta*.

29. The Coho recovery plan adopted by NMFS finds that disease poses a high or very high stress to 13 populations in the listing, including three in the Klamath Basin. Final SONCC Coho Recovery Plan at 1-5; 3-19 (2014). The recovery plan identifies *C. shasta* as responsible for most of the mortality of Klamath River juvenile Coho in recent years. *Id*. at 3-20. It establishes a recovery goal of no greater than 10% mortality of Coho juveniles from *C. shasta*, which it equates with natural background levels. *Id*. at 4-14, 4-15.

B. Southern Resident Killer Whales

30. NOAA Fisheries listed Southern Resident Orcas as endangered in 2005. 70 Fed. Reg. 69.903 (Nov. 18, 2005). The Orca population had declined by 20% between 1996-2001 to 81 whales. It subsequently grew to 87 whales, but declined recently to 75 whales due a series of failed pregnancies, calf mortalities, and starving adults.

31. The Orca listing and recovery plan identified three principal threats: (A) reduced quantity and quality of the Orcas' prey; (B) toxic chemicals that accumulate in top predators like Orcas; and (C) disturbance from noise and vessels. Of these threats, the loss of prey is primary and most urgent. 2019 BiOp at 223-24.

32. The Southern Residents are fish-eating Orcas. Salmon and Steelhead make up to 98% of their diet and Chinook, the largest salmon with the highest fat content, comprise almost 80%. 2019 BiOp at 224. Scientific experts have correlated prey abundance with fecundity and producing calves, and have determined that Chinook abundance would need to increase by 15% for the Orcas to reach the growth target in the recovery plan. 2019 BiOp at 220. When prey is

Earthjustice
705 Second Ave., Suite 203
Seattle, WA 98104-1711
(206) 343-7340

scarce, Orcas expend more energy foraging, experience nutritional stress, and have difficulty becoming pregnant. In recent years, some Orcas have lost body mass and died. 2019 BiOp at 228-29, 260-61, 265.

33. The Orcas follow salmon runs in the Salish Sea, along Vancouver Island, and along the coast of Washington, Oregon, and Northern California. J pod spends most of its time in and around the Salish Sea and all three pods generally are present in the inland waters of the Salish Sea in May and June and spend a considerable amount of time inland through September. Two of the three pods – K and L pods, which have 52 of the remaining whales – feed along the coast as far south as Monterrey Bay during the winter and spring. 2019 BiOp at 222-23, 264. They feed primarily on Chinook, including from the Klamath River. The Klamath Project has diminished Chinook abundance and viability, decreasing the available Chinook prey for Orcas.

I. THE BUREAU'S OPERATION OF THE KLAMATH PROJECT

34. Congress authorized construction and development of the Klamath Project in 1905, pursuant to the Act of February 9, 1905, ch. 567, 33 Stat. 714, which is part of the Reclamation Act of 1902, 43 U.S.C. §§ 372, *et seq.* Various Project facilities were built between 1906 and 1966. The Project consists of over 185 miles of various diversions, canals, and pumping stations. The Project provides irrigation water to approximately 200,000 acres of agricultural land each year, as well as to four national wildlife refuges within its boundaries. The Bureau's operation of the Klamath Project determines the level, timing, and rate of water flow in the Klamath River below Iron Gate Dam, the lowest downriver dam, which blocks salmon fish passage upstream. Klamath Project operations determine the quantity of water available in the Klamath River to support salmon. Water withdrawals for irrigation have increased in the 1961-2007 period, particularly in dry years, and this trend is expected to continue. 2019 BiOp at 107.

35. Pursuant to a 1956 contract with the Bureau, PacifiCorp, a private corporation,

Earthjustice
705 Second Ave., Suite 203
Seattle, WA 98104-1711
(206) 343-7340

operates the Project's Link River Dam, although the Bureau controls water releases at the dam. PacifiCorp also owns and operates several downstream dams on the Klamath River for hydroelectric power generation. In September 2016, PacifiCorp applied to the Federal Energy Regulatory Commission for a transfer of its license with respect to four dams in the lower portion of the Klamath Project, including Iron Gate Dam, to a corporation established to oversee removal of those dams beginning in 2020.

II. THE ENDANGERED SPECIES ACT'S REQUIREMENTS

A. The Duty to Engage in Consultation and to Avoid Jeopardy and Adverse Modification of Critical Habitat.

36. Section 7 of the ESA prohibits agency actions that may jeopardize the survival and recovery of a listed species or adversely modify its critical habitat:

> Each federal agency shall, in consultation with and with the assistance of the Secretary, insure that any action authorized, funded, or carried out by such agency (hereinafter in this section referred to as an "agency action") is not likely to jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification of habitat of such species which is determined by the Secretary . . . to be critical . . . .

16 U.S.C. § 1536(a)(2).

37. "Action" is defined broadly to encompass "all activities or programs of any kind authorized, funded, or carried out, in whole or in part, by Federal agencies." 50 C.F.R. § 402.02. An agency's Section 7 obligations extend to ongoing actions over which the agency retains authority or discretionary control.

38. Section 7 establishes an interagency consultation process to assist federal agencies in complying with their duty to avoid jeopardy to listed species or destruction or adverse modification of critical habitat. Under this process, a federal agency proposing an action that "may affect" a listed species, including salmon and steelhead, must prepare and provide to the appropriate expert agency a description of the proposed action, its effects, and the relevant

Earthjustice
705 Second Ave., Suite 203
Seattle, WA 98104-1711
(206) 343-7340

scientific evidence. 16 U.S.C. § 1536(a)(2); 50 C.F.R. § 402.14(a).

39. Where the agency proposing the action determines that an action "may affect" protected salmon, but is "not likely to adversely affect" the species, it may attempt "informal consultation" with NMFS. 50 C.F.R. §§ 402.13, 402.14(b)(1). An agency's "not likely to adversely affect" determination becomes final and terminates consultation only when NMFS concurs in writing in the determination. 50 C.F.R. §§ 402.13, 402.14(b)(1).

40. For actions that may adversely affect a listed species or critical habitat, a formal consultation with the expert fish and wildlife agency is required. 50 C.F.R. § 402.14. At the conclusion of a formal consultation, the expert fish and wildlife agency issues a biological opinion assessing the effects of the action on the species and its critical habitat, determining whether the action is likely to jeopardize the continued existence of the species or adversely modify its critical habitat and, if so, offering a reasonable and prudent alternative that will avoid jeopardy or adverse modification. 16 U.S.C. § 1536(b)(3)(A); 50 C.F.R. § 402.14(g)-(h).

B. The Prohibition on Take of Listed Species and Incidental Take Statements.

41. Section 9 of the ESA prohibits "take" of endangered species by any person, which includes federal agencies. 16 U.S.C. § 1538(a)(1). "Take" means to "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect." 16 U.S.C. § 1532(19). NMFS has defined "harm" to include "significant habitat modification or degradation which actually kills or injures fish or wildlife by significantly impairing essential behavioral patterns, including breeding, spawning, rearing, migrating, feeding or sheltering." 50 C.F.R. § 222.102.

42. The ESA makes the take prohibition applicable to species listed as endangered, like Orcas. NMFS has extended the take prohibition to listed salmon, including SONCC Coho. 50 C.F.R. § 223.203(a); 65 Fed. Reg. 42,422 (2000).

43. If a federal action undergoing consultation will take a listed species, the biological

Earthjustice
705 Second Ave., Suite 203
Seattle, WA 98104-1711
(206) 343-7340

opinion must include an "incidental take statement" that specifies the amount and extent of incidental take of listed species that may occur without causing jeopardy or adverse modification of critical habitat. 16 U.S.C. § 1536(b)(4); 50 C.F.R. § 402.14(i). The incidental take statement provides a safe harbor, insulating from take liability activities undertaken in compliance with the incidental take statement's terms and conditions. 16 U.S.C. § 1536(o)(2); *see* 16 U.S.C. § 1536(b)(4)(C). An incidental take statement also serves as a check on the biological opinion's assumptions and conclusions and provides for monitoring. 50 C.F.R. § 402.14(i)(3). It must set out a "trigger" that specifies an unacceptable level of take that invalidates the safe harbor and requires the agencies to immediately reinitiate consultation. *Id*. § 402.14(i)(4).

44. The ESA implementing regulations provide:

> Reinitiation of formal consultation is required and shall be requested by the Federal agency or by the Service, where discretionary Federal involvement or control over the action has been retained or is authorized by law and
>
> (a) If the amount or extent of taking specified in the incidental take statement is exceeded; [or]
>
> (b) If new information reveals effects of the action that may affect listed species or critical habitat in a manner or to an extent not previously considered . . . .

50 C.F.R. § 402.16 & (a)-(b). If either of these triggers occurs, both the action agency and the expert fish and wildlife agency have a duty to request reinitiation of consultation.

III. THE BUREAU'S ESA CONSULTATIONS FOR KLAMATH PROJECT OPERATIONS

A. Early Consultations on Klamath Project Operations.

45. The Bureau operates the Klamath Project under operating plans that determine the flow levels in the Klamath River downstream of Iron Gate Dam. This Court has held that the Bureau must engage in Section 7 consultation on its operating plans. *PCFFA v. Bureau of Reclamation,* 138 F. Supp. 2d 1228, 1242-43 (N.D. Cal. 2001). When the Bureau failed to do so

Earthjustice
705 Second Ave., Suite 203
Seattle, WA 98104-1711
(206) 343-7340

in 2000, this Court issued an injunction requiring the Bureau to curtail water deliveries that would cause river levels to drop below specific flows needed to provide useable Coho juvenile rearing habitat until it completed formal consultation. *Id.* at 1249-50. The flows were based on a report prepared for the Department of Interior by Dr. Thomas Hardy to prevent unacceptable risks to salmon.

46. Recognizing the need to plan Klamath Project operations over a longer time horizon, the Bureau began developing ten-year operating plans. As the 2002 irrigation season approached, NMFS had not issued a biological opinion on the 2002-2012 plan. NMFS concurred in the Bureau's "not likely to adversely affect" determination for "below average" water year flows for 2002, but this Court held that the agencies could not lawfully avoid formal consultation for a segment of a larger project that was likely to adversely affect Coho.

47. In that consultation, NMFS subsequently issued a biological opinion concluding that the 2002-2012 Plan would likely jeopardize the Coho's survival and recovery and adversely modify its critical habitat. NMFS found the Bureau's replication of the last ten years' minimum flows would not provide sufficient water to support Coho spawning, rearing, and juvenile migration. NMFS offered a reasonable and prudent alternative ("RPA") that established higher long-term minimum flows based on Dr. Hardy's report on instream flow needs, but did not require those flows in the first and second phases of the plan, which spanned eight years.

48. Yurok Tribe and others challenged the RPA for failing to provide sufficient flows for Coho. This Court invalidated: (1) the RPA's reliance on speculative, future state and private actions to meet some of the flow needs because those actions were not reasonably certain to occur; and (2) the incidental take statement because it lacked a take limit that would serve as a trigger to reinitiate consultation. On appeal, the Ninth Circuit held that NMFS acted unlawfully

Earthjustice
705 Second Ave., Suite 203
Seattle, WA 98104-1711
(206) 343-7340

by requiring only a portion of the flows NMFS deemed necessary in the initial two phases of the plan, leaving Coho with insufficient flows for eight of the plan's ten years. *PCFFA v. Bureau of Reclamation*, 426 F.3d 1082 (9th Cir. 2005). On remand, this Court issued an injunction limiting water withdrawals if Klamath River flows would fall below the minimum flows in the RPA.

B. Consultation on the 2013-2023 Klamath Project Operations Plan.

49. In March 2010 in the reinitiated consultation, NMFS issued a jeopardy biological opinion based on reduced juvenile Coho survival and adverse modification of Coho critical habitat. NMFS proposed an RPA with spring flows that would prevent reduction in the amount of juvenile Coho habitat by no more than 10% from what would be available without the Project.

50. The Bureau never implemented this biological opinion and instead proposed a different plan. After NMFS objected to the Bureau's inadequate river flows, the Bureau agreed to minimum spring flows based on Dr. Hardy's work. In addition, the Bureau established a real-time disease management program that could produce dilution flows at the Bureau's discretion when infection rates are above disease thresholds. The dilution flows, however, would come from the Environmental Water Account ("EWA"), which is the amount of water set aside to provide for Klamath River flows to meet the needs of Coho between March 1 and September 30. The Bureau locks in the amount of water allocated to irrigation as of April 1st, and the allocations cannot be reduced during the rest of that water year. It also sets the amount of water in the EWA as of April 1st.

51. In the May 2013 biological opinion, NMFS made a no-jeopardy finding on the 2013-2023 Klamath Project operations plan based on its view that the plan would improve conditions for Coho compared to the period of record, defined as 1981-2012. NMFS found that disease risk from *C. shasta* is the key factor limiting salmon recovery in the Klamath River. 2013 BiOp at 341, 376. While *C. shasta* and salmon have long co-existed in the Klamath Basin,

Earthjustice
705 Second Ave., Suite 203
Seattle, WA 98104-1711
(206) 343-7340

the Klamath Project has increased the incidence of *C. shasta* infection rates because the parasite's host worm is not flushed out without the high winter and spring flows that occurred historically. 2013 BiOp at 339, 341, 343. NMFS concluded that, in below average water years, *C. shasta* would proliferate and lead to higher infection rates and mortalities of juvenile Coho. However, it made a no-jeopardy because it believed the minimum spring flows and real-time disease management program would improve disease risks compared to the period of record. 2013 BiOp at 40-41, 346-47, 377, 391.

52. The 2013 incidental take statement set a limit on the incidence of *C. shasta* infections. It used infection rates in Chinook as a surrogate for Coho because Coho are now too rare to sample reliably in the mainstem Klamath River, Chinook and Coho have similar susceptibility to *C. shasta*, and a scientifically sound Chinook disease monitoring has been in place since 2005. NMFS used this monitoring data to set the take limit at 49%, the highest *C. shasta* infection rates observed in the monitoring program. 2013 BiOp at 391. The biological opinion then spelled out the consequences if actual disease rates exceed these limits:

> If the percent of *C. shasta* infections for Chinook salmon juveniles in the mainstream Klamath River between Shasta River and Trinity River during May to July exceed these levels . . . reinitiation of formal consultation will be necessary.

Id.

IV. THIS COURT'S ORDERS REQUIRING REINITIATION OF FORMAL CONSULTATION AND DISEASE MANAGEMENT FLOWS.

A. This Court Held That The Agencies Had A Legal Duty To Reinitiate Formal Consultation.

53. Because the 2013 biological opinion did not mandate disease management flows, the necessary flows failed to materialize. In 2014 and 2015, both below-average water years, *C. shasta* rates of 81% and 91% far exceeded the incidental take statement's 49% cap. *C. shasta* infection rates also bumped up against the cap in average water years in 2013 and 2016, coming

Earthjustice
705 Second Ave., Suite 203
Seattle, WA 98104-1711
(206) 343-7340

in at 46% and 48%. In granting Yurok Tribe summary judgment, this Court held that the Bureau had a legal duty to reinitiate consultation to determine what is needed to reduce infections and avoid jeopardizing Coho survival and recovery. *Yurok Tribe*, 231 F. Supp. 3d at 475.

54. This Court determined that "[i]njunctive relief is appropriate" because plaintiffs "have presented sufficient evidence to show that they will face irreparable harm absent an injunction," Coho are in a precarious state after years of high *C. shasta* rates, and, without protective flows, are likely to face another year of high infection rates that will weaken an already weakened population. *Id.* at 479, 483-84. This harm to the salmon would harm both the Yurok Tribe and the fishing association plaintiffs. *See id*. at 481 ("The Yurok Tribe has demonstrated that the Yurok people's lives are inextricably linked to salmon and that they rely on salmon for their subsistence, cultural identity, rituals, and economic well-being."); *id*. ("The fishing associations have shown that they are harmed when salmon abundance drops because the potential salmon harvests decrease."). Applying controlling Ninth Circuit precedent, this Court held that the balance of hardships and public interest tip heavily in favor of protecting endangered species, like Coho, and providing water to support the salmon fisheries that are subject to the Yurok Tribe's federally recognized fishing rights, which carry a priority date of time immemorial and therefore have precedence over irrigation withdrawals. *Id*. at 484, 486.

B. The Court Issued An Injunction Requiring Disease Management Flows.

55. After the infection rates spiked in 2014 and 2015, the federal agencies and Tribes formed a Disease Technical Advisory Team to guide the development of measures to mitigate the effects of *C. shasta*. FWS compiled the best available scientific information on *C. shasta* infections and the need for and efficacy of disease management flows. The tribal experts on the technical team, with input from the federal agencies, completed a Guidance Document laying out disease management flows to reduce *C. shasta* infections. The Bureau subsequently

Earthjustice
705 Second Ave., Suite 203
Seattle, WA 98104-1711
(206) 343-7340

commissioned a formal, independent peer review, which concluded that the Guidance Document is comprehensive and scientifically sound, and its management measures to mitigate the effects of *C. shasta* are well supported by available scientific data. Independent Peer Review at i, 8 (2018). This Court held that: "Plaintiffs have demonstrated that flushing flows and emergency dilution flows would reduce *C. shasta* rates among Coho salmon. There is no meaningful dispute among the parties on this point." *Yurok Tribe,* 231 F. Supp. 3d at 489.

56. The Court entered an injunction that required two types of disease management flows until formal reinitiated consultation is completed. ECF 70. First, it required surface or deep flushing flows every year to disrupt the habitat supporting the host worms. Second, the injunction required the Bureau to release emergency dilution flows when spore concentrations exceed 5 spores per liter or when the prevalence of infection exceeds 20% in sampling done as part of the *C. shasta* monitoring program. No dilution flows were required if 80% of wild juvenile Chinook had outmigrated or after June 15, whichever occurred first. The injunction required the Bureau to establish a 50,000 acre foot reserve water supply to ensure that water is available for emergency dilution flows.

57. Defendant-intervenors Klamath Water Users Association *et al*. ("KWUA") appealed the injunction and the final judgment in April and October 2017, ECF 75, 91, and the federal defendants filed protective notices of appeal. ECF 81, 90. Both KWUA and the federal defendants subsequently dismissed their appeals.

C. Implementation of the Injunction Flows

58. This Court's February 2017 order came during an above-average water year. The Bureau implemented a surface flushing flow to coincide with precipitation events. The thresholds triggering emergency dilution flows were not exceeded so the water reserved for such flows was made available for irrigation. In 2017, the prevalence of infection rate during the peak

Earthjustice
705 Second Ave., Suite 203
Seattle, WA 98104-1711
(206) 343-7340

outmigration period was 26%, lower than any previous year under the 2013 biological opinion.

59. 2018 was a below-average water year. KWUA sought relief from the injunction to avoid disease management flows, and the Bureau sought clarification to eliminate the dilution flows. ECF 101; 109-1. This Court denied those motions. ECF 129. In early April, the Bureau began implementing a surface flushing flow. When *C. shasta* prevalence of infection exceeded the injunction's trigger, the Bureau implemented a dilution flow and infection rates declined.

V. THE REINITIATED CONSULTATION

A. The 2019-2024 Klamath Project Operations Plan

60. The Bureau presented a Proposed Action to NMFS in a December 2018 biological assessment, which it subsequently modified to respond to some concerns raised by NMFS about inadequate flows for Klamath River salmon. The 2019-2024 Klamath Project Operations Plan ("2019-2024 Plan" or "Plan") started with the formulaic approach used in the 2013 biological opinion modified to increase Upper Klamath Lake levels to meet the needs of the endangered suckers. It establishes minimum releases for Coho habitat needs and allows more water to be added to the EWA by April 1st based on Upper Klamath Lake levels in the early spring period and forecast inflow to lake. The amount of water in the EWA is fixed as of April 1st. The Plan continues to lock in an allocation for irrigation as of April 1st, which can be increased, but not decreased, based on subsequent water availability forecasts.

61. NMFS sought an additional 30,000 acre feet to increase the low flows proposed for May-June to increase habitat for juvenile Coho at a critical time for rearing. The Bureau responded by providing 20,000 acre feet to enhance May and June flows during water years that are classified as neither wet nor dry as of April 1st. 2019 BiOp at 41-42. Even with this additional amount of water, the May and June flows would frequently provide less than the amount of available rearing habitat that NMFS has deemed necessary for conservation of the

Earthjustice
705 Second Ave., Suite 203
Seattle, WA 98104-1711
(206) 343-7340

salmon species. 2019 BiOp at 146, 148-50, 155, 160.

62. Unlike the 2013 biological opinion, the 2019-2024 Plan provides for a surface flushing flow in most years. In average to wet years, the Bureau will implement a surface flushing flow meeting the parameters of the 2017 injunction. In below-average or dry years, an additional 50,000 acre feet of water will be available for disease management and habitat needs, which the Bureau and NMFS expect to be used for a surface flushing flow. The model predicts that the Plan will result in a surface flushing flow in the hydrologic conditions present in 34 out of 36 years in the period of record.

63. The 2019-2024 Plan requires no dilution flows when infection rates spike, as was required under the 2017 injunction. Instead, it relies on the real-time disease management program established in 2013, which allows technical experts to recommend using EWA water to provide flows to reduce disease, but gives the Bureau discretion to decide whether to provide any dilution flows. Because the amount of water available for river flows is capped as of April 1st, using EWA water in May and June for disease management will reduce the amount of water available for salmon later in the water year.

B. The 2019 Biological Opinion

1. Coho Salmon

64. The 2019 biological opinion focused on two key concerns about the impacts of the Plan on Coho: (1) disease in outmigrating juveniles; and (2) sufficient juvenile rearing habitat.

65. In terms of disease, the 2019 biological opinion identified *C. shasta* as a key limiting factor impeding salmon recovery and characterized the high mortality rates in recent years as worse than natural conditions. 2019 BiOp at 160-61. It indicated that the high incidence of disease has been due to the Klamath Project's reduction in the magnitude,

Earthjustice
705 Second Ave., Suite 203
Seattle, WA 98104-1711
(206) 343-7340

frequency, and duration of spring flows. 2019 BiOp at 161, 167.

66. The 2019 biological opinion acknowledges the science demonstrating benefits of surface flushing flows and notes that the surface flushing flows under the 2017 injunction disrupted the polychaete host worms and reduced disease risks in 2016-2018. 2019 BiOp at 134. Yet, immobile bed conditions, which provide habitat to support host worms, will continue 70% of each year and 50% of the time under the Plan. 2019 BiOp at 132-33.

67. The 2019 biological opinion concludes that the "net disease effect to coho salmon from implementation of surface flushing flows is somewhat unclear, but is likely to be improved over the observed POR because the increased frequency of surface flushing flow events will provide more intense and frequent disturbance to polychaetes and sediment." 2019 BiOp at 166; *id*. at 167 (increased frequency of surface flushing flows "is expected to somewhat disrupt the life cycle of *C. shasta*," but increase sublethal effects of *C. shasta* infections); *id*. ("NMFS concludes that the proposed action will result in disease risks to coho salmon that are lower than under observed POR conditions yet higher than under natural flow conditions."). It believes that lowering disease risks will likely improve Coho abundance and productivity. 2019 BiOp at 216.

68. The 2019 biological opinion does not base its jeopardy conclusion on the extent to which *C. shasta* infections and disease would impede survival or attainment of abundance targets. Nor does it address the extent to which the Plan will impede attaining the Coho recovery plan's target of reducing Coho mortality from *C. shasta* to no more than 10% of outmigrating juveniles. The 2019 biological opinion focuses on the benefits of having surface flushing flows, but pays scant attention to the negative effects of making dilution flows discretionary, even though it identifies the density of actinospores as the primary determinant of salmon infections and mortality and finds that high spring flows can dilute spore densities and reduce *C. shasta*

Earthjustice
705 Second Ave., Suite 203
Seattle, WA 98104-1711
(206) 343-7340

transmission efficiency. 2019 BiOp at 161.

69. The 2019 biological opinion relies on real-time disease management to use water from the EWA to address disease threats and outbreaks. It states that real-time disease management is likely to partially offset the increased disease risks during average and below-average water years. While it notes that using EWA water for spring disease management flows will reduce the amount of water available for summer flows, it does not analyze the effects of lower summer flows on Coho. 2019 BiOp at 167. The 2019 biological opinion is relying on the same real-time disease management program that failed, under the 2013 biological opinion, to prevent the exceedingly high infection rates and disease outbreaks in 2014 and 2015. The 2019 biological opinion never addresses this failure.

70. In terms of Coho rearing habitat, the Plan will reduce spring flows, which in turn, will reduce available habitat at a critical time for juvenile Coho rearing, particularly in below-average and dry water years. 2019 BiOp at 130, 136, 174, 202-05, 208-09. The 2019 biological opinion focuses on conditions when habitat availability will be less than 80% of the maximum available habitat because NMFS has deemed that amount of available habitat necessary to provide for the conservation of the species. 2019 BiOp at 144, 146, 155. It finds that the Plan will decrease available juvenile habitat below this standard in most months of the year and in most water year types. 2019 BiOp at 155; *see also id.* at 146, 148-150, 155, 159-60, 175. It will reduce habitat availability in the Seiad Valley the most, including in March-June, the critical rearing period for Coho fry and for outmigration of juveniles. 2019 BiOp at 202-03.

2. Southern Resident Orcas

71. A majority of the remaining Southern Residents feed along the coast as far south as Monterey Bay during the winter and spring. 2019 BiOp at 222-23, 264. Fall and spring Chinook from the Klamath River are among the stocks identified as preferred prey for the Orcas.

Earthjustice
705 Second Ave., Suite 203
Seattle, WA 98104-1711
(206) 343-7340

2019 BiOp at 227. The 2019 biological opinion finds that Klamath River Chinook can constitute a sizeable percentage of Chinook encountered by Orcas in the coastal waters off Northern California and South/Central Oregon and at least a small portion encountered as far north as the Columbia River. 2019 BiOp at 235, 237. NMFS concluded that Klamath River salmon are an important part of the Orcas' diet when they are in coastal waters, especially south of the Columbia River, which includes times when they have reduced body condition and increased diet diversity. 2019 BiOp at 234-35.

72. The 2019 biological opinion estimated 2019 ocean Chinook abundance as 274,200 fish, which is consistent with the average overall abundance over the past 10 years and substantially less than the historic abundance of one million fish. The biological opinion estimates that the Klamath River produces 1-10% of the Chinook found in coastal waters from California through British Columbia. 2019 BiOp at 236, 259. This is a sizeable portion of the Chinook available to the Orcas, likely at least several hundred thousand fish, and as much as 45% of local Chinook abundance when Orcas are foraging in the area. 2019 BiOp at 235, 237, 259, 261.

73. The 2019 biological opinion relied on its analysis of the Plan on Coho to assess its impacts on Chinook with a separate analysis of the more severe shortfalls in available Chinook habitat. 2019 BiOp at 247, 298-302. It finds that the Plan will reduce Chinook abundance and that the principal threat is disease in juveniles, which will reduce Chinook prey for the Orcas. However, it believes the surface flushing flows and augmented May-June flows in some years will improve conditions compared to the period of record. 2019 BiOp at 240-45, 256-59. It further finds that the reduced Chinook abundance will reduce fitness of Orcas in K and L pods due to increased energy necessary to find prey and nutritional stress. 2019 BiOp at 261. The

Earthjustice
705 Second Ave., Suite 203
Seattle, WA 98104-1711
(206) 343-7340

reduced Chinook abundance will continue through 2027, when the juveniles that outmigrate in 2024 return as adults. 2019 BiOp at 261-62, 264.

74. Although the Plan will continue to reduce Chinook abundance, the 2019 biological opinion relies on surface flushing flows to conclude that the available Chinook prey will increase compared to the period of record without assessing whether the remaining Chinook abundance will meet the Orcas' needs. 2019 BiOp at 265. Orcas will be harmed by the lack of prey, expend more energy foraging, and experience nutritional stress and even the poor body condition that has led to mortalities of food-deprived whales. Because of the increased abundance compared to the period of record, however, the 2019 biological opinion concludes that the 2019-2024 Plan would not be expected to reduce the fitness of individual Orcas or reduce the reproduction, numbers, or distribution of the Orca population. 2019 BiOp at 265-66.

C. The 2019 Incidental Take Statement

75. NMFS set take limits on *C. shasta* disease, but did not use prevalence of infection rates drawn from the *C. shasta* monitoring data, as the 2013 biological opinion did, even though it concluded that prevalence of infection continues to be an important tool for addressing infections and disease. Instead, NMFS used a preliminary draft model that estimates the prevalence of mortality, defined as the predicted proportion of spring/early summer outmigrating juveniles that will suffer *C. shasta* induced mortality. 2019 BiOp at 273.

76. It set the take limit for Coho at 49% prevalence of mortality for Coho Salmon juveniles emigrating from the Shasta River. This is the mortality that the preliminary draft indicates would have occurred in 2009 (the highest estimated prevalence of mortality for the period of record) if there had been a 25% reduction in *C. shasta* actinospores that NMFS predicts from surface flushing flows. 2019 BiOp at 273-74.

77. For impacts to Chinook that are prey for the Orcas, NMFS set a take limit based

Earthjustice
705 Second Ave., Suite 203
Seattle, WA 98104-1711
(206) 343-7340

on modeled prevalence of *C. shasta* mortality at a specific sampling location. It set the take limit at 53% based on model results indicating that the prevalence of juvenile Chinook mortality would not have exceeded 53% if the Plan had been implemented during the period of record. 2019 BiOp at 278-79.

VI. THE NATIONAL ENVIRONMENTAL POLICY ACT AND KLAMATH PROJECT OPERATIONS.

A. The National Environmental Policy Act's Requirements

78. The National Environmental Policy Act ("NEPA") is our "basic national charter for protection of the environment." 40 C.F.R. § 1500.1(a). Under NEPA, federal agencies must take a hard look at the environmental impacts of their proposed major federal actions before deciding to proceed with the proposed action. 42 U.S.C. §§ 4321, *et seq*. NEPA has two principal purposes: (1) to ensure that an agency, in reaching its decision, will have available, and will carefully consider, detailed information concerning the significant environmental impacts of its proposed actions and alternatives; and (2) to disclose that information to stakeholders and the public so they can play a role in the decision-making process and implementation of the decision.

79. To that end, NEPA requires federal agencies to evaluate and disclose the significant adverse environmental impacts of their proposed actions and alternatives. 42 U.S.C. § 4332(C). If an agency action is likely to have adverse environmental effects that are "significant," they need to be analyzed in an environmental impact statement ("EIS"). 40 C.F.R. § 1501.4. If it is unclear whether the impacts are significant, the agency may prepare an environmental assessment ("EA") to assist in making that determination. *Id.* Based on the EA, the agency can determine whether the action may have significant adverse environmental effects. If the agency determines that the agency action is not likely to have significant environmental impacts in what is called a finding of no significant impact ("FONSI"), then it need not prepare

Earthjustice
705 Second Ave., Suite 203
Seattle, WA 98104-1711
(206) 343-7340

an EIS. In the absence of such a finding or if such a finding flies in the face of evidence of significant environmental impacts, the agency must prepare an EIS.

80. The Council on Environmental Quality ("CEQ") has promulgated regulations implementing NEPA that are binding on all federal agencies. *Andrus v. Sierra Club*, 442 U.S. 347 (1979). The CEQ regulations define significance in terms of the action's context—the setting in which the proposed action will take place—and intensity—the severity of its environmental impacts. 40 C.F.R. § 1508.27(a), (b). CEQ regulations identify the "significance factors" that agencies must consider in determining the intensity of a proposed action's environmental impacts, which includes the degree to which the proposed action may adversely affect a threatened or endangered species or its habitat. 40 C.F.R. § 1508.27(b)(9).

81. An EA, like an EIS, must include a no-action alternative that reflects the status quo at the time a proposed action is being considered. The no-action alternative cannot be an option that has been found to be inadequate by the court. The EA or EIS must compare the effects of the proposed action to the effects of the no-action alternative. This comparison is designed to produce an objective analysis of the effects of the proposed action.

82. The EA must also detail "alternatives to the proposed action." 42 U.S.C. § 4332(C)(iii), (E); 40 C.F.R. § 1508.9(b). NEPA requires federal agencies to "study, develop, and describe appropriate alternatives to recommended courses of action in any proposal which involves unresolved conflicts concerning alternative uses of available resources." 42 U.S.C. § 4332(2)(E); *Western Watersheds Project v. Abbey*, 719 F.3d 1035, 1050 (9th Cir. 2013). CEQ regulations direct federal agencies to discuss "the environmental impacts of the proposed action and alternatives." 40 C.F.R. § 1508.9(b). The discussion of alternatives is "the heart" of the NEPA process and is intended to provide a "clear basis for choice among options by the

Earthjustice
705 Second Ave., Suite 203
Seattle, WA 98104-1711
(206) 343-7340

decisionmaker and the public." 40 C.F.R. § 1502.14. Federal agencies must "[r]igorously explore and objectively evaluate all reasonable alternatives." 40 C.F.R. § 1502.14(a).

B. The Bureau's Past Efforts To Comply With NEPA For Klamath Project Operations.

83. Construction and development of the Klamath Project preceded enactment of NEPA. The Bureau, therefore, does not need to comply with NEPA for routine managerial actions that have been carried out from the outset without change. When operations of pre-NEPA projects change substantially, the agency must determine whether the changes in operations may have significant adverse environmental effects that need to be analyzed under NEPA.

84. The Bureau recognizes that there have been substantial changes in Klamath Project operations that must be assessed under NEPA. EA at 1. Over the last two decades, courts have established and the Bureau has recognized its obligation to ensure operation of the Klamath Project will comply with the ESA and protect Tribal fisheries. These legal obligations have led to substantial changes in operation of the Klamath Project to provide more water to the river to sustain salmon.

85. The Bureau did not prepare an EA or EIS for the 2013-2023 operations plan. The last official reference to a NEPA analysis for Klamath Project operations appears in a 2003 Federal Register notice initiating a scoping process for an EIS. 68 Fed. Reg. 23,761 (May 5, 2003). The notice refers back to earlier notices of intent to prepare an EIS in 1997 and 1999 and to alternatives developed in 2001. There is no public record of any EIS that grew out of these notices. The 2019 EA is the first EA or EIS that the Bureau has completed on Klamath Project operations in at least the last two decades.

C. The Bureau's EA And FONSI On The 2019-2024 Plan

Earthjustice
705 Second Ave., Suite 203
Seattle, WA 98104-1711
(206) 343-7340

86. As part of the process to develop a new operations plan in the reinitiated consultation, the Bureau indicated that it would prepare an EA. On March 4, 2019, the Bureau released a draft EA for public comment. It allowed only 15 days for public comment. Yurok Tribe, PCFFA, and IFR submitted comments on March 19, 2019, the 15-day deadline. The comments objected to the short comment period on a complex project that has such far-reaching and pervasive impacts on Salmon and Orcas, as well as on Yurok fisheries, economic well-being, and way of life. The comments objected to the EA's alternatives analysis because the Bureau eliminated from consideration an alternative that would operate the Klamath Project with the disease management flows required by the 2017 injunction. The comments pointed out that the proposed action would reduce flows that provide juvenile Coho habitat in May and June and would not require dilution flows, as the 2017 injunction did, yet the draft EA failed to evaluate the risks posed by the lower spring flows and lack of mandatory dilution flows. Finally, the comments pointed to the significant adverse environmental effects of the Plan that warrant preparation of an EIS rather than an EA.

87. On April 1, 2019, the Bureau issued a final EA and FONSI. The EA identifies the purpose and need as providing certainty regarding Project operations while complying with the ESA and protecting federally reserved Tribal fishing and water rights. EA at 1-2; FONSI at 1. The no-action alternative would operate the Project under the 2013 biological opinion without any of the 2017 injunction flows. The EA and FONSI find disease risks from the 2019-2024 Plan will be less than the no-action alternative, due to more frequent surface flushing flows. FONSI at 15; EA at 60. Based on this statement, the Bureau made a finding of no significant impact for Plan's impacts on Coho, Chinook, and Orcas. FONSI at 15.

88. The EA eliminates from further analysis an alternative requiring the other disease

Earthjustice
705 Second Ave., Suite 203
Seattle, WA 98104-1711
(206) 343-7340

management flows that were recommended in the Guidance Document and embodied in the 2017 injunction. The sole explanation it offers consists of a bullet point that lists "best available scientific information, hydrologic modeling constraints, unacceptable level of certainty for meeting Project contractual and/or water right delivery obligations, not appropriately protective of Lost River and shortnose suckers." EA at 6. The EA contains no further explanation.

89. The EA and FONSI acknowledge the Bureau's obligation to protect fishery resources of the Yurok Tribe and the other Klamath Basin Tribes, EA at 39-40, and recognize the profound effect salmon declines have had on the Yurok Tribe's culture, traditional and spiritual practices, and economic well-being. EA at 38-40, 73. However, because it believes that the Plan would reduce disease risk compared to the no-action alternative, the Bureau stated there will be no change in fishing opportunities or possibly increased fishing for subsistence, ceremonial, and commercial needs. EA at 73, 75-76; FONSI at 18-19.

CLAIMS FOR RELIEF

ALLEGATIONS COMMON TO ESA CLAIMS

90. Plaintiffs reallege each and every allegation set forth in this complaint.

91. The ESA directs that the Bureau, like other federal agencies,

> shall, in consultation with and with the assistance of the Secretary, insure that any action authorized, funded, or carried out by such agency (hereinafter in this section referred to as an "agency action") is not likely to jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification of habitat of such species which is determined by the Secretary . . . to be critical . . . .

16 U.S.C. § 1536(a)(2).

92. "Action" is defined broadly to encompass "all activities or programs of any kind authorized, funded, or carried out, in whole or in part, by Federal agencies." 50 C.F.R. § 402.02.

93. The Bureau's operation of the Klamath Project is an action over which the Bureau

Earthjustice
705 Second Ave., Suite 203
Seattle, WA 98104-1711
(206) 343-7340

has discretion and control and is subject to ESA Section 7. The Bureau must consult with NMFS over the impacts of its 2019-2024 Plan on listed species, including threatened Coho and endangered Orcas.

94. The Bureau's Plan is likely to adversely affect: (A) Coho Salmon and their critical habitat; and (B) Orcas because of impacts to their Chinook prey. The Bureau initiated formal Section 7 consultation by submitting to NMFS a biological assessment, which found that its proposed operations are likely to adversely affect Coho and their critical habitat. NMFS concurred in that finding. The Bureau's biological assessment asserts that its proposed operations are not likely to adversely affect Orcas. NMFS did not concur in that finding and instead found that the Plan is likely to adversely affect Orcas.

95. The Bureau had a legal obligation to complete formal reinitiated consultation with NMFS on its Plan. To complete the formal reinitiated consultation, NMFS issued a biological opinion, as it is obligated to do, and concluded that the Plan is not likely to jeopardize the continued existence of Coho or Orcas or adversely modify Coho critical habitat. 16 U.S.C. § 1536(b)(3)(A); 50 C.F.R. § 402.14(g)-(h). The biological opinion and accompanying incidental take statement are final agency actions subject to judicial review under the APA. *Bennett v. Spear*, 520 U.S. 154, 175 (1997). The APA authorizes courts to review, hold unlawful, and set aside final agency action, findings, and conclusions that are arbitrary and capricious, an abuse of discretion, or otherwise not in accordance with law. 5 U.S.C. § 706(2)(A).

FIRST ESA CLAIM FOR RELIEF

THE NO-JEOPARDY CONCLUSION IS FLAWED BECAUSE IT IS BASED ON WHETHER IMPACTS WILL BE REDUCED INSTEAD OF WHETHER IMPACTS WILL IMPEDE SURVIVAL OR RECOVERY.

96. The ESA implementing regulations, 50 C.F.R. § 402.02, define "jeopardize the continued existence" as:

Earthjustice
705 Second Ave., Suite 203
Seattle, WA 98104-1711
(206) 343-7340

> to engage in an action that reasonably would be expected, directly or indirectly, to reduce appreciably the likelihood of both the survival and recovery of a listed species in the wild by reducing the reproduction, numbers, or distribution of that species.

97. Under this definition, NMFS must evaluate an action's impacts on both survival and recovery. The Joint NMFS-FWS Consultation Handbook (at xviii-xix) defines "survival" for purposes of the jeopardy analysis as "the condition in which a species continues to exist into the future while retaining the potential for recovery," and as "the species' persistence as listed or as a recovery unit, beyond the conditions leading to its endangerment, with sufficient resilience to allow for the potential recovery from endangerment." *Id.* The fact that an action may be slightly less harmful than the status quo is the wrong question. Continuation of a precarious state may increase the probability of extinction, given the likelihood of chance events, worsening conditions due to climate change, and other threats.

98. The ESA regulations define "recovery" to mean "improvement in the status of listed species to the point at which listing is no longer appropriate under the criteria set out" in the Act. 50 C.F.R. § 402.02. The ESA uses the terms "recovery" and "conservation" interchangeably. It defines "conservation" as "the use of all methods and procedures which are necessary to bring any endangered species or threatened species to the point at which the measures provided pursuant to this chapter are no longer necessary." 16 U.S.C. § 1532(3).

99. Under the regulatory definition of jeopardy, NMFS must assess whether Coho and Orcas will have sufficient numbers, distribution, and productivity to exist in the future with sufficient resilience to allow for the potential for recovery. NMFS must also assess whether the Plan will impede recovery due to its impacts on reproduction, numbers, and distribution.

100. NMFS has developed a viable salmonid population framework to assess how near or far a listed salmon species is from a recovered state in light of current conditions and existing

Earthjustice
705 Second Ave., Suite 203
Seattle, WA 98104-1711
(206) 343-7340

and future threats. This analysis considers abundance, population growth, spatial structure, and diversity. Applying those factors, the 2016 Coho status review found that Coho continue to be at high risk of extinction and have faced a heightened risk to Coho persistence since 2011 due to increased water withdrawals and unprecedented drought conditions impede juvenile rearing and survival. Five-Year Status Review at 47-49.

101. The 2019 biological opinion finds that conditions have worsened since the 2016 status review due to degraded conditions, including from reduced Klamath River flows. Spawner abundance has declined since 2016 and most independent Coho populations are below the number of adult salmon needed for the population's survival. 2019 BiOp at 67.

102. The 2019 biological opinion finds that the Plan will reduce juvenile salmon rearing habitat and expose Coho and Chinook to higher *C. shasta* infection and mortality rates than under natural conditions. 2019 BiOp at 215-17. Nonetheless, the 2019 biological opinion reaches a no-jeopardy conclusion based on NMFS's belief that *C. shasta* disease conditions will improve compared to the period of record. 2019 BiOp at 167-68, 170, 172, 215-17.

103. NMFS identified disease from *C. shasta* as the most significant risk to Coho and found that the Plan will increase disease and disease-related mortality in juvenile Coho compared to natural conditions. 2019 BiOp at 160-61, 215. It believed that the minimum flows and surface flushing flows would reduce disease risks compared to the incidence in recent monitoring. These measures would not eliminate the elevated risks from *C. shasta* or bring them into acceptable levels, but NMFS believed that they would provide a limit to the increase in disease risks. 2019 BiOp at 167. On that basis, NMFS concluded that the Plan is not likely to jeopardize the continued existence of Coho. 2019 BiOp at 167-68, 170, 172, 215-17.

104. This no-jeopardy conclusion is divorced from the regulatory criteria on which a

Earthjustice
705 Second Ave., Suite 203
Seattle, WA 98104-1711
(206) 343-7340

jeopardy determination must be based. It is not based on whether the Plan will appreciably reduce the numbers, reproduction, and distribution of Coho or Orcas below that needed to ensure survival and recovery. Nor is it based on an assessment of the extent to which the Plan will impede attainment of those survival and recovery needs.

105. The 2019 biological opinion's no-jeopardy conclusion is also based on an arbitrary and untenable period of record. Coho salmon have been listed since 1997 and their condition has since become worse. The *C. shasta* monitoring period of record spans 2005-2018, a timeframe when Coho abundance has decreased and *C. shasta* infection and mortality rates have dwarfed natural conditions in most years. The period of record includes 2014 and 2015 when *C. shasta* infection rates reached 81% and 91%. There is no scientific evidence that Klamath River juvenile salmon can withstand repeated years with infection rates at or near the worst years in the period of record, particularly since the year classes of salmon that outmigrated in 2014 and 2015 have been weakened by the high infection rates.

106. Nor did NMFS assess whether such infection rates will impede Coho recovery. The recovery plan identifies *C. shasta* as responsible for most of the mortality of Klamath River juvenile Coho in recent years and establishes a recovery goal of no more than 10% mortality of Coho juveniles from *C. shasta*. Coho Recovery Plan at 3-20, 4-14 & 4-15. The 2019 biological opinion's no-jeopardy analysis never addresses this recovery goal. It lacks any reasoned explanation of how NMFS can allow mortality from *C. shasta* to reach 49% and not impede recovery.

107. Based on its flawed assumption that conditions will improve for Chinook compared to the period of record, NMFS made a no-jeopardy conclusion for the Orcas. NMFS failed to assess whether any such improvement would be sufficient to avoid jeopardy to the

Earthjustice
705 Second Ave., Suite 203
Seattle, WA 98104-1711
(206) 343-7340

Orcas.

108. The Orcas are endangered and at precariously low population levels because of a lack of prey and in particular a lack of Chinook prey. A majority of the Orcas forage off the coast in the winter and spring, including at the mouth of the Klamath River. NMFS found that Klamath River Chinook comprise a sizeable amount of the Chinook available to the Orcas when they are foraging in the area. NMFS also found that the Plan will reduce Chinook abundance and the amount of Chinook available to the Orcas, which will require the orcas to expend more energy foraging and lead to nutritional stress and possibly deteriorating body conditions and risks of starvation. Despite these findings, the 2019 biological opinion concludes that the lack of sufficient Klamath Chinook abundance will not reduce the reproduction, numbers, or fitness of the Orcas.

109. This conclusion is contrary to the best available science, the record, and the required jeopardy analysis. For the Orcas to survive and recover, they need more abundant Chinook stocks and this need is urgent given the recent failed pregnancies, calf mortalities, and the poor condition of individual Orcas. The NOAA Northwest Fisheries Science Center has estimated that the Orcas need a 15% increase in Chinook to meet the population growth goals in the Orca recovery plan. NMFS failed to assess whether the Plan will impede an increase in Chinook abundance to provide prey the Orcas need.

110. NMFS's conclusion that the Plan will not be likely to jeopardize survival or recovery of threatened Coho or endangered Orcas lacks a rational basis, is contrary to the best available science, and fails to comply with ESA Section 7 and its implementing regulations.

Earthjustice
705 Second Ave., Suite 203
Seattle, WA 98104-1711
(206) 343-7340

SECOND ESA CLAIM FOR RELIEF

MAKING DILUTION FLOWS DISCRETIONARY IS CONTRARY TO NMFS'S PAST FINDINGS AND THE BEST AVAILABLE SCIENCE.

111. *C. shasta* infections are the primary limiting factor and threat to Coho survival and recovery. 2013 BiOp at 341, 376; 2019 BiOp at 160, 166-67. The 2014 recovery plan identifies *C. shasta* as responsible for most of the mortality of Klamath River juvenile Coho in recent years. Recovery Plan at 3-20.

112. FWS scientists compiled the best available science on *C. shasta* threats and mitigation measures after the untenable infection rates in 2014 and 2015. The best available science demonstrates that disease management flows are the most effective measures to reduce *C. shasta* infection rates. Dilution flows serve as an emergency measure to dilute and flush out *C. shasta* spores when their density is high and infection rates spike. The independent peer review of the guidance document found strong evidence, both theoretical and empirical, that increasing flow will dilute spore concentrations and reduce infection rates. Peer Review at 9, 13.

113. The 2017 injunction required disease management flows upon concluding that plaintiffs "have convincingly shown that their proposed injunctive flows are based on the best available science and incorporate comments and feedback from experts in the field." *Yurok Tribe*, 231 F. Supp. 3d at 488-89; *accord id*. at 488 ("The FWS memos compile the best available science on *C. shasta* life history, infection rates, and the effect of flushing and dilution flows."). The Court held that: "Plaintiffs have demonstrated that flushing flows and emergency dilution flows would reduce *C. shasta* rates among Coho salmon. There is no meaningful dispute among the parties on this point." *Id*. at 489. The 2017 injunction required emergency dilution flows when *C. shasta* spore concentrations or infection rates exceed certain thresholds, and it required the Bureau to set aside 50,000 acre feet of water for the dilution flows.

Earthjustice
705 Second Ave., Suite 203
Seattle, WA 98104-1711
(206) 343-7340

114. The 2019-2024 Plan does not require dilution flows when infection rates spike, its sets aside no water for dilution flows, and it locks in the irrigation allocation and quantity of water in the EWA as of April 1st, even if hydrologic conditions in May show that more water is needed in the EWA. Whether dilution flows will occur hinges on a real-time disease management process in which scientists recommend mitigation measures, but the Bureau retains the final decision-making authority. Dilution flows, should they occur, will use water from the EWA in May or June and will result in less water being available for other salmon needs later in the season.

115. In signing off on the Bureau's plan to leave dilution flows to the Bureau's discretion in the real-time disease management process, the biological opinion runs counter to the best available science in the FWS memos and independent peer review, which substantiate the need for and efficacy of dilution flows when infection rates spike. While the independent peer review identified ways the particular dilution flow regime could be improved, for example, by including water temperature as a trigger and using more water in a managed dilution flow, it substantiated the efficacy of dilution flows as an emergency disease management tool. Peer Review at 9, 13, 14, 15.

116. The 2019 biological opinion acknowledges this scientific evidence and finds that dilution flows are effective in reducing spore densities and transmission efficiency. 2019 BiOp at 161. Despite this acknowledgement, the 2019 biological opinion leaves dilution flows to the Bureau's discretion under the same real-time disease management process that produced no emergency dilution flows in 2014 and 2015 when infection rates reached 81% and 91%. It is arbitrary and capricious for NMFS to rely on the real-time disease management process to produce additional flows to reduce infection and disease when that process is not reasonably

Earthjustice
705 Second Ave., Suite 203
Seattle, WA 98104-1711
(206) 343-7340

certain to produce the needed flows and, if that process leads to a dilution flow, less water will be available to meet the needs of salmon later in the year than what the biological opinion assumes.

THIRD ESA CLAIM FOR RELIF

NMFS IMPROPERLY CONCLUDED THAT THE PLAN WILL NOT ADVERSELY MODIFY CRITICAL HABITAT WHEN IT WILL FREQUENTLY VIOLATE NMFS'S SALMON HABITAT CONSERVATION STANDARD.

117. A biological opinion must determine whether the action is likely to result in the destruction or adverse modification of critical habitat designated for a listed species. 16 U.S.C. § 1536(a)(2). "Critical habitat" of relevance to this case consists of "specific areas within the geographical area occupied by the species . . . on which are found those physical or biological features (I) essential to the conservation of the species and (II) which may require special management considerations or protection." 16 U.S.C. § 1532(5)(A)(i).

118. NMFS designated critical habitat for SONCC Coho in 1999 and included most of the Klamath River below Iron Gate Dam in the designation. 64 Fed. Reg. 24,049 (May 5, 1999). NMFS identified irrigation water withdrawals and dam operations as "[a]ctivities that may require special management considerations." *Id.* at 24,059.

119. The Coho critical habitat designation uses the term "primary constituent element" to refer to a physical or biological feature essential to the conservation of a species. 2019 BiOp at 56. It identifies juvenile summer and winter rearing areas, juvenile migration corridors, and areas for growth and development to adulthood as primary constituent elements of Coho critical habitat. *Id*. at 67.

120. "Destruction or adverse modification" of critical habitat is a "direct or indirect alteration that appreciably diminishes the value of critical habitat for the conservation of a listed species. Such alterations may include, but are not limited to, those that alter the physical or biological features essential to the conservation of a species or that preclude or significantly

Earthjustice
705 Second Ave., Suite 203
Seattle, WA 98104-1711
(206) 343-7340

delay development of such features." 50 C.F.R. § 402.02. The focus is on altering, precluding, or delaying development of features needed for conservation and ultimately delisting of the species.

121. The early ESA consultations on Klamath Project operations focused on obtaining sufficient flows to inundate and make habitat useable for salmon rearing. Based on a series of comprehensive, peer-reviewed studies by Dr. Hardy to correlate river flows with rearing habitat suitability, NMFS has established a conservation standard of at least 80% of maximum habitat availability. 2019 BiOp at 61-63. NMFS has determined that "at least 80 percent of maximum available habitat provides for the conservation needs of coho salmon." 2019 BiOp at 63. Flows above this threshold are beneficial in maintaining the critical habitat functions and provide "a wide range of conditions and habitat abundance in which populations can grow and recover." 2019 BiOp at 63.

122. To assess the Plan's impacts on salmon rearing habitat, NMFS evaluated how often and to what extent the 80% conservation standard will be met under varying water conditions. NMFS focused on reaches that have relatively high habitat availability and are most influenced because they are closest to Iron Gate Dam, including Trees of Heaven and Seiad Valley. *Id*. NMFS found that the Plan "will generally decrease available juvenile coho salmon habitat from [Iron Gate Dam] to the Middle Klamath River reach" and that "available habitat is reduced below 80 percent of maximum available in most months of the year and in most water year types." 2019 BiOp at 155. The Plan will reduce habitat availability in the Seiad Valley the most, in most years and all months between March and June, *id*. at 202-03, which includes the critical rearing period for coho fry and outmigration time for juveniles. For juveniles in the Seiad Valley reach, the Plan will lead to conditions meeting the conservation standard only 17%

Earthjustice
705 Second Ave., Suite 203
Seattle, WA 98104-1711
(206) 343-7340

of the time between March-June and less than 16% in May-June. *Id*. at 149. In the Trees of Heaven reach, the amount of available habitat will meet the conservation standard only 42% of the time between March-June and less than 37% in May-June. *Id*. at 148. While the 2019 biological opinion discloses that the Plan will lead to violations of the conservation standard most of the time in these reaches, it fails to explain how this failure avoids adversely modifying critical habitat. It never assesses the extent to which failure to provide 80% of maximum available habitat does not alter, preclude, or delay the development of functioning rearing habitat, a primary constituent element of Coho critical habitat.

123. It is arbitrary, capricious, contrary to the best available science and NMFS's own findings, and in violation of the ESA and its implementing regulations, for NMFS to find that the Plan is not likely to adverse modify Coho critical habitat when it will so frequently fail to meet habitat conditions NMFS has found necessary for Coho conservation.

FOURTH ESA CLAIM FOR RELIEF

THE 2019 BIOLOGICAL OPINION'S LIMIT ON TAKE IS INVALID.

124. The ESA prohibits any person from "taking" an endangered species. 16 U.S.C. § 1538(a)(1)(B). Under Section 4(d), 16 U.S.C. § 1533(d), NMFS has the authority to issue regulations extending the take prohibition to threatened species. NMFS has extended the take prohibition to threatened species, including SONCC Coho. 50 C.F.R. § 223.203. Under Section 9(a)(1)(G), it is unlawful to take threatened salmon in violation of this 4(d) regulation.

125. The take prohibition applies to "any person." 16 U.S.C. § 1538(a)(1). The ESA defines "any person" to include "any officer, employee, agent, department, or instrumentality of the Federal Government." 16 U.S.C. § 1532(13). The ESA citizen suit provision authorizes suits to enforce the ESA and its implementing regulations against any person, including federal agencies. *Id*. § 1540(g)(1). The Bureau is a person subject to the ESA take prohibition and to

Earthjustice
705 Second Ave., Suite 203
Seattle, WA 98104-1711
(206) 343-7340

ESA citizen suits.

126. The ESA defines "take" to include "harm." *Id*. § 1532(19). By regulation, NMFS has defined "harm" to include:

> Significant habitat modification or degradation which actually kills or injures fish or wildlife by significantly impairing essential behavioral patterns, including breeding, spawning, rearing, migrating, feeding or sheltering.

50 C.F.R. § 222.102.

127. If a federal action undergoing consultation will take a listed species, the biological opinion must include an "incidental take statement" that specifies the amount and extent of incidental take of the listed species that may occur without causing jeopardy or adverse modification, includes "terms and conditions," and provides for monitoring of take. 16 U.S.C. § 1536(b)(4); 50 C.F.R. § 402.14(i)(1)-(3). The incidental take statement insulates from take liability activities undertaken in compliance with its terms and conditions. 16 U.S.C. § 1536(o)(2); *see* 16 U.S.C. § 1536(b)(4)(C).

128. An incidental take statement serves as a check on the biological opinion's assumptions and conclusions. It must set out a "trigger" that specifies an unacceptable level of take that invalidates the safe harbor and requires the agencies to immediately reinitiate consultation. 50 C.F.R. §§ 402.14(i)(4), 402.16(a).

129. The 2013 Biological Opinion's incidental take statement imposed a limit of 49% on the prevalence of *C. shasta* infections in sampled Chinook, which was the highest prevalence since *C. shasta* monitoring began. NMFS based its take limit on the prevalence of infection data from the well-structured and scientifically sound *C. shasta* monitoring program. In the first two years under the 2013 biological opinion, prevalence of infection rates were 81% and 91%, far in excess of the 49% cap on *C. shasta* infection rates. Because the allowable level of take was exceeded, the Bureau and NMFS had a legal obligation to immediately reinitiate formal

Earthjustice
705 Second Ave., Suite 203
Seattle, WA 98104-1711
(206) 343-7340

consultation on Klamath Project operations. That reinitiated consultation led to the 2019 biological opinion.

130. The 2019 incidental take statement sets a limit for *C. shasta* in Coho and Chinook, but not based on prevalence of infection, like the 2013 incidental take statement. Instead, NMFS used a preliminary draft model that estimates the prevalence of mortality, defined as the predicted proportion of spring/early summer outmigrating juveniles from the Shasta River that suffer *C. shasta* induced mortality. 2019 BiOp at 273. For Coho, NMFS set the take limit at a maximum prevalence of mortality rate of 49%, which it estimated would have been the highest on record using the preliminary draft model, while assuming a 25% reduction in *C. shasta* actinospore concentrations as a result of surface flushing flows. 2019 BiOp at 273-74. For Orcas, NMFS set a take limit of 53% based on prevalence of mortality in Chinook juveniles using the same preliminary draft model. 2019 BiOp at 278-79.

131. The new *C. shasta* take limits lack a rational basis and are not grounded in the best available science. First, setting the take limit at the highest *C. shasta* mortalities estimated to have occurred during the period of record allows an unacceptably high level of take – the death of approximately half of outmigrating juvenile salmon – which could cause adverse population effects and even jeopardy or adverse modification of critical habitat. It would allow a repeat of the 81% and 91% infection rates in 2014 and 2015 because they would not lead to modeled mortalities above the take limit. Yet these high infection rates called into question NMFS's no-jeopardy conclusion in the 2013 biological opinion. Allowing them to occur under the 2019-2024 Plan fails to provide a meaningful limit on harm to salmon and puts already severely weakened salmon populations at risk.

132. Second, the ESA's prohibition on take extends to harm that may not produce

Earthjustice
705 Second Ave., Suite 203
Seattle, WA 98104-1711
(206) 343-7340

mortality. It prohibits injuries that significantly impair essential behavioral patterns. The scientific evidence and NMFS's own findings confirm that *C. shasta* produces sublethal effects, such as impaired growth, swimming performance, and body condition increased stress, and susceptibility to other infections that could lead to mortality, particularly when water temperatures are high. 2019 BiOp at 164. By basing the take limit on the prevalence of mortality, NMFS is missing a substantial amount of the take caused by the Plan.

133. Third, the prevalence of infection rates over the period of record come from actual measured infection rates in the well-designed and scientifically sound *C. shasta* monitoring program. In contrast, NMFS based the mortality take limits on a preliminary draft model that seeks to reconstruct mortality rates during the period of record. Because the preliminary draft model produces prevalence of mortality rates only after the juvenile salmon outmigration has occurred, it cannot be used to trigger the immediate reinitiation of consultation and development of mitigation measures in real-time the way that actual infection monitoring data can and have. In using the preliminary draft model, the Bureau violated its policy of requiring independent peer review of scientific information that has a clear and substantial impact on the Bureau's actions. Reclamation Policy CMP P14, *Peer Review of Scientific Information and Assessments* (2016), https://www.usbr.gov/recman/cmp/cmp-p14.pdf. The Bureau obtained an independent peer review of the Guidance Document because of the role it plays in decisionmaking concerning Klamath Project operations, but did not obtain a peer review of preliminary draft model used to establish the incidental take statement's take limit.

134. The 2019 limits on take are arbitrary, capricious, contrary to the best available science, and in violation of the ESA and its implementing regulations.

ALLEGATIONS COMMON TO NEPA CLAIMS

135. Plaintiffs re-allege each and every allegation set forth in this complaint.

Earthjustice
705 Second Ave., Suite 203
Seattle, WA 98104-1711
(206) 343-7340

136. NEPA requires federal agencies to prepare an EIS for "major Federal actions significantly affecting the quality of the human environment." 42 U.S.C. § 4332(2)(C). Federal agencies may prepare an EA to determine whether the environmental impacts of an agency action are significant and warrant an EIS. 40 C.F.R. § 1501.4(b), (c); § 1508.9. If the EA demonstrates that the proposed action might cause significant environmental impacts, then the agency must prepare an EIS before taking the proposed action. But, if based on the EA, the agency concludes that the proposed action will likely not have significant environmental impacts, then the agency may issue FONSI and need not prepare an EIS. 40 C.F.R. § 1508.13.

137. NEPA provides that agencies must "study, develop, and describe appropriate alternatives to recommended courses of action in any proposal which involves unresolved conflicts concerning alternative uses of available resources." 42 U.S.C. § 4332(2)(E). This requirement applies to the preparation of an EA. *Western Watersheds Project*, 719 F.3d at 1050. An EA must discuss "the environmental impacts of the proposed action and alternatives." 40 C.F.R. § 1508.9(b). An agency's failure to consider a viable alternative is fatal to the sufficiency of its analysis of the environmental impacts of its proposed action.

138. The Bureau is a federal agency subject to NEPA. The Plan is a major federal action under NEPA. Because construction of the Klamath Project preceded enactment of NEPA, the Bureau does not need to comply with NEPA for routine maintenance of the project, but it has a legal obligation to comply with NEPA when operations change substantially. The amount of water withdrawn for irrigation as part of Klamath Project operations has increased since NEPA was enacted, particularly in dry years. 2019 BiOP at 107. NMFS expects this trend to continue. *Id*. Since the Coho listing and as a result of court decisions holding that the Bureau has fallen short of its ESA obligations, the Bureau has made substantial changes to its project

Earthjustice
705 Second Ave., Suite 203
Seattle, WA 98104-1711
(206) 343-7340

operations. The Bureau develops an operations plan to try to provide for the needs of endangered suckers in Upper Klamath Lake and Klamath River Salmon while still delivering large volumes of water for agriculture. This plan has far-reaching impacts on the lake, the river, threatened and endangered fish species, and the Tribal communities and commercial fishing families that depend on them. The Bureau has a legal obligation to comply with NEPA when it adopts an operations plan for the Klamath Project. The Bureau acknowledges this obligation. EA at 1.

139. The Bureau prepared an EA on its Plan. Its no-action alternative consists of Project operations under the 2013 biological opinion without any of the disease management flows required under this Court's 2017 injunction. The EA eliminated from further consideration an alternative that would include operating the Klamath Project with the disease management flows that were recommended in the Guidance Document and embodied in the 2017 injunction.

140. The Bureau finalized its EA and issued a finding of no significant impact on April 1, 2019. It found that, under the Plan, disease risks would be lessened compared to the no-action alternative due to more frequent surface flushing flows. Based on this comparison, NMFS concluded that Coho, their critical habitat, and Chinook that are prey for orcas are expected to be less adversely impacted than under the no-action alternative. It relied on the more frequent surface flushing flows compared to what was required before this Court's injunction to conclude that Tribal fishing opportunities would either be unchanged or increase. Based on these conclusions, the Bureau issued a FONSI and decided not to prepare an EIS.

141. Upon completion of the EA and FONSI and the 2019 biological opinion, the Bureau began operating the Klamath Project in accordance with the Plan. It will continue to conduct operations in accordance with the Plan and 2019 biological opinion for the next five

Earthjustice
705 Second Ave., Suite 203
Seattle, WA 98104-1711
(206) 343-7340

years.

142. Under the APA, courts may review final agency actions and hold unlawful and set aside final agency action, findings, and conclusions that are arbitrary and capricious, an abuse of discretion, or otherwise not in accordance with law. 5 U.S.C. § 706(2)(A). The APA provides for judicial review of the Bureau's EA and FONSI.

FIRST NEPA CLAIM FOR RELIEF

THE EA FAILED TO COMPARE THE PLAN TO THE COURT-ORDERED DISEASE MANAGEMENT FLOWS AS EITHER THE NO-ACTION-ALTERNATIVE OR ANOTHER ALTERNATIVE.

143. The discussion of alternatives is the heart of the NEPA process and is intended to provide a clear basis for choice among options by the decision-maker and the public. 42 U.S.C. § 4332(C)(iii), (E); 40 C.F.R. § 1502.14. An agency must fully and meaningfully consider all reasonable alternatives. The scope of reasonable alternatives encompasses those that are practical or feasible. Failure to examine a viable alternative will render an EA inadequate.

144. In an EA, the range of alternatives must include a no-action-alternative. CEQ's guidance describes the no-action-alternative as the status quo or the current course of action at the time the proposed action is being considered. *Forty Most Asked Questions Concerning CEQ's National Environmental Policy Act Regulations*, 46 Fed. Reg. 18027 (March 23, 1981). The no-action-alternative cannot embody an action that a court has found to be inadequate.

145. An EA, like an EIS, compares the effects of the no-action-alternative to the effects of the proposed action and often other viable alternatives. The comparison serves to produce an objective analysis and disclosure of the effects of the proposed action.

146. The EA's no-action-alternative consists of operation of the Klamath Project under the 2013 biological opinion. In 2017, this Court held that NMFS and the Bureau had to reinitiate formal consultation on Klamath Project operations after infection rates exceeded the 49% take

Earthjustice
705 Second Ave., Suite 203
Seattle, WA 98104-1711
(206) 343-7340

limit. This Court issued an injunction that required the Bureau to implement winter-spring flushing flows to disrupt the habitat that supports the *C. shasta* carriers, as well as dilution flows to move *C. shasta* spores downstream if the infection rates spiked. Accordingly, the status quo included both operation of the Klamath Project in accordance with the 2013 biological opinion and the disease management flows ordered by this Court. The no-action-alternative does not reflect the status quo or management of the Klamath Project at the time the EA was finalized.

147. The EA also eliminated the operation of the Klamath Project with the court-ordered disease management flows from further consideration as an alternative. The Bureau's reasoning for doing so consists of only a single bullet point listing several cryptic items. The EA contains no further explanation and therefore lacks a reasoned explanation for eliminating the court-ordered disease management flows from further consideration as an alternative.

148. In the bullet point, the EA lists "best available scientific information" as a reason to eliminate the court-ordered disease management flows as an alternative. This Court selected injunction flows based on the Guidance Document, which it found to be the "best available science." The independent peer-review of the Guidance Document found the recommended measures to be comprehensive, scientifically sound, and well supported by scientific data. By listing "best available scientific information" as a reason not to consider the court-ordered disease management flows as an alternative, the EA fails to address and runs counter to the evidence before it.

149. The injunction flows are a viable alternative to the Plan. They have been the status quo since the Bureau was ordered to implement them under the 2017 injunction. In addition, implementation of the disease management flows is consistent with the Plan objectives, which include fulfilling the Bureau's obligation to protect Coho and Orcas as required under the

Earthjustice
705 Second Ave., Suite 203
Seattle, WA 98104-1711
(206) 343-7340

ESA and its Tribal trust responsibility. The reasons the EA offers for eliminating the disease management flows as an alternative are conclusory, lack support in the record, and are contrary to this Court's findings as well as those in the independent peer review. By failing to analyze the Plan with the disease management flows as either the no-action-alternative or another alternative, the Bureau acted arbitrarily, capriciously, and contrary to NEPA and the CEQ regulations.

SECOND NEPA CLAIM FOR RELIEF

THE FINDING OF NO SIGNIFICANT IMPACT IS UNLAWFULLY BASED ON A BELIEF THAT CONDITIONS WILL IMPROVE, NOT THAT THE IMPACTS WILL BE INSIGNIFICANT.

150. A federal agency must prepare an EIS on a major federal action if it may have significant environmental impacts. The fact that an action may decrease adverse environmental effects does not necessarily mean the remaining effects are insignificant.

151. The Bureau found that its Plan would improve conditions compared to the no-action-alternative, which is implementation of the 2013 biological opinion. The Bureau never prepared an EA or EIS on the operations embodied in the 2013 biological opinion. The EA, therefore, could not tier to an earlier NEPA analysis and focus only on impacts beyond those under the 2013 biological opinion. In addition, because the no-action-alternative does not reflect the status quo, it formed a fictional point of comparison.

152. Even if conditions might improve compared to a risky and harmful baseline, such an improvement does not mean no significant environmental impacts remain. A decrease in risks and harm compared even to a valid no-action-alternative does not ask the right question. The Bureau had to assess whether the Plan raises a substantial question as to whether the Plan may cause significant adverse environmental effects. By focusing solely on its belief that there would be some improvement over operations that fell short, the Bureau failed to evaluate and determine whether its Plan may have significant environmental impacts.

Earthjustice
705 Second Ave., Suite 203
Seattle, WA 98104-1711
(206) 343-7340

153. Recent history demonstrates that the Bureau's operation of the Klamath Project has pervasive, negative effects on Klamath River salmon. Adding a few measures to lessen those negative effects may improve conditions, but that does not mean no significant environmental effects remain. The Bureau acted arbitrarily, capriciously, and contrary to NEPA and the CEQ regulations in finding no significant impact based on its belief that there will be some improvements compared to operations under the 2013 biological opinion.

THIRD NEPA CLAIM FOR RELIEF

BECAUSE THE BUREAU'S 2019-2023 PLAN MAY HAVE SIGNIFICANT ADVERSE ENVIRONMENTAL IMPACTS, AN EIS MUST BE PREPARED.

154. CEQ has promulgated binding regulations that establish the requirements for federal agency compliance with NEPA. The CEQ regulations define significance in terms of context—the setting in which the proposed action will take place—and intensity—the severity of the proposed action's impact. 40 C.F.R. § 1508.27. Intensity is evaluated under the "significance factors" set out by the CEQ regulations, which includes "[t]he degree to which the action may adversely affect an endangered or threatened species or its habitat that has been determined to be critical." *Id.* § 1508.27(b)(9). The presence of one significance factor may be sufficient to require preparation of an EIS.

155. The Bureau disregarded this significance factor in making its finding of no significant impact. Instead, its FONSI is based on its belief that disease conditions would improve compared to the past. The EA and 2019 biological opinion confirm that the Plan may, and indeed is certain to, have significant adverse environmental effects.

156. Operation of the Klamath Project has had far-reaching and pervasive impacts on salmon populations. Low flows caused by the Klamath Project diminish the habitat needed for fry and juvenile salmon rearing. The Klamath Project has reduced winter and spring flows,

Earthjustice
705 Second Ave., Suite 203
Seattle, WA 98104-1711
(206) 343-7340

which has led to a substantial increase in *C. shasta* infections—the most significant threat to juvenile Coho Salmon. 2019 BiOp at 376.

157. While the 2019-2024 Plan will increase the frequency of surface flushing flows compared to the 2013 biological opinion, the Bureau has eliminated the dilution flows required under this Court's 2017 injunction. Under the 2013 plan, which similarly did not set aside water for dilution flows, the Bureau did not release emergency dilution flows when infection rates reached 81% in 2014 and 91% in 2015. Under the 2019-2024 Plan, *C. shasta* infection and mortality rates will remain far greater than natural levels and far higher than the recovery plan targets. Juvenile salmon will continue to experience sub-lethal effects of *C. shasta* infections that impair growth and swimming ability and increase stress and susceptibility to secondary infections. The Plan also will result in low spring flows that diminish rearing habitat for juvenile salmon.

158. Coho Salmon are in a precarious state. Their condition has worsened in recent years. Operating the Klamath Project without the safeguards imposed by this Court will perpetuate this precarious state and may make it worse.

159. Endangered Orcas depend on Chinook, including from the Klamath River, for their sustenance, and desperately need more abundant Chinook stocks. Implementation of the Plan will reduce Chinook abundance compared to the abundance that could be achieved with more safeguards.

160. The CEQ regulations treat an action as significant based on the degree of its adverse effects on endangered or threatened species or critical habitat. 40 C.F.R. § 1508.27(b)(9). The only defensible conclusion is that the Plan may, and is certain to, have significant adverse effects on Coho, Chinook, and Orcas. The Bureau's conclusion that the Plan

Earthjustice
705 Second Ave., Suite 203
Seattle, WA 98104-1711
(206) 343-7340

would not have significant adverse impacts is arbitrary, capricious, and contrary to NEPA and the CEQ regulations.

PRAYER FOR RELIEF

WHEREFORE, plaintiffs respectfully request that this Court:

A. Declare that the 2019 biological opinion is arbitrary, capricious, and contrary to the ESA and its implementing regulations in violation of the APA, 5 U.S.C. § 706(2)(A),

B. Declare that the limits NMFS set for allowable take in the incidental take statement accompanying the 2019 biological opinion are arbitrary, capricious, and contrary to the ESA and its implementing regulations in violation of the APA, 5 U.S.C. § 706(2)(A),

C. Vacate the 2019 biological opinion and take limits and remand to NMFS with instructions for NMFS to reopen and complete the reinitiated consultation;

D. Reinstate the 2017 injunction issued by this Court for duration of the reinitiated consultation;

E. In the alternative, enjoin the Bureau to provide sufficient flows to prevent irreparable harm to Coho and Orcas during the time it will take to complete reinitiated formal consultation;

F. Declare the Bureau's EA and FONSI arbitrary, capricious, and contrary to NEPA and the CEQ regulations in violation of the APA, 5 U.S.C. § 706(2)(A), and remand to the Bureau with instructions to prepare an EIS on the 2019-2024 Plan.

G. Award plaintiffs their reasonable fees, expenses, costs, and disbursements, including attorneys' fees associated with this litigation under the Equal Access to Justice Act 28 U.S.C. § 2412; and

Earthjustice
705 Second Ave., Suite 203
Seattle, WA 98104-1711
(206) 343-7340

H. Grant plaintiffs such further and additional relief as the Court may deem just and proper.

DATED this 31st day of July, 2019.

Respectfully submitted,

/s/ Kristen L. Boyles
KRISTEN L. BOYLES (CSBA # 158450)
PATTI A. GOLDMAN (WSBA # 24426)
[Pro Hac Vice Admission Pending]
ASHLEY BENNETT (WSBA # 53748)
[Pro Hac Vice Admission Pending]
Earthjustice
705 Second Avenue, Suite 203
Seattle, WA 98104
Ph: (206) 343-7340 | Fax: (206) 343-1526
kboyles@earthjustice.org
pgoldman@earthjustice.org
abennett@earthjustice.org

Attorneys for Plaintiffs Pacific Coast Federation of Fishermen's Associations, Institute for Fisheries Resources, and Yurok Tribe

/s/ Amy Cordalis
AMY CORDALIS (CSBA # 321257)
Yurok Tribe
190 Klamath Blvd.
P.O. Box 1027
Klamath, CA 95548
Ph: (707) 482-1350 | Fax: (707) 482-1377
acordalis@yuroktribe.nsn.us

/s/ Daniel Cordalis
DANIEL CORDALIS (CSBA # 321722)
Cordalis Law, P.C.
2910 Springer Drive
McKinleyville, CA 95519
Ph: (303) 717-4618
dcordalislaw@gmail.com

Attorneys for Plaintiff Yurok Tribe