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IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF OREGON

NATIONAL WILDLIFE FEDERATION,
et al.

Plaintiffs,

and

STATE OF OREGON, et al.

Intervenor-Plaintiffs,

v.

**NATIONAL MARINE FISHERIES
SERVICE,** et al.,

Defendants,

and

PUBLIC POWER COUNCIL, et al.,

Intervenor-Defendants.

Case No. 3:01-cv-00640-SI

OREGON'S 2025 MOTION FOR
PRELIMINARY INJUNCTION AND
SUPPORTING MEMORANDUM

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**MOTION FOR PRELIMINARY INJUNCTION FOR VIOLATIONS OF THE
ENDANGERED SPECIES ACT**

Pursuant to Fed. R. Civ. P. 65, Intervenor-Plaintiff State of Oregon (“Oregon”) hereby moves the Court for a preliminary injunction against Federal Defendants to address their violations of Section 7 of the Endangered Species Act (“ESA”), 16 U.S.C. § 1536 (a)(2), arising from the U.S. Army Corps of Engineers’ (“Corps”) and Bureau of Reclamation’s (“BOR”) (collectively, “Action Agencies”) Joint Record of Decision for Columbia River System Operations (“ROD”), dated September 28, 2020, which relies on the Biological Opinion for Continued Operation and Maintenance of the Columbia River System issued by the National Marine Fisheries Service (“NMFS”), dated July, 2020 (“2020 BiOp”).¹

As set forth in detail in the Proposed Order² filed herewith, Oregon respectfully asks the Court to order Federal Defendants to:

1. Expand spill operations at the eight mainstem dams on the lower Columbia River (“LCR”) and lower Snake River (“LSR”);
2. Operate the LSR reservoirs at Minimum Operating Pool (“MOP”) with a 1-foot operating range for the spring and summer seasons;
3. Operate the McNary, The Dalles, and Bonneville reservoirs at near MOP³ with a 1.5-foot operating range for the spring and summer seasons;

¹ This motion does not address all of Oregon’s claims for violations of the ESA, nor any of its claims for violations of the National Environmental Policy Act (“NEPA”), 42 U.S.C. § 4321, *et seq.* Oregon does not waive any of its claims and will address them in further proceedings in this case.

² Because of the level of detail required to explain Oregon’s requested relief, the specifics of the relief sought are identified in the Proposed Order.

³ “Near MOP” means a combination of the reservoir’s lowest normal (i.e., recent) operating elevation and MOP with a 1.5-foot operating range allowance. Proposed Order § II. Lowest normal operation elevations for those reservoirs are as follows: McNary (337 feet above mean sea level); The Dalles (155 feet above mean sea level); Bonneville (71.5 feet above mean surface level). *Id.*

4. Operate John Day Reservoir at Minimum Irrigation Pool (“MIP”) with a 1.5-foot operating range from March 1 through June 15; and at 1-foot above MIP with a 1.5-foot operating range from June 16 through August 31;
5. Prepare a plan detailing actions necessary to operate the John Day reservoir at MOP with a 1.5-foot operating range for both the spring and summer seasons, with a presumptive requirement to implement any water supply mitigation actions;
6. Undertake critical fish passage infrastructure repair and maintenance;
7. Undertake additional specified emergency conservation measures.

Oregon’s Motion is supported by the accompanying Memorandum, the Declaration of Edward Bowles (“Bowles Decl.”), and the Proposed Order.

CONFERRAL CERTIFICATION

In compliance with LR 7-1(a), Oregon conferred with counsel for the Corps, BOR and NMFS (collectively, “Federal Defendants”) on September 30, 2025 (prior to the lapse in appropriations). Federal Defendants will oppose the motion. On October 1, 2025, Plaintiffs and Oregon convened a conferral call open to counsel for all parties. Oregon’s understanding is that, like Federal Defendants, all Defendant-aligned parties are likely to oppose the motion upon reviewing the specific relief requested.

MEMORANDUM IN SUPPORT

INTRODUCTION

For more than thirty years, the federal agencies responsible for operating the Columbia and Snake River dams have struggled, and failed, to develop and implement operations that comply with the ESA. Since 1993, three different federal district court judges have invalidated six biological opinions (“BiOps”) issued by NMFS—in the years 1993, 2000, 2004, 2008, 2010 and 2014—for failing to ensure that operation of the Columbia River System (“CRS”) is not likely to jeopardize listed salmon and steelhead. Over these decades, as Federal Defendants have

wasted precious time interpreting and reinterpreting the ESA and its regulations, listed salmon and steelhead impacted by the CRS have suffered ongoing decline and currently teeter on the brink of extinction. The adverse impacts of climate change deepen the crisis for listed fish and intensify the urgent need for the Federal Defendants to comply with their legal obligations.

In the 2020 BiOp and ROD, history repeats itself. Instead of remedying the legal errors this Court identified in its Opinion and Order invalidating the 2014 BiOp, Federal Defendants chose to cast aside previous analytical frameworks, set an even lower bar for jeopardy, and abandon the recovery analysis. Despite the listed species' highly degraded population status and high risk of extinction, Federal Defendants concluded that the continuation of status quo operations is not likely to jeopardize any listed species nor adversely modify or destroy their critical habitat. In so doing, Federal Defendants failed to adhere to even the unlawfully-permissive ESA regulations then in place. They also employed a comparative jeopardy framework similar to the framework used in the 2004 BiOp, which Judge Redden described as “a cynical and transparent attempt to avoid responsibility for the decline of listed Columbia and Snake River salmon and steelhead.” *NWF v. NMFS*, 839 F. Supp. 2d 1117, 1130 (D. Or. 2011) (hereafter “*NMFS IV*”).

In prior decisions, the Court has repeatedly emphasized the urgent need for Federal Defendants to prioritize listed salmon and steelhead rather than status quo operations. The 1993 BiOp was “seriously, significantly, flawed because it [was] too heavily geared towards a status quo that has allowed all forms of river activity to proceed in a deficit situation—that is, relatively small steps, minor improvements and adjustments—when the situation literally cries out for a major overhaul.” *Idaho Dep’t of Fish and Game v. NMFS*, 850 F. Supp. 886, 900 (D. Or. 1994) (hereafter “*IDFG*”), *remanded by* 56 F.3d 1071 (9th Cir. 1995) (internal quotations omitted). Decades later, the 2014 BiOp still focused “essentially on the same approach to saving the listed species—hydro-mitigation efforts that minimize the effect on hydropower generation operations with a predominant focus on habitat restoration. These efforts have already cost billions of

dollars, yet they are failing.” *NWF v. NMFS*, 184 F. Supp. 3d 861, 876 (D. Or. 2016) (hereafter “*NMFS V*”). Like earlier BiOps, that 2014 BiOp failed to comply with the ESA. Many of the errors identified by this Court in invalidating prior BiOps are repeated in the 2020 BiOp and ROD. Rather than “break[ing] through any logjam that simply maintains the precarious status quo,” *id.* at 876, the 2020 BiOp and ROD authorize operations that will increase harm to fish, particularly in the context of already low population abundances, climate change, and the last 30 years of illegal operation of the dams.

The CRS operations evaluated in the 2020 BiOp and selected in the ROD do not contain necessary and legally required measures to protect listed fish. Instead, they continue the interim “flexible spill operation” negotiated by Oregon, the Nez Perce Tribe, Washington, and Federal Defendants in 2018 (“Flex Spill Agreement”), which was never intended to be the long-term solution itself. The Flex Spill Agreement did not supply the needed fish benefits to ensure that the CRS is not likely to jeopardize listed fish or adversely modify critical habitat.

Federal Defendants’ analysis—and the basis for their no-jeopardy conclusion—is even more concerning than in prior BiOps because the Selected Alternative only commits to one year of known operations, and calls for “adaptive implementation” of the flexible spill operation between 2021 and 2035. The adaptive implementation process is undefined, provides no minimum spill operation or contingency plan, and expressly constrains conservation actions to ensure that BPA is no worse off financially than it was under the 2018 spill injunction.

By adopting an amorphous and unenforceable adaptive implementation plan, the Action Agencies are essentially saying “trust us” to take necessary steps to protect threatened and endangered species. History has shown that they are not deserving of that trust. Over twenty five years ago, NMFS recognized that “breaching the four lower Snake River dams would provide more certainty of long-term survival and recovery than would other measures,” and therefore committed to a contingency plan that would allow for speedy Congressional authority to breach the lower Snake River dams if the reasonable and prudent alternative (“RPA”) actions

did “not provide the anticipated survival rate increases, or [if] subsequent information shows the predicted improvements are inadequate.” 2000 BiOp Section 9.1.7 at 9-5. Now, after many years of small tweaks to status quo operations, listed fish remain in perilous condition and many populations precipitously declined since the 2014 BiOp. Instead of following through on their decades-old commitment to seek congressional authority for dam breach, the Federal Defendants adopted a ROD and issued a BiOp that contain no contingency plan to protect listed species from further declines, much less a long-term solution.

CRS operations authorized under the 2020 BiOp and ROD will cause irreparable harm to listed fish during the pendency of this case. Oregon’s requested injunctive relief will reduce, but not eliminate, that harm. Until Federal Defendants comply with their legal obligations and develop a long-term solution, it is imperative that the Court order key near-term measures to protect listed fish from further declines and likely extinction. Oregon’s requested relief focuses on measures that maximize benefits to the fish within the existing configuration of the eight mainstem dams. Increasing spill and decreasing fish travel time have long been recognized as effective conservation measures to benefit listed fish, and they continue to be the focus of Oregon’s requested relief. Some elements of Oregon’s requested relief seek reinstatement of requirements designed to benefit fish that were previously implemented by the Corps but, over time, were modified or eliminated to benefit power generation or other authorized purposes of the CRS. Oregon also requests that the Court order Federal Defendants to take certain non-operational conservation measures that will ensure spill and fish travel time benefits are realized or otherwise reduce the negative impact of the CRS on listed species in the short term. Given the dire situation faced by listed populations and the wholly inadequate alternative selected by the Federal Defendants, it is imperative to restore the environmental protections for fish that were rolled back from previous BiOps because of non-biological considerations.

Like the Flexible Spill Agreement negotiated as an interim measure in 2018, implementation of the requested relief will not cure Federal Defendants’ violation of the ESA.

Nor will it provide adequate protection for listed populations. But until there is a comprehensive long-term solution, and pending permanent injunctive relief, it is imperative that Federal Defendants implement key stop-gap measures identified in the Proposed Order to reduce CRS operations' irreparable harm to listed salmon and steelhead.

BACKGROUND

I. Status of the listed species.

A. The status of many listed populations has declined even further since issuance of the 2014 BiOp.

In its decision invalidating the 2014 BiOp, the Court found that listed fish were imperiled based on, among other things, the overall viability rating of the species as reported in NMFS' 5-year status review completed in 2011. *See NMFS V*, 184 F. Supp. 3d at 880, 890 (citing 2014 BiOp at 71, Table 2.1-1); *see also id.* at 872, 876, 879, 891, 918, 948 (citing relevant data). NMFS has issued two 5-year reviews since then. NMFS issued a 5-year review of Snake River sockeye, Chinook and steelhead in 2016 on which it relied in the 2020 BiOp and in which it found that the overall viability ratings for the listed species have not improved. Bowles Decl. ¶ 5. In its 2016 review, NMFS found all populations of Snake River spring/summer Chinook, except one, to be at high risk of extinction or functionally extirpated. *See* 2020 BiOp at 104, Table 2.2-2 [ACE001056323];⁴ Bowles Decl. ¶ 5. Additionally, NMFS found the Snake River sockeye salmon Evolutionary Significant Unit ("ESU") remained at a high risk of extinction. 2020 BiOp at 436 [ACE001056655]; Bowles Decl. ¶ 5. NMFS' most recent 5-year status review of Snake River fall Chinook, sockeye, spring-summer Chinook, and steelhead, issued in 2022, found no substantive improvement in the status of listed fish. Bowles Decl. ¶ 6. Among other things, NMFS found that the majority of spring-summer Chinook were still at high risk of extinction and Snake River sockeye were still at extreme risk of extinction. *Id.*

⁴ Citations to the 2020 BiOp, 2020 ROD and EIS are to the Corps' Administrative Record and are in the form "ACE" with a Bates-stamped page number. Citations to NMFS' Administrative Record in this Motion are in the form of "NMFS" with a Bates-stamped page number.

Since issuance of the 2014 BiOp, several listed populations have either declined dramatically in abundance or continued to persist at perilously low levels, and populations that have seen improvements have only seen marginal improvements. *Id.* ¶ 7. Several listed species of salmon and steelhead have experienced such significant declines that they tripped the “Early Warning Indicator” and “Significant Decline Trigger” of the Adaptive Management Implementation Plan (“AMIP”) used in prior BiOps. *Id.* The Significant Decline Trigger was purportedly a crisis safety net, which was not expected to be triggered any time in the near future. *Id.* ¶¶ 7–8. As stated in the AMIP itself, the Significant Decline Trigger indicates that

the observed condition [is] a significant deviation from the biological expectations in the 2008 BiOp (NMFS 2008). If it were to persist despite the AMIP’s short and long-term contingency actions, it could call into question the BiOp’s No Jeopardy conclusion for one or more species, resulting in the reinitiation of consultation.

Id. ¶ 7 (quoting AMIP at 31, AA 2009 at 31). Notably, NMFS abandoned the AMIP altogether without explanation or replacement in the 2020 BiOp. Bowles Decl. ¶ 9.

The 2020 BiOp predicts that most listed salmon and steelhead populations migrating past the CRS dams will continue to be dangerously low in abundance under the proposed action. *See id.* ¶ 10. Extinction risk is heightened with the increasing magnitude, frequency, scope, and duration of downturns in abundance. *Id.* ¶ 11. Most listed species have experienced several downturns in abundance since the mid-1990s. *Id.* Notably, the recent downturn for many populations has been as significant as the downturn that resulted in ESA listing. *Id.* And the increasing frequency and magnitude of unfavorable environmental conditions exacerbates the population declines. *Id.* ¶¶ 12-13.

B. An alarming number of populations are currently at or below Critical Abundance and/or Quasi Extinction Thresholds.

Both Critical Abundance Thresholds (“CATs”) and Quasi Extinction Thresholds (“QETs”) are indices that biologists consider when evaluating a population’s and stock’s risk of collapse. *See* Bowles Decl. ¶ 22. CAT is reached when a population dips below 500 spawners

and represents an initial alarm for heightened extinction risk. *Id.* It requires urgent action to avoid additional population decline and lift the population above the threshold. *Id.* At least 80% of Snake River spring-summer Chinook and summer steelhead are below CAT and have been for several years. *Id.* Rising above CAT for these populations is not expected in the near term. *Id.*

QETs are even more dire than CATs and represent potential tipping points for population collapse in which avoidance of absolute extinction can no longer be assumed or predicted, even with improved conditions. *Id.* ¶ 26. When a population is below QET, it is more vulnerable to demographic, genetic and environmental risks, which can amplify the risk of extinction. *Id.* ¶ 23. Accordingly, conservation scientists typically use QET, not zero fish, as the “floor” for assessing extinction risk and population viability. *Id.* ¶ 26. The NMFS’ Technical Recovery Team uses 50 adult spawners per year for four consecutive years as their criteria for QET. *Id.* The NMFS’ Technical Recovery Team generally requires the probability of extinction (i.e., QET) to be 5% or less for 24, 50, or 100 years. *Id.* Multiple listed fish populations have already fallen below QET. Thirteen percent of listed spring-summer Chinook populations are at QET and 33% are projected to fall to QET by 2029. *Id.* ¶ 31. Seven percent of listed Snake River steelhead are at QET and 33% are projected to fall to QET by 2029. *Id.*

It is alarming when any population falls below QET or CAT. *Id.* ¶ 25. But when multiple populations fall below or are projected to fall below these indices of extinction risk, it is particularly alarming and further raises the need for urgent corrective action. *Id.* Avoiding the loss of even one population within a species is critical. *Id.* ¶ 21. Every existing population is vital to the persistence and health of the species because every population is critical for abundance, productivity, spatial structure, and diversity. *Id.* Yet the data and analyses indicate that multiple populations of listed fish are already below QET or CAT, with more projected on the horizon. This raises a cause for alarm that already imperiled listed species could lose one or more constituent populations in the near future. *Id.* ¶¶ 28, 31, 33. Although recent QET analyses indicate minor improvement for some populations from prior analyses, temporarily

improved ocean conditions, such as those observed in 2021, likely caused the improvement. *Id.* ¶ 32. Reliance on such temporary environmental improvements is neither sustainable nor prudent. *Id.* Rather, many populations of listed fish are at extinction crisis levels that are unlikely to be able to sustainably improve without urgent action. *Id.* ¶ 33. Many listed fish have already reached the QET tipping point, which not only accelerates extinction risk but also heightens the likelihood that populations may no longer be able to respond favorably to improved conditions. *Id.* ¶ 23. The magnitude, scope, duration, and frequency of these population declines is directly related to the risk of imminent collapse and, in the case of the listed species at issue here, all of those factors point toward the need for immediate action. *Id.* ¶ 33.

C. Smolt-to-Adult Returns (“SARs”) are too low for survival and recovery of listed species.

For a salmonid population to grow, more adult progeny (recruits) must consistently return to spawn than the number of parents that produced them. Bowles Decl. ¶ 34. Production of recruits depends on: (1) the number of eggs that survive to become out-migrating juveniles (“smolts”) per spawner; and (2) the survival of those smolts to adulthood (“SAR”). *Id.* SARs are an important measure of hydrosystem effects on life-cycle survival of salmonid populations. *Id.* ¶ 35. SARs include multiple sources of mortality in addition to the CRS, but the smolt-to-adult stage is important for understanding CRS impacts on listed fish because it includes all sources of mortality (direct and delayed or indirect) associated with the hydrosystem. *Id.*

A SAR of 2% is the low point of the range of SARs necessary for populations to maintain their abundance and avoid population decline. *Id.* ¶ 36. A SAR of 2% means that only two adult fish return out of every 100 fish that migrate through the CRS as juveniles. *Id.* ¶ 35. A SAR of 2% is not a target but, rather, the minimum SAR during unfavorable environmental conditions. *Id.* ¶ 36. At low abundances, maintaining at least a SAR of 2% is critically important because the population cannot afford further declines without heightened extinction risk. *Id.*

SARs for Snake River salmon and steelhead are particularly concerning. *Id.* ¶¶ 37–39. From 1994–2023, the geometric mean SAR for PIT-tagged wild Snake River spring-summer Chinook was 0.77%, well below both the 4% average SAR objective and the 2% minimum SAR objective. *Id.* ¶ 38. For that same period, the 2% minimum SAR was only reached in 2 years. *Id.*

Similarly, SARs for wild Snake River summer steelhead have also experienced a precipitous decline and continued depression most often below the minimum 2% SAR. *Id.* ¶ 39. From 1997–2017, the geometric mean SAR for PIT-tagged steelhead was 1.31%— again significantly below the 2% minimum SAR and far below the 4% average SAR objective. *Id.* And from 1997–2022, Snake River steelhead have failed to reach the 2% minimum SAR approximately two-thirds of the time. *Id.*

D. Climate change is exacerbating the adverse impacts of the configuration and operation of the CRS dams on listed fish

It is scientifically established that the configuration and operation of the CRS are important factors in the decline, listing, and continued imperilment of listed fish. Bowles Decl. ¶ 40. Environmental factors such as poor ocean conditions, drought, reduced snowpack, reduced river flow, and elevated water temperatures are also important factors that are increasing in frequency, magnitude, and duration with climate change. *Id.* ¶¶ 12, 41. Unfavorable environmental conditions worsen the adverse impacts of CRS dams, reservoirs, and operations on listed fish. *Id.* ¶¶ 18-19, 41. Addressing the substantial and ongoing CRS impacts on listed fish is increasingly urgent, particularly against the backdrop of climate change and its associated environmental impacts, because listed species have little to no survival cushion left to sustain themselves. NOAA has acknowledged that the impacts of climate change heighten, rather than diminish, the importance of taking meaningful action to benefit listed fish. *Id.* ¶ 20.

II. Summary of prior CRS BiOps.

The long history of illegal CRS BiOps is set forth in detail in previous cases. *See NWF v. NMFS*, 254 F. Supp. 2d 1196 (D. Or. 2003) (hereafter “*NMFS I*”) (invalidating 2000 BiOp);

NWF v. NMFS, 2005 WL 1278878 (D. Or. May 26, 2005) (hereafter “*NMFS II*”), *aff’d*, 524 F.3d 917 (9th Cir. 2008) (hereafter “*NMFS III*”) (invalidating 2004 BiOp); *NWF v. NMFS*, 839 F. Supp. 2d 1117 (D. Or. 2011) (hereafter “*NMFS IV*”) (invalidating 2008/2010 BiOps); *NMFS V*, 184 F. Supp. 3d 861 (invalidating 2008/2010/2014 BiOps). These opinions provide comprehensive and thorough legal analyses of Federal Defendants’ repeated failures to comply with the ESA over the past decades, the repeated admonitions and direction provided to Federal Defendants by this Court and the Ninth Circuit, and Federal Defendants’ continued failures to heed those admonitions. For ease of reference, **Appendix 1** to this Memorandum is a case chart highlighting the relevant Court holdings from 1993 to 2016 regarding prior BiOps in this matter.

III. Spill Injunction, Flexible Spill Agreement

A. 2017 Spill Injunction.

In early 2017, Plaintiffs moved for an injunction under the ESA to increase voluntary spill for fish passage at the eight mainstem dams to the maximum level allowed by state water quality standards for the spring of 2017 and spring of 2018. *See NWF v. NMFS*, 2017 WL 1829588, at *1, *9 (D. Or. Apr. 3, 2017) (ECF No. 2190) (hereafter *NMFS VI*) (granting motion but delaying implementation until spring of 2018). In granting the motion, the Court noted “there is ample evidence in the record that indicates that the operation of the [CRS] causes substantial harm to listed salmonids” and that “continuation of the status quo is likely to result in irreparable harm to the listed species.” *Id.* at *5 (quoting *NMFS IV*, 839 F. Supp. 2d at 1131). The Ninth Circuit affirmed. *NWF v. NMFS*, 886 F.3d 803 (9th Cir. 2018) (hereafter *NMFS VII*).

B. 2018 Flexible Spill Agreement.

In December 2018, Oregon, Washington, the Nez Perce Tribe, the Action Agencies and BPA executed the Flexible Spill Agreement—an interim agreement to govern voluntary spring spill operations during the remainder of the remand (2019, 2020 and 2021),⁵ or until Federal

⁵ On October 19, 2018, then-President Trump directed the agencies to issue these documents by September 30, 2020, one year earlier than the agencies had stated was possible. *See* 2020 BiOp at 95 & n.16 [ACE001056314]. The agencies complied with that directive.

Defendants issued a new BiOp concurrent with an EIS and ROD. *See* Status Report re: 2019-2021 Spill Operations Agreement (Dec. 18, 2018) (ECF No. 2298). The goal was to provide a *temporary* stop-gap spill operation to avoid litigation during the NEPA remand period. *See* Status Report at 2. However, the parties did not concede “the legal validity [or] scientific validity . . . of the spill operations.” Agreement § X.B. (ECF No. 2298-1). As part of the Flexible Spill Agreement, the parties agreed to operational actions to benefit fish but also to (1) federal power system benefits under which BPA would, at a minimum, be no worse financially compared to the 2018 injunction (“power-cost objective”); and (2) operational feasibility for the Corps (“operational feasibility objective”). *See* Agreement § III.

Pursuant to the Flexible Spill Agreement, the planned spring spill operations for 2020 and 2021 required: (a) spill for 16 hours per day at 125% Total Dissolved Gas (“TDG”) spill cap at six of the eight CRS projects, 120% TDG spill cap at John Day and 40% at The Dalles; and (b) eight hours per day of “performance standard spill” at all eight CRS projects. *See* Agreement § VI.B.2 and Attachment Tables 1.1, 1.2. The Flexible Spill Agreement also allowed reductions to summer spill levels during the last two weeks of August to meet the power-cost objective.

IV. 2020 EIS, ROD, and BiOp finding no jeopardy.

A. Selected Alternative.

In February 2020, the Action Agencies issued a Draft Environmental Impact Statement (“DEIS”) identifying six alternatives for operations, maintenance and configuration of the CRS. The Preferred Alternative consists of a suite of measures that include the spill operations previously specified in the Flexible Spill Agreement. The Preferred Alternative formed the basis for the proposed action that the Action Agencies submitted to NMFS for formal consultation under Section 7 of the ESA, and which was evaluated by NMFS in the 2020 BiOp. *See* 2020 BiOp at 45, 95 [ACE001056264, ACE001056314]. In the 2020 ROD, the Action Agencies designated the Preferred Alternative as the Selected Alternative and agreed with NMFS’ determination in the 2020 BiOp that implementation of this operation was not likely to

jeopardize listed species or adversely modify critical habitat. The Selected Alternative includes several relevant elements.

1. Spill.

The Selected Alternative does not define target spill levels nor specify any minimum spill levels or biological performance targets for the years 2022 to 2035. Instead, it contemplates an Adaptive Implementation Framework (“AIF”) to establish spill levels for each year after 2021. *See* 2020 BiOp at 55 [ACE001056274] (citing DEIS App’x R, Part 2). The AIF does not prioritize benefits to fish; instead, it is designed to meet the three objectives of the Flexible Spill Agreement (fish, power-cost, and operational feasibility) as well as a fourth objective to “evaluate the effectiveness of the spring spill operation.” 2020 BiOp at 54 [ACE001056273]; *see also* Columbia River System Operations (“CRSO”) EIS App’x V, ESA Consultation, Part 1, CRS 2020 Biological Assessment (hereafter “BA”) at 2-49 [ACE001059560]. Inclusion of non-fish related objectives results in the dilution, if not the outright elimination, of any measures that will have a significant effect on survival of fish. Moreover, the AIF grants the Action Agencies sole authority and discretion to adapt or modify spill levels “to account for unanticipated outcomes that affect the ability of the Action Agencies to maintain their individual federal mandates.” EIS App’x R, Part 2 at R-2-1 [ACE001066379]; *see also id.* at R-5-1 [ACE001066387].

2. Reservoir elevations and flow operations.

The Selected Alternative contains reservoir elevation and flow provisions that are detrimental to fish. It provides the Action Agencies will operate LSR reservoirs at MOP “with a 1.5-foot operating range from April 3 until August 14 *unless adjusted on occasion to meet authorized project purposes*, primarily navigation.” *See* 2020 BiOp at 58–59 [ACE001056277–8] (Table 1.3-3) (emphasis added). These adjustments allow for a larger operating range—and therefore higher reservoir elevation levels—to accommodate navigation. *See id.* Table 1.3-3 n.2 (“variable MOP” at Lower Granite) and n.3 (“raised MOP” or “Expanded MOP” at Little Goose,

Lower Monumental, and Ice Harbor Dams); *see also* Bowles Decl. ¶ 117. The lower Columbia River reservoirs have not been required to operate at MOP in any of the prior BiOps and have not generally had a biologically-constrained operating range. Bowles Decl. ¶ 120. This results in normal operating elevations up to 6.5-feet above MOP depending on the project. *See* 2020 BiOp at 59 [ACE001056278], Table 1.3-3; Bowles Decl. ¶ 120. The Selected Alternative requires the John Day Reservoir elevation to be held between 264.5 and 266.5 feet (well above MOP) from April 10 to June 1. The proffered rationale for this elevation at John Day is to deter Caspian terns from nesting in the Blalock Islands Complex during this period. *See* 2020 BiOp at 58 [ACE001056277]; Bowles Decl. ¶ 122.

The Selected Alternative extends zero flow operations—even though zero flow is detrimental to fish passage and riverine ecology—in the LSR between October 15 and February 28 as needed to benefit power. *See* 2020 BiOp at 63–64 [ACE001056282–3]; Bowles Decl. ¶ 108. This change is a rollback in fish protection from the 2008/2014 BiOp that allowed this operation to start no earlier than December 1 and required that abundance-based criteria must be met prior to implementation. *See Id.* ¶ 108.

B. Jeopardy framework.

NMFS concluded in the 2020 BiOp that CRS operations are not likely to jeopardize the continued existence of any listed species nor destroy or adversely modify critical habitat for a 15-year period. *See* 2020 BiOp at 1–2 [ACE001056220–1]. In reaching that conclusion, NMFS abandons the jeopardy and adverse modification standards and analytical framework adopted in the 2000 and 2008/2014 BiOps because, according to NMFS, those standards exceeded the requirements of the ESA.⁶ Notably, the Court invalidated the jeopardy standard as applied by

⁶ NMFS states that its intent in previous BiOps “was to adopt standards that provided ample assurances that the ESA’s section 7(a)(2) jeopardy prohibition was not violated. [NMFS] did not find or conclude that the 2000 or 2008/2014 biological opinion standards and analyses were required by the plain language of the ESA, or our implementing regulations.” 2020 BiOp at 44 [ACE001056263].

NMFS in those BiOps as arbitrary and capricious and in violation of the ESA. *NMFS V*, 184 F. Supp. 3d 861 (D. Or. 2016) (ECF No. 2065); *NMFS IV*, 839 F. Supp. 2d 1117 (D. Or. 2011) (ECF No. 1855); *NMFS II*, 2005 WL 1278878 (D. Or. May 26, 2005) (ECF No. 986), *aff'd*, *NMFS III*, 524 F.3d 917 (9th Cir. 2008); *NMFS I*, 254 F. Supp. 2d 1196 (D. Or. 2003) (ECF No. 396).

As discussed below, *see* Background § V.A.2 and Argument § I.C., the first Trump Administration amended the ESA Section 7 regulations in 2019, loosening protections for threatened and endangered species. Those weaker rules, which have since been rescinded and in some instances revised, were applied in the 2020 BiOp and ROD. *See* 2020 BiOp at 46 [ACE001056265] (“The jeopardy and destruction or adverse modification analyses in this opinion . . . adhere to the interpretations of the ESA and its implementing regulations found in the preambles and responses to comments of the proposed and final rules referenced above.”); ROD at 20 [ACE000339683].

V. Legal Standards.

A. Endangered Species Act.

1. Statute and longstanding regulations.

The fundamental purposes of the ESA are to “provide a means whereby the ecosystems upon which endangered . . . and threatened species depend may be conserved, [and] to provide a program for the conservation of such [endangered and threatened] species[.]” 16 U.S.C. § 1531(b). The ESA defines “conservation” broadly as “the use of all methods and procedures which are necessary to bring any endangered . . . or threatened species to the point at which the measures provided pursuant to this chapter are no longer necessary”—i.e., to the point of full recovery. *Id.* § 1532(3).

Section 7 of the ESA, 16 U.S.C. § 1536, requires all federal agencies to “insure” that any action they propose to authorize, fund, or carry out “is not likely to jeopardize the continued existence of any endangered . . . or threatened species or result in the destruction or adverse

modification of” any designated critical habitat. *Id.* § 1536(a)(2). If a proposed federal agency action may affect any listed species or critical habitat, the federal action agency must initiate consultation with the relevant Service (i.e., NMFS or FWS, depending on the affected species). *Id.* §§ 1536(b)(3), (c)(1). The Service must then prepare a biological opinion to determine whether the action is likely to jeopardize the continued existence of any listed species or destroy or adversely modify any designated critical habitat and, if so, to provide “reasonable and prudent alternatives” to the agency action that would avoid jeopardy or adverse modification. *Id.* § 1536(b)(3)(A). To “jeopardize the continued existence of” a listed species “means 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.” 50 C.F.R. § 402.02. In formulating its biological opinion and determining whether an action will jeopardize a species or destroy or adversely modify its critical habitat, the Service must use “the best scientific and commercial data available.” 16 U.S.C. § 1536(a)(2).

2. The 2019 Rules.

In 2019, the Trump administration enacted rules that attempted to weaken the ESA significantly in several respects. *See, e.g.*, 84 Fed. Reg. 44976 (Aug. 27, 2019) (“2019 Rules”). Most relevant here, the 2019 Rules: (1) changed the definition of “effects of the action” by limiting both the type and extent of effects of a proposed federal agency action that must be analyzed in the Section 7 consultation process; and (2) redefined “environmental baseline” to include “ongoing agency activities or existing agency facilities that are not within the agency’s discretion to modify,” thereby exempting ongoing actions from analysis as effects of an agency action.

Further, the preamble to the proposed 2019 Rules explained that NMFS did not “interpret Section 7(a)(2) and the regulations thereunder to require that each proposed action improve or increase the likelihood of survival and recovery of the species, or improve the conservation value

of critical habitat.” 83 Fed. Reg. 35178, 35182 (July 25, 2018). This was the agency’s purported interpretation “even where a species already faces severe threats prior to the action.” *Id.* The proposed 2019 Rules specifically discussed prior holdings in this case, asserting that, in NMFS’ opinion, the Ninth Circuit, in affirming Judge Redden’s invalidation of the 2004 BiOp, “mistakenly asserted” that “where baseline conditions already jeopardize a species, an agency may not take action that deepens the jeopardy by causing additional harm.” *Id.* (quoting *NMFS III*, 524 F.3d at 930) (internal quotation marks omitted). The 2019 Rules that were in effect when NMFS issued the 2020 BiOp have been rescinded or revised.⁷ During the current administration, FWS has not rescinded or formally proposed any revisions to these amended regulations, which remain in effect today.

B. Administrative Procedure Act.

The ESA does not provide a separate standard of review, so claims under the ESA are reviewed under the well-established standards of the Administrative Procedure Act (“APA”). *See NMFS V*, 184 F. Supp. 3d at 879 (citations omitted). Under the APA, an agency action must be upheld on review unless it is “arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law[.]” 5 U.S.C. § 706(2)(A). “A reviewing court must consider whether the decision was based on a consideration of the relevant factors and whether there has been a clear error of judgment.” *NMFS V*, 184 F. Supp. 3d at 879 (internal quotation marks omitted).

⁷ Oregon’s merits arguments concern the statute and 2019 Rules in effect when NMFS issued the 2020 BiOp, but the subsequent regulatory history may be useful context. In June 2021, NMFS and FWS announced that they would “revise, rescind, or reinstate” five ESA regulations changed by the 2019 Rules through future rulemakings. Press Release, FWS, U.S. Fish and Wildlife Service and NOAA Fisheries to Propose Regulatory Revisions to Endangered Species Act (June 4, 2021), https://www.fws.gov/press-release/2021-06/us-fish-and-wildlife-service-and-noaa-fisheries-propose-regulatory-revisions?ref=u.s.-fish-and-wildlife-service-and-noaa-fisheries-to-propose-regulatory-&_ID=36925. FWS rescinded two of the 2019 Rules in June and July, 2022. 87 Fed. Reg. 37757 (June 24, 2022) (rescinding 85 Fed. Reg. 81411); 87 Fed. Reg. 43433 (July 21, 2022) (rescinding 85 Fed. Reg. 82376). On April 5, 2024, FWS issued final rules revising the remaining three 2019 Rules. 89 Fed. Reg. 24300 (Apr. 5, 2024) (revising 84 Fed. Reg. 45020); 89 Fed. Reg. 24268 (Apr. 5, 2024) (revising 84 Fed. Reg. 44976); 89 Fed. Reg. 23919 (Apr. 5, 2024) (rescinding 84 Fed. Reg. 44753).

C. Standard for issuance of a preliminary injunction under the ESA.

This Court has authority, and has previously exercised that authority, to grant preliminary injunctive relief when the moving party establishes that: (1) it is likely to prevail on the merits; (2) it is likely to suffer irreparable harm in the absence of relief; (3) the balance of equities tips in its favor; and (4) an injunction is in the public interest. *See NMFS VI*, 2017 WL 1829588, at *1 (citing *Winter v. Nat. Res. Def. Council, Inc.*, 555 U.S. 7, 20 (2008)). The Ninth Circuit has developed several iterations of this standard that vary in the strength of the evidence required to secure relief. *See, e.g., Alliance for the Wild Rockies v. Cottrell*, 632 F.3d 1127, 1134–35 (9th Cir. 2011) (describing a “sliding scale” approach in which all four *Winter* prongs must be satisfied but where a preliminary injunction can be entered when “serious questions going to the merits were raised and the balance of hardships tips sharply in the plaintiff’s favor” (citation omitted)). Additionally, consistent with Ninth Circuit precedent, this Court has ruled previously that “the ESA strips courts of at least some of their equitable discretion in determining whether injunctive relief is warranted.” *See NMFS VI*, 2017 WL 1829588, at *2 (citing *Cottonwood Env’t L. Ctr. v. U.S. Forest Serv.*, 789 F.3d 1075, 1090 (9th Cir. 2015), *cert. denied*, 137 S. Ct. 293 (Oct. 11, 2016)).

Even the application of the strictest *Winter* standard demands the entry of preliminary injunctive relief here. Oregon and its fellow plaintiffs are likely to succeed on the merits, have demonstrated that irreparable harm is likely without immediate relief, and have demonstrated that the balancing of the equities and public interest warrant entry of relief.

ARGUMENT

I. Oregon is likely to prevail on the merits of its claims that the 2020 BiOp and ROD violate the ESA.

A. The jeopardy analysis allows for functional extinction of listed fish and fails to insure that likelihood of recovery is not appreciably diminished.

The Federal Defendants’ jeopardy analysis violates the ESA because it fails to consider and account for (1) the degraded status of the species associated with CRS operations, and (2)

the impact of prolonged low population abundances on the species' likelihood of survival and recovery. Instead of remedying the legal errors in the 2014 BiOp's jeopardy analysis, the 2020 BiOp's jeopardy analysis allows for functional extinction of the species and abandons recovery metrics altogether. Federal Defendants arbitrarily conclude that CRS operations will avoid jeopardy without discussing the wealth of available scientific information—some of which was authored by NMFS scientists—which shows that the species are not likely to survive or recover and instead will continue to decline to extinction if CRS operations continue as planned.

1. The jeopardy analysis fails to properly account for the status of the species.

NMFS' jeopardy analysis applies a standard that has been rejected by courts—including this one—by failing to consider the already dire condition of the species. Citing the preamble to one of the 2019 Rules, NMFS took the position in the 2020 BiOp that it did “not interpret the statute or its regulations to require the proposed action to improve or increase the likelihood of survival and recovery. Section 7(a)(2) focuses on the ‘continued existence’ of the species, not an improvement in the likelihood of recovery or the attainment of an improved status, which is addressed through Section 4 recovery plans.” 2020 BiOp at 46 [ACE001056265]; *see also* 83 Fed. Reg. 35178, 35182 (proposed rule preamble prescribing this definition “even where a species already faces severe threats prior to the action.”). That position is erroneous.

This ESA interpretation has been expressly rejected by this Court and the Ninth Circuit for failing to consider the imperiled status of the species. Where, as here, the population is already severely degraded, a standard that reaches a no-jeopardy conclusion with only minimal *improvement* to the species does not satisfy the ESA. Indeed, this Court invalidated the recovery analysis in the 2014 BiOp because it considered population “*growth* regardless of actual population numbers.” *NMFS V*, 184 F. Supp. 3d at 888 (emphasis in original). The Court explained that:

The three [recovery] metrics indicate a trend in growth from wherever an existing population may be, but provide no rational connection from that existing population or the incrementally

larger population anticipated after the [reasonable and prudent alternative] actions to ensuring no decreased risk of reaching recovery. A population that is dangerously low in abundance could be increasing, but by only a very few fish per year for the BiOp period, resulting in an abundance level at the end of the BiOp period that remains dangerously low despite the increase in population. Such a small increase in population could still result in all three of the recovery metrics being greater than 1.0, and thus under the “trending toward recovery” standard the population would be deemed not to be in jeopardy under the recovery prong, regardless of how far below minimum viable abundance the population may be at the end of the BiOp period.

Id. at 888; *see also id.* at 893 (rejecting defendants’ argument that consideration of status of the species improperly incorporates the Section 4 recovery analysis into a Section 7 consultation (citing *NMFS III*, 524 F.3d at 936)). The 2020 BiOp violates the ESA because it fails to account for the imperiled status of the species caused by decades of illegal CRS operations.

2. The jeopardy framework is untethered from minimum requirements for survival and recovery.

The 2020 BiOp uses life-cycle modeling to project median geometric mean (“geomean”) abundances and QET probabilities to assess the likely effects of hydropower operations under the proposed action, as well as the future effect of habitat restoration actions, hatchery production and predation. *See* 2020 BiOp at 223 [ACE001056442]. As employed in the 2020 BiOp and adopted in the ROD, these two metrics bear no logical or analytical connection to science-based recovery criteria and are completely untethered from any estimated recovery abundance levels and the rough timeframe to achieve those levels.

a. The 2020 BiOp and ROD fails to explain how their own predictions of significant extinction risks could rationally yield no jeopardy determinations.

This Court has already held that QET modeling is not indicative of whether an action will appreciably reduce a species’ likelihood of recovery. In the 2014 BiOp, using QET modeling, NMFS determined the level of improvement necessary to achieve a five percent or less risk of extinction during the following 24 years. *NMFS V*, 184 F. Supp. 3d at 892. The Court held that the QET modeling had no bearing on a species’ likelihood of recovery because “even if a species is expected to have a less than five percent risk of extinction in the next 24 years, that does not

necessarily mean its chances of recovery are not being appreciably diminished” as “a species can often cling to survival even when recovery is far out of reach.” *Id.*

The 2020 BiOp includes an even weaker QET analysis than that in the unlawful 2014 BiOp. The 2020 BiOp does not calculate the level of improvement necessary to achieve a five percent or less risk of extinction during the next 24 years, but instead merely provides modeled predictions for QET. *See* 2020 BiOp at 204, 224 [ACE001056423, ACE001056443]. Moreover, the 2020 BiOp itself projects QETs that significantly exceed a five percent risk of extinction over the next 24 years for multiple listed populations. *See, e.g.*, 2020 BiOp at 228–29 [ACE001056447-8] (Table 2.2-19b); 2020 BiOp at 233 (Table 2.2-21). The Federal defendants failed to articulate a rational connection between these predictions and their no-jeopardy conclusions.

b. The 2020 BiOp and ROD fail to make a rational connection between continued low projected abundances and species’ likelihood of survival and recovery.

The 2020 BiOp and ROD similarly fail to explain how the projected geomean abundances, which remained low for many populations, relate to the species’ likelihood of survival and recovery. The 2020 BiOp projects geomean abundances but does not assess or evaluate how those projections compare to minimum viable abundances or any recovery threshold, much less require that any specific goals are met with respect to any of the viable salmonid population (“VSP”) factors as part of the jeopardy analysis. *See NMFS V*, 184 F. Supp. 3d at 887. Like the 2014 BiOp, NMFS’ analysis in the 2020 BiOp ignores the minimum viable abundance numbers identified by the Interior Columbia Technical Review Team (“ICTRT”). *See id.* at 872; Bowles Decl. ¶ 10. NMFS itself projected that some populations would continue to remain far below the ICTRT’s minimum abundance thresholds. *See* Bowles Decl. ¶ 10. Indeed, NMFS conceded that “[b]ased on the modeling, we expect abundances over the next 24 years to decrease and extinction risk to increase, even when taking into account the benefits of the proposed non-operational conservation measures and the most optimistic hypotheses related to reduced latent mortality.” 2020 BiOp at 289 [ACE001056508]. Despite this stark admission,

NMFS provided no reasoned basis to support its conclusion that the likelihood of survival of these fish is not appreciably diminished under the proposed action.

NMFS ultimately did not rely on any quantitative analysis to reach its no-jeopardy conclusion. NMFS instead made qualitative statements that speculate about effects of the proposed action on specific populations. For example, NMFS concluded that the CRSO operations are not likely to jeopardize any listed species because “the proposed action includes some elements that will harm salmonids and some that will benefit salmonids.” *See* 2020 BiOp at 290 [ACE001056509]; *see also id.* at 428 [ACE001056647] (Snake River steelhead), 640 [ACE001056859] (Snake River Fall Chinook), 754 [ACE001056973] (Upper Columbia River Spring-run Chinook Salmon), 863 [ACE001057082] (Upper Columbia River steelhead), 967 [ACE001057186] (Middle Columbia River steelhead), 1028 [ACE001057247] (Columbia River Chinook salmon), 1167 [ACE001057386] (Lower Columbia River Steelhead), 1232 [ACE001057451] (Lower Columbia River Coho salmon), 1283 [ACE001057502] (Upper Willamette River Chinook salmon), 1333 [ACE001057552] (Upper Willamette River steelhead); *see also, e.g.*, 2020 BiOp at 194 [ACE001056413] (“The associated effects [of flow] on SR spring/summer Chinook smolts or adults should not change from recent conditions by a meaningful amount.”). NMFS provided no rational explanation about how its qualitative analysis appropriately supports its no-jeopardy finding. The 2020 BiOp and ROD do not properly consider or use the best available scientific information including, but not limited to, the available and credible quantitative information and analyses regarding listed species. *See, e.g.*, Bowles Decl. ¶¶ 52-53.

The failure of the Federal Defendants to address the likelihood of survival and recovery in a meaningful way is arbitrary and capricious, an abuse of discretion, and contrary to the ESA.

B. The proposed action is vague, uncertain, and contains no contingency plan for listed fish, yet the 2020 BiOp concludes no jeopardy for a 15-year period.

The proposed action purportedly analyzed in the 2020 BiOp—and chosen as the Selected Alternative in the ROD—is the operation, maintenance, and associated non-operational

conservation measures for the 14 CRS dams for a period of 15 years. The federal agencies conclude that the proposed action is not likely to jeopardize listed species or destroy or adversely modify critical habitat for the full 15-year term of the BiOp. This conclusion is arbitrary and capricious. The proposed operations are so vague and undefined that it is impossible for Federal Defendants to have a rational basis to even identify the actual action, let alone *ensure* that it is not likely to jeopardize the continued existence of any endangered or threatened species or to result in the destruction or adverse modification of critical habitat. In addition, the proposed action is devoid of any contingency plan to protect listed fish from entering an extinction vortex, and they fail to include measures that give the benefit of the doubt to the species as required under the ESA. To make a no-jeopardy finding without even knowing what the federal actions will be—and without any backstop to prevent listed species from sliding into extinction—is arbitrary and capricious, an abuse of discretion and inconsistent with the ESA.

1. The spill operation is undefined and expressly constrained by BPA’s economic interests.

One of the key uncertainties is the spill operation to be implemented over the 15-year term of the BiOp. Even now, five years later, spill operations for 2026 and beyond are undefined. As explained above, *see* Background § IV.A.1, NMFS defined spill levels for only one year: 2021. The BiOp describes the 2021 spill operation as the “base operation for the first year” of the 15-year term of the 2020 BiOp. *See* EIS App’x R, Part 2 at R-3-1 [ACE001066381]; *see also* EIS App’x V, Part 1, BA at 2-52 to 2-54 [ACE001059563-65] (describing the “initial planned spring spill operation targets” and “initial summer spill operation targets”). A single year of defined spill operations is insufficient to ensure that CRS operations are not likely to jeopardize listed species for the full 15-year term of the 2020 BiOp. Indeed, even under best-case scenarios in terms of environmental conditions and operational certainty, both Chinook and steelhead will experience SARs equal to or less than 2 percent—the bare minimum SAR needed to confidently avoid further population declines—over 60 percent of the time under the Selected Alternative. *See* Bowles Decl. ¶ 52 & Table 1.

The 2020 BiOp lacks any minimum spill levels or minimum performance targets between 2022 and 2035. Instead, the federal government afforded itself discretion to modify spill levels as it deems appropriate to meet its four unilaterally-identified objectives. Those include ensuring that the financial impact to BPA of the spill operation is no worse than the 2018 spill injunction. *See* EIS App'x R, Part 2 at R-4-1 [ACE001066383]. This approach contains several fundamental legal flaws.

First, under the ESA, Federal Defendants are required “to halt and reverse the trend toward species extinction, whatever the cost.” *Tenn. Valley Auth. v. Hill*, 437 U.S. 153, 184 (1978). The financial impact on BPA of the spill operation is not an appropriate consideration under the ESA.

Second, without identifying a minimum spill operation for years 2022 to 2035, NMFS cannot reasonably ensure that CRS operations will not jeopardize listed species or adversely modify critical habitat during that time period. The ESA prohibits the federal agencies from placing the risk of uncertainty (if any) on listed fish, which is precisely what they have done here. *See NMFS V*, 184 F. Supp. 3d at 906 (citing *TVA*, 437 U.S. at 194).

Third, the federal agencies claim that there is uncertainty about latent mortality, which they propose to evaluate over the 15-year term of the BiOp by developing and implementing an unspecified study design. *See* EIS App'x R, Part 2 at R-4-2 [ACE001066384]. The parameters of this unspecified study are undefined. As a general matter, an effective study design requires controls, which could include spill curtailments large enough to be able to detect a statistical difference in SARs, which would increase powerhouse encounters and further erode fish protections.⁸ To the extent that there is substantive uncertainty about latent mortality, which Oregon disputes, the ESA requires that the uncertainty be resolved in favor of protecting listed

⁸ The only putative study identified by the federal agencies to date is the “block design” spill operation evaluated as Multi-Objective 1 in the EIS and which would constitute a significant reduction in spill during crucial migration periods for juvenile fish.

species. *See NMFS V*, 184 F. Supp. 3d at 906 (“plac[ing] all of the risk of . . . uncertainty on the species . . . is precisely what the ESA does not permit.”).

Moreover, because no minimum spill levels are defined, the Action Agencies are also free to curtail spill—which detrimentally impacts survival—for other undisclosed reasons. Because significant uncertainty associated with CRS operations—and the spill operation in particular—remains, the Corps has failed to specify adequate fish protections and failed to ensure any uncertainty is not shouldered by listed species.

2. The 2020 BiOp contains no contingency plan to protect listed fish from further declines and extinction.

Previous iterations of CRS BiOps have, to varying degrees, contained fish contingency plans. The 2000 BiOp’s RPA included an aggressive contingency plan with “advance planning for breach.” 2000 BiOp at 9-5. The RPA required specific actions to “reduce the time needed to seek congressional authorization for breach and . . . reduce the time needed for possible implementation” if the hydro and offsite mitigation actions did “not provide the anticipated survival rate increases, or that subsequent information shows the predicted improvements are inadequate.” *Id.*

The predicted survival benefits in the 2000 BiOp did not, and have not, come to fruition, yet the federal agencies failed to seek congressional authorization for breach, as required by the RPA. Instead, in the 2010 and 2014 BiOps, Federal Defendants adopted the AMIP, which would be triggered only when the listed fish experienced catastrophic *declines*, not when predicted improvements to listed fish failed to materialize as was the case in the 2000 BiOp. *See* 2014 BiOp at 419 [NMFS00338212]; *see also* Oregon Response to AMIP (ECF No. 1725) (explaining flaws in AMIP); Oregon Mot. for Summ. J. (ECF No. 1985) at 42–44 (same). As explained above, *see* Background § I.A, the AMIP triggers were tripped in 2021, despite the fact that they were intended as crisis safety nets that NMFS did not anticipate would be triggered any time in the near future. *See* Bowles Decl. ¶ 7; 2014 BiOp at 419 [NMFS00338212]; AMIP at 31.

Nonetheless, when these crisis safety nets were in fact triggered, NMFS’ “rapid response” for the

CRS was limited to reliance on status quo operations associated with the Flexible Spill Agreement. *See* Bowles Decl. ¶ 8.

Rather than remedying the AMIP’s deficiencies and providing a robust adaptive management plan based on scientifically sound metrics and related qualitative analyses, or seeking congressional authorization for breach as required by the 2000 BiOp RPA, Federal Defendants simply discarded the AMIP without explanation and opted not to adopt any contingency plan whatsoever to address the urgent population status crisis. *See* 2020 BiOp at 91 [ACE001056310] (claiming AMIP abundance triggers “have become outdated”). Instead, the Action Agencies proposed “to work with NMFS, USFWS, federal, state, and tribal sovereigns and other appropriate parties in any region-wide diagnostic efforts to determine the causes of declines in the abundance of naturally produced salmon and steelhead and to identify and operationalize potential contingency actions *should the need arise*.” *Id.* (emphasis added). The need plainly arose, but that aspiration went unfulfilled. The 2020 BiOp’s vague intimation of future, unspecified collaboration with some unspecified trigger flatly ignores that an effective contingency plan is urgently necessary today to protect listed fish from further declines and extinction, as well as to ensure that CRS operations are not likely to further jeopardize listed fish or adversely modify critical habitat. The 2020 BiOp is legally flawed because it failed to articulate a reasoned explanation for its abrupt deviation from longstanding past practice of including contingency plans. *See Oregon Wild v. U.S. Forest Serv.*, 193 F. Supp. 3d 1156, 1165 (D. Or. 2016) (“To ensure prior standards are not ignored or inadvertently altered, an agency must supply a reasonable explanation for a change in course or ‘swerve from prior precedents[.]’” (quoting *Bush-Quayle ’92 Primary Comm., Inc. v. Fed. Election Comm’n*, 104 F. 3d 448, 453 (D.C. Cir. 1997))). Moreover, it was arbitrary and capricious for NMFS to have tripped the prior BiOps’ emergency switches but then conclude that largely unspecified dam operations would not jeopardize the existence of any listed species for 15 years and that further contingency plans would not evidently be necessary.

C. The 2020 BiOp violates the ESA by manipulating the environmental baseline and employing a comparative—rather than additive—approach that has been rejected by the Court.

The 2020 BiOp and ROD employ the 2019 Rules’ definition of environmental baseline, which effectively excludes the existence and ongoing operation of the CRS—the subject of the consultation—from environmental review under the ESA. Under this approach, the environmental baseline includes nearly three decades of illegal operations of the CRS that, by NMFS’ own prior admission, jeopardize listed species. NMFS has attempted to apply this environmental baseline before, and courts (in this case and others) have resoundingly rejected those attempts.

1. The 2020 BiOp and ROD violate the ESA by shifting ongoing discretionary CRS operations into the environmental baseline and by unduly narrowing assessed effects of the action.

In an attempt to weaken protections for endangered species, the 2019 Rules revised the definition of environmental baseline as follows, with the new text underlined:

Environmental baseline refers to the condition of the listed species or its designated critical habitat in the action area, without the consequences to the listed species or designated critical habitat caused by the proposed action. The environmental baseline includes the past and present impacts of all Federal, State, or private actions and other human activities in the action area, the anticipated impacts of all proposed Federal projects in the action area that have already undergone formal or early section 7 consultation, and the impact of State or private actions which are contemporaneous with the consultation process. The consequences to listed species or designated critical habitat from ongoing agency activities or existing agency facilities that are not within the agency’s discretion to modify are part of the environmental baseline.

84 Fed. Reg. 44976, 45016 (emphasis added); *see also* 2020 BiOp at 125 [ACE001056344].

As noted above, *supra* § V.A.2., this effectively excludes from consideration any effects caused by ongoing agency activities that the Services deem nondiscretionary. *See* 50 C.F.R. § 402.02 (2019); 84 Fed. Reg. at 45016. But, as the Services expressly acknowledged in a preamble to the 2019 Rules, consultations should nonetheless analyze “the effects of all of the discretionary operations” of a proposed action, “*even those operations that the Federal agency proposes to*

keep the same.” 84 Fed. Reg. at 44978 (emphasis added); *see* 2020 BiOp at 45 [ACE001056264] (stating NMFS’s intent to apply the joint consultation regulations and “preambles to those regulations”). NMFS’ approach in the 2020 BiOp of considering only the changes in operations of the CRS relative to all prior and ongoing operations runs afoul of even that cramped definition because it fails to assess the discretionary elements of ongoing agency action. This in turn hopelessly tainted NMFS’ ultimate conclusion that CRS operations will not jeopardize the continued existence of listed species or result in the destruction or adverse modification of critical habitat.

The 2020 BiOp unlawfully includes the ongoing discretionary CRS operations within the environmental baseline, without any rational explanation as to either (1) why it should be permitted to characterize *any* aspect of CRS operations as nondiscretionary, or (2) why, even assuming that those ongoing operations were discretionary, it is lawful to subsume them within the environmental baseline and thereby ignore their effects absent prior lawful consultation. As to the first issue, the Ninth Circuit has already held that CRS operations are mostly, if not entirely, discretionary. *NMFS III*, 524 F.3d at 928 (“Congress has imposed broad mandates which do not direct agencies to perform any specific nondiscretionary actions, but rather, are better characterized as directing the agencies to achieve particular goals.”).

As to the second issue, none of the operations within the past twenty years prior to the 2020 BiOp had been deemed lawful under the ESA. *See NMFS V*, 184 F. Supp. 3d at 880–84 (summarizing prior failures). It was unlawful for NMFS to include in the environmental baseline the effects of decades of harm to listed species from nearly 30 years of (illegal) operation of the CRS. For example, the 2020 BiOp included in the environmental baseline the altered and reduced river flows caused by CRS operations, which it admits have “significantly degraded salmon and steelhead habitats.” 2020 BiOp at 126 [ACE001056345]. It also included in the environmental baseline mortality to both juvenile and adult salmon caused by ongoing CRS operations. By lumping in those and other harms as part of the environmental baseline, the 2020

BiOp effectively turns a blind eye to the most significant effects of the Proposed Action. Accordingly, the 2020 BiOp was deficient even under the overly generous leeway provided by the 2019 Rules.

Even if the 2019 Rules were construed to allow prior and ongoing discretionary actions to be included in the environmental baseline, that would be unlawful as applied here. The Ninth Circuit has already spoken to this very tactic, holding that the ESA does not allow agencies to “immunize discretionary agency actions [from consultation] simply because they are taken in pursuit of a non-discretionary goal.” *NMFS III*, 524 F.3d at 929. Doing so also does not comport with the ESA’s fundamental purposes of preventing extinction and fostering recovery.

NMFS also unlawfully divorced the harms in the environmental baseline from the analysis by arguing that the terms “jeopardize the continued existence of” and “destruction or adverse modification” are “determinations that are made about the effects of Federal actions” and “not determinations made about the environmental baseline for the proposed action or about the pre-action condition of the species.” 2020 BiOp at 46 [ACE001056265]. This flawed analysis is compounded by NMFS’ application of the revised definition of “effects of the action,” which was significantly narrowed to require that the effects must be a “but for” result of the agency action and “reasonably certain to occur.” 2020 BiOp at 189 [ACE001056408] (citing 50 CFR §§ 402.17(a)–(b) (2019)); *see also NMFS II*, 2005 WL 1278878, at *2 (“reliance on the ‘reasonably certain to occur’ standard is better directed to mitigation activities than harmful activities.”). NMFS’ use of this narrowed definition fails to give the benefit of the doubt to listed species and attempts to artificially isolate the “effects of the action” from the decades of illegal operations that brought listed fish to the brink of extinction. The Action Agencies echo this theory in the ROD, arguing that “[t]he analysis under these regulatory definitions must always consider whether the effects of the Selected Alternative’s effects [*sic*] *cause* appreciable reductions to survival and recovery or *cause* appreciable diminishment of the conservation function of critical habitat. This analysis is separate from the analysis of the environmental

baseline or a characterization of the condition of the species prior to implementation of the proposed action, even where the proposed action is a continuation of a prior federal action.” ROD at 20 [ACE000339683] (emphasis in original).

Thus, in the 2020 BiOp and ROD, nearly three decades of unlawful federal action—which NMFS itself concluded would jeopardize listed fish—creates the baseline on top of which additional operations harmful to fish are then measured. Rather than addressing the devastating effects of previous illegal dam operations on fish—or explaining why the survival improvements predicted under prior BiOps have not come to fruition—Federal Defendants subsume that period in the environmental baseline and compare that “baseline” to the narrowly constrained effect of the agency action. This unlawful approach allows Federal Defendants to erroneously conclude that CRS operations will not cause jeopardy or adversely modify critical habitat based on qualitative statements that the effects will be similar, or not *appreciably worse*, for fish than the past decades of illegal operations. The ESA was neither intended to, nor has it been interpreted to, function in this manner.

2. Courts have soundly rejected the narrow and piecemeal approach to assessing jeopardy employed in the 2020 BiOp.

In the 2020 BiOp, NMFS repeated its earlier attempts to minimize the perceived impact of federal action under the ESA. The Ninth Circuit expressly rejected this very approach in its review of the 2004 BiOp, finding that NMFS’ analysis violated the ESA because “instead of assessing whether the listed fish would be jeopardized by the aggregate of the proposed agency action, the environmental baseline, cumulative effects, and current status of the species,” NMFS instead considered “whether the proposed agency action—consisting of only the proposed discretionary operation of the FCRPS—would have an appreciable net effect on a species.” *NMFS III*, 524 F.3d at 926; *see also id.* at 927–28. This approach unlawfully allowed listed species to “be gradually destroyed, so long as each step on the path to destruction is sufficiently modest. This type of slow slide into oblivion is one of the very ills the ESA seeks to prevent.” *Id.* at 930.

The Ninth Circuit further held that NMFS cannot minimize the effects of a federal agency action by classifying portions of that action as “ongoing” and/or “non-discretionary” and subsuming them within the environmental baseline. *See id.* at 926, 928–29. The ESA does not permit “agencies to ignore potential jeopardy risks by labeling parts of an action non-discretionary,” and may not “sweep so-called ‘nondiscretionary’ operations into the environmental baseline, thereby excluding them from the requisite ESA jeopardy analysis.” *Id.* at 929; *see also San Luis & Delta Mendota Water Auth. v. Jewell*, 747 F.3d 581, 639–40 (9th Cir. 2014).

The D.C. Circuit likewise has held that the consulting agency may not “establish[] the environmental baseline without considering the degradation to the environment caused by” the ongoing operation of a hydropower project, and that “attributing ongoing project impacts to the ‘baseline’ and excluding those impacts from the jeopardy analysis” was inadequate under Section 7 of the ESA. *Am. Rivers v. FERC*, 895 F.3d 32, 46, 47 (D.C. Cir. 2018); *see also Cooling Water Intake Structure Coal. v. EPA*, 905 F.3d 49, 81 (2nd Cir. 2018) (noting that “[w]here the future operation of a regulated facility depends on the discretion of the acting agency, the continued operation of that facility is not a ‘past’ or ‘present’ impact of a previous federal action” that is included in the environmental baseline) (citing *NMFS III*, 524 F.3d at 930–31). NMFS’ analysis of the effects of ongoing actions in the environmental baseline in the 2020 BiOp is contrary to the ESA and controlling precedent.

3. The 2020 BiOp is inconsistent with NMFS’ prior determinations.

Not only have courts rejected an ESA analysis that minimizes and fails to account for the effects of ongoing federal action, as the 2020 BiOp does, NMFS itself has rejected that approach in other CRS BiOps. By resurrecting this unlawful analysis in the 2020 BiOp, NMFS deviates markedly from the approach taken in the 2000, 2008 and 2014 BiOps. *See, e.g.,* 2014 BiOp at 184 n.50 [NMFS00040192] (“Prospective effects of ongoing FCRPS operations are properly included only in the proposed action (RPA), rather than in prospective effects of the

environmental baseline.”); *id.* at 462 [NMFS00338255] (“The application of the jeopardy standard (see Section 1.7 in the 2008 BiOp) required determining that the aggregate effects of the environmental baseline, cumulative effects, and effects of the action would ensure that the species would survive with an adequate potential for recovery.”); 2000 BiOp at 1–8 (considering the effects of the environmental baseline in the jeopardy analysis). NMFS does not provide any reasoned explanation for this about-face. *See Organized Villages of Kake v. U.S. Dep’t of Agric.*, 795 F.3d 956 (9th Cir. 2015) (agency change in policy violated APA where it failed to “explain why an action that it found posed a prohibitive risk to the . . . environment only two years before now poses merely a ‘minor’ one.”).

The Federal Defendants’ approach in the 2020 BiOp and ROD violates the ESA, is contravened by controlling case law, and is inconsistent with prior agency interpretations without any rational explanation. It is arbitrary, capricious and an abuse of discretion, and should be rejected. Oregon is likely to prevail on the merits of this claim.

II. Status quo operations will result in irreparable harm.

Oregon is not required to show an extinction-level threat to the species in the short-term to establish irreparable harm. *See NMFS VII*, 886 F.3d 803, 821 (9th Cir. 2018) (affirming Judge Simon’s 2017 spill order). Nonetheless, the evidence supports such a finding. At the very least, the irreparable harm to listed species is even more dire today than it was twenty years ago when the Ninth Circuit held that “continuation of the status quo could result in irreparable harm” to the threatened salmon and steelhead in the Columbia River. *NWF v. NMFS*, 422 F.3d 782, 796 (9th Cir. 2005) (affirming Judge Redden’s spill order). At no point since that Ninth Circuit ruling have Federal Defendants offered a biological opinion that complies with the ESA.

A. The listed species remain at high risk of extinction.

The Court is aware that listed fish are in a highly precarious condition and have been for decades. *See NMFS V*, 184 F. Supp. 3d at 879–80 (citing 2014 BiOp at 70–71 and Table 2.1–1 (citing data showing that 65% of the populations in the listed ESUs were at high risk of

extinction and 28.5% were at a maintained risk of extinction, while only 4% were considered viable and 2.5% were considered highly viable); Bowles Decl. ¶¶ 5-8 (describing more recent status reviews showing no general improvement in abundance but, instead, declines or low-level persistence). As explained above, *see* Background § I.A, many populations of listed species have declined significantly in the intervening years since issuance of the 2014 BiOp, and the few that have seen improvements have been marginal. As the Court previously recognized, “the longer a species remains at low population levels, the greater the possibility of extinction from chance events, inbreeding depression, or additional environmental disturbance.” *NMFS V*, 184 F. Supp. 3d at 872 (quoting NOAA’s Consultation Handbook). The outlook for these species is dire if the status quo remains. *See* Bowles Decl. ¶ 27–32.

B. At critically low abundance, a single year of poor environmental conditions increases extinction risk.

The extreme vulnerability of these species to extinction risks was made clear in 2015 and remains in 2025. *See* Bowles Decl. ¶ 19. Elevated water temperatures in 2015 resulted in massive fish kills, with thousands of unlisted Columbia River sockeye dying in the impounded sections of the river and over 95% of listed Snake River sockeye succumbing. *Id.* ¶¶ 16, 69. Another interior heatwave in June 2021 resulted in critically elevated temperatures in the impounded river, extreme risk to adults and juveniles, and evidence of adult fish mortality. *Id.* ¶ 16. These elevated temperatures continue to occur, including in 2025. *Id.* From 2015 to 2024, the vast majority of the CRS experienced water temperatures in excess of state water quality criteria for an extended period of time. *Id.* ¶ 70 & Table 2.

Unfortunately, extreme heat continues to cause elevated water temperatures, the effects of which are clearly seen in the CRS. Ample evidence of migration delay was observed in 2025 for adult salmon and steelhead resulting from elevated water temperature. *Id.* ¶ 16. Water temperatures routinely exceed 75° F in dam ladders, and adult conversion rates in August between The Dalles and John Day dams for fall Chinook were the lowest observed since 1990 – most likely caused by elevated water temperatures. *Id.* As recognized by this Court in 2016,

“[e]ven a single year with detrimental climate conditions can have a devastating effect on the listed salmonids.” *NMFS V*, 184 F. Supp. 3d at 874, 914 (citing examples from 2002 and 2013). Given the critically low abundance status of many listed populations and their heightened extinction risk, maintenance of the status quo will result in irreparable harm, and actions to improve the chances of survival for these species are imperative.

C. Climate change increases the risk of irreparable harm to listed species.

The threats from low abundance are exacerbated by climate change, including, but not limited to, the potential for catastrophic weather events. “The best available information indicates that climate change will have a significant negative effect on the listed species,” *NMFS V*, 184 F. Supp. 3d at 914, “particularly in light of the precarious state of many of the listed species, where a few poor years can decimate a population,” *id.* at 918; *see also id.* at 923 (“In light of the fragile state of many of the listed species, such a potential catastrophe should be considered.”). It is widely acknowledged that the probability of higher temperature and lower snowpack is increasing, both of which are threats to salmon recovery. *See, e.g.*, 2014 BiOp at 169–71 [NMFS00337962–64]; 2020 BiOp at 118–24 [ACE001056337–43]; Bowles Decl. ¶¶ 12, 41. Climate change is also associated with more frequent and more severe downturns in environmental conditions for listed species. Bowles Decl. ¶ 41.

It can no longer be argued that climate change is speculative or limited to some future risk—it is here. NOAA scientists have repeatedly sounded the alarm, stating in 2020 that “extreme weather events may become the new normal due to anthropogenic climate change with catastrophic consequences for endangered species.” *Id.* ¶ 12 (quoting Crozier et al. 2020, p. 1). And in 2021, they stated, “With a warming climate, deterministic declines inevitably lead to extinction unless some ecological, evolutionary, or climatic rescue effect occurs.” *Id.* ¶ 13 (quoting Crozier et al. 2021, p. 3–4). The call to action could not be clearer:

The urgency is greater than ever to identify successful solutions at a large scale and implement known methods for improving survival. Management actions that open new habitat, improve

productivity within existing habitat, or reduce mortality through direct or indirect effects in the ocean are desperately needed.

Id. (quoting Crozier et al. 2021, p. 9). This type of large-scale management activity is what NMFS and the Action Agencies should have been pursuing for the past 40 years, instead of issuing invalid BiOp after invalid BiOp, and allowing the species to reach the point where the “prospects for saving this iconic keystone species . . . are diminishing.” *Id.*

Similarly, data compiled by NOAA and referred to as the “stoplight indicators” show that poor ocean conditions for salmon are occurring more frequently over time and can include multiple years of downturns. *Id.* ¶ 14. Recovery from those poor conditions is never certain and, in fact, is and less frequent. *Id.* Thus, while current ocean conditions have improved somewhat over the extremely poor conditions in the recent past, that improvement is tenuous with no assurance that improvement will continue. Indeed, NMFS’ projections do not anticipate favorable ocean conditions being maintained. *Id.*; *see also* 2020 BiOp at 118-25 [ACE001056337–44].

Federal Defendants have failed to address or account for low abundances, deteriorating environmental conditions, and concerns regarding extreme climactic events. These failures, taken together, counsel in favor of immediate steps to help buffer populations from the harm caused by current CRS operations, especially in light of the devastating impacts of even a few poor years. It is incumbent upon the Federal Defendants to take action to reduce the deleterious impacts of the CRS—which are exacerbated by deteriorating environmental conditions from climate change—sufficient to ensure that the likelihood of survival and recovery is not appreciably diminished. *See NMFS V*, 184 F. Supp. 3d at 917–24 (discussing failure of the 2014 BiOp to account for the effects of the 2014 RPA with climate impacts).

There is no doubt that the listed species have been at dangerously low levels for decades. The longer they remain at perilous levels, the greater the risk of extinction, particularly when adverse environmental conditions become more frequent and more severe. The Federal Defendants’ operation of the CRS will continue to cause irreparable harm to listed species. An

injunction requiring the Federal Defendants to take immediate steps to boost survival and provide a buffer against the harm these species otherwise face from status quo CRS operation is necessary and appropriate.

III. The equities are squarely in Oregon’s favor and an injunction is in the public interest.

The balance of hardships and public interest weigh strongly in favor of issuing Oregon’s requested injunction. Both this Court and the Ninth Circuit have acknowledged that the status of the species at issue is “highly precarious.” *NMFS V*, 184 F. Supp. 3d at 890 (quoting *NMFS III*, 524 F.3d at 933). But rather than prioritize those actions that would help the species avoid a further slide into extinction, Federal Defendants have done exactly the opposite. Their myopic approach improperly elevates short-term economic impacts over dire risks to the species. Equity and the public interest plainly demand that Federal Defendants be ordered to take the requested actions to reduce harms that continue to jeopardize the existence of the listed species. *See Sierra Club v. Marsh*, 816 F.2d 1376, 1383 (9th Cir. 1987), *abrogated on other grounds as recognized in Cottonwood*, 789 F.3d at 1088–91 (“In Congress’s view, projects that jeopardized the continued existence of endangered species threatened incalculable harm: accordingly, it decided that the balance of hardships and the public interest tip heavily in favor of endangered species.”); *Cottonwood*, 789 F.3d at 1090 (“Congress established an unparalleled public interest in the incalculable value of preserving endangered species. It is the incalculability of the injury that renders the remedies available at law, such as monetary damages inadequate.”) (citation modified).

IV. The Court should order Oregon’s requested injunctive relief.

The existing configuration of the CRS limits available options to provide immediate relief for listed fish from harmful CRS actions, particularly in light of ongoing climate change, continued population declines and low abundances, and high risks of extinction. A comprehensive solution is urgently needed to address the current extinction crisis and provide a pathway to recovery moving forward.

As stop-gap measures pending permanent relief, however, Federal Defendants should be ordered to take those operational and conservation-focused actions that are immediately possible within the existing configuration of the CRS to help address CRS impacts and reduce extinction risk. These actions form the basis of Oregon's requested relief, which includes operational measures that are likely to increase listed species' life-cycle survival by reducing powerhouse encounters, juvenile fish travel time, and water temperature risks, as well as non-operational conservation actions. While the requested relief will reduce irreparable harm in the near-term, it will not provide the large-scale and enduring improvements that are required to ensure continued viability of the species. Nonetheless, they are much-needed measures that should at least stave off near-term extinction for many listed populations.

A. Reducing powerhouse encounters, travel time, and water temperature risks are key elements of improved survival.

The negative effects of slowed and impeded migration through the impounded CRS are well documented, including impaired physiological transition to a saltwater organism, increased vulnerability to predation, and increased risk from elevated water temperature. Bowles Decl. ¶ 57. These negative effects, as well as other stressors associated with passage through the CRS, result in decreased lifecycle survival. *Id.* Stop gap measures that focus on increasing life-cycle survival by reducing powerhouse encounters, improving juvenile fish travel time, and mitigating water temperature risks are critical to improving population abundance.

1. Increased spill reduces powerhouse encounters and is associated with positive survival benefits

As this Court is aware from the 2017 spill injunction proceedings, it is widely agreed that spill benefits fish survival by reducing powerhouse encounters. *See NWF VI*, 2017 WL 1829588, at *7–9; *see also* Bowles Decl. ¶ 60. Since those proceedings, evidence that increased spill is associated with positive survival benefits has continued to grow. *See* Bowles Decl. ¶ 61. Recent analyses continue to show that increased spill lowers the number of powerhouse encounters for fish that must pass the dams and is associated with higher SARs and life-cycle

survival. *Id.* This evidence continues to confirm that increasing spill, thereby decreasing powerhouse encounters, is the best available tool for increasing fish survival within the existing configuration of the CRS. *Id.*

2. Reducing travel time and forebay delay is associated with positive survival benefits.

The CRS not only created enormous concrete barriers that anadromous fish must navigate over or through; it also contributes to the decline of anadromous fish runs by creating massive reservoirs that caused system-wide water velocities to dramatically decrease and fish travel time to dramatically increase. Bowles Decl. ¶ 64. The water travel time from Lower Granite to Bonneville was approximately 10 times faster prior to construction and operation of the CRS. *Id.* Slower fish travel time is directly associated with slower water travel time in the CRS. *Id.* Fish travel time is a key factor associated with in-river survival and SARs of Snake River spring/summer Chinook and steelhead and is a key variable in NOAA's COMPASS model affecting post-Bonneville SARs of Snake River Chinook and steelhead. *Id.*

Spill helps to mitigate for slower fish travel time because it increases the proportion of flow hitting a dam that goes through the spillways rather than the powerhouse. *Id.* ¶ 65. Juvenile fish tend to follow flow; if most of the flow passes through powerhouses located at the base of the dam, juvenile fish are delayed in the dam forebay while they reorient and locate the powerhouse passages far beneath the surface. *Id.* Shifting a larger proportion of the flow to the spillways, which are closer to the surface, is an important tool for reducing forebay delay and overall fish travel time and stress. *Id.*

Although spill improves SARs and helps reduce forebay delay and overall fish travel time, it does not help reduce travel time through the main body of mainstem reservoirs. *Id.* ¶ 66. In order to increase water velocity or water travel time in an impounded system, one must either augment flow or reduce reservoir elevation. *Id.* ¶ 67. Although flow augmentation or manipulating reservoir elevation cannot fully compensate for the lost slope of the free-flowing river, they can be used to improve conditions and water travel time to some extent. *Id.* Because

augmenting flow requires additional water, which can be difficult, the Federal Defendants should be ordered to maintain reservoirs at lower elevations with more restricted operating ranges to improve both water and fish travel times.

3. It is becoming increasingly important to mitigate for adverse impacts from elevated water temperature.

Water temperature is becoming an increasingly important factor in the conservation of listed fish as climate change continues to unfold. Bowles Decl. ¶ 68. The configuration and operation of the CRS contributes directly to elevated water temperature by increasing surface area of water exposed to solar radiation, dramatically slowing water travel time, and creating reservoir heat “traps” that do not readily dissipate. *Id.* The frequency, magnitude, and duration of elevated water temperature events has increased with climate change and is exacerbated by the CRS. *Id.* The 2020 BiOp acknowledges that “[t]he greatest challenge for migrating SR sockeye salmon adults is the increasing water temperatures as they move upstream through the hydrosystem.” 2020 BiOp at 466 [ACE001056685].

The Corps has not effectively addressed or mitigated elevated water temperature risk in CRS reservoirs and fish ladders. Bowles Decl. ¶ 71. This is partially because of the current dam configuration and operation. *Id.* Restoration of a free flowing lower Snake River is the single most important CRS action that can be taken to reduce heating in the lower Snake River reach, reduce heat loading into the lower Columbia River reservoirs, and help deliver cold water from Dworshak reservoir to the lower Columbia River reservoirs (currently that cold water is dissipated in lower Snake River reservoirs). *Id.* Until a comprehensive long-term solution that includes restoration of the lower Snake River is secured, the Federal Defendants must take immediate action to reduce water temperature impacts to listed fish. These actions include increasing spill to reduce forebay delay, reducing reservoir elevations to reduce fish travel time and reservoir heating, and installing pumps in select fish ladders to move cooler water into the fish ladders. *Id.* ¶ 73.

B. Federal Defendants should be ordered to maximize benefits to fish within the existing configuration of the eight mainstem dams and to remove economic constraints that limit those benefits.

1. The hours of the maximum spill operation should be expanded from 16 to 24 hours per day during the spring spill season.

Federal Defendants have already embraced the efficacy of spill by rolling forward the flexible spill operations into 2021 and providing the maximum amount of water that can be spilled without exceeding state TDG standards for 16 hours per day during the spring spill period. In light of ongoing low abundances and population declines, these spill operations should be expanded to 24 hours per day to provide additional benefits to fish. Oregon requests that the Court order Federal Defendants to spill the maximum amount of water that can be spilled without exceeding state TDG standards for 24 hours per day during the spring spill period at Lower Granite, Lower Monumental, Ice Harbor, McNary, John Day and Bonneville, thus eliminating the “flex spill” operation that allows for reduced spill for 8 hours per day at those projects for BPA’s power purposes. At Little Goose, Federal Defendants would spill to 125% of Gas cap for 24 hours until the adult criteria are reached, and at The Dalles, the Federal Defendants would conduct 40% spill up to 125% Gas cap for 24 hours per day. *See Proposed Order.* Modeling estimates that this additional spill could decrease dam powerhouse encounters for Snake River spring-summer Chinook and steelhead by about 54% and 59%, respectively, and improve SARs by about 27% and 30%, respectively, for out-migrating fish compared to modeled results for the Selected Alternative. Bowles Decl. ¶ 84.

2. Federal Defendants should expand surface spill operations to benefit adult steelhead, juveniles that are in the mainstem fall and winter, and early migrating juveniles in late winter.

Fall and winter spill are important for preserving species diversity, which supports the viability of fish populations. Bowles Decl. ¶ 91. Diversity refers to the distribution of traits within and among populations that contribute to species persistence and adaptability. *Id.* Along with population abundance, productivity, and spatial structure, diversity is one of the recognized Viable Salmonid Population (“VSP”) benchmarks for assessing the status of listed species. *Id.*

Diversity helps protect species from both short and long-term environmental variability and change by helping them survive and adapt. *Id.* Accordingly, the failure to protect unique life cycle characteristics can have an outsized impact on species viability and resilience. *Id.*

Oregon requests the Court to order expanded fall-winter spill to protect species diversity and reduce irreparable harm. Pursuant to the 2020 BiOp’s Incidental Take Statement (“ITS”), the Action Agencies are required to “implement offseason surface spill as a means of providing safe and effective downstream passage for adult steelhead that overshoot and then migrate back downstream through McNary Dam and the Snake River dams during months when there is no scheduled spill for juvenile passage.” 2020 BiOp at 1399 [ACE001057618]. The ITS requires that surface-oriented spill levels are provided at five projects (the Snake River projects and McNary) between October 1 and November 15 and March 1 to March 30 at least three times per week for four hours per day. Oregon asks that the Court order Federal Defendants to expand the surface-oriented spill operation to provide 24-hour spill from September 1 to November 30 and March 1 to the start of spring spill at the six dams that contain surface passage spill weirs (all dams except The Dalles and Bonneville) and September 1 to the start of spring spill for The Dalles and Bonneville. *See* Bowles Decl. ¶¶ 92 and Proposed Order. In this context, surface-oriented spill is the minimum amount of spill that will allow fish to access a non-turbine passage route and will benefit: (a) listed adult steelhead that overshoot their natal tributaries; (b) listed juvenile fish (primarily fall Chinook) residing and moving in the impounded reaches outside of the spring and summer migration periods; and (c) listed juvenile fish (from all types of salmon and steelhead) that begin their migration to the ocean before the start of the spring spill season in early April. *See* Bowles Decl. ¶¶ 95–101, 102–04, 107.

a. Expanded surface-oriented spill throughout the fall-winter spill season will provide a survival benefit to adult steelhead.

Surface-oriented spill is important for adult steelhead that overshoot their natal stream. When traveling upstream for spawning, listed adult steelhead often migrate further than their natal stream and past dams before needing to return downstream to spawn in their natal stream.

See Bowles Decl. ¶ 95. The 2020 BiOp describes this occurrence at the McNary and the Lower Snake River dams. NMFS explains,

Relatively large numbers of adult steelhead (e.g., MCR steelhead from the John Day, Umatilla, and Walla Walla River MPGs; and SRB steelhead from the Tucannon River population) overshoot McNary and the lower Snake River dams and then volitionally migrate downstream through the dams to reach their natal streams in the fall and spring. To return to natal streams, these fish often have no passage options other than turbines and screened bypass systems once spill operations for juvenile migrants have ended. This behavior has been repeatedly documented and is identified as a threat in the Snake River and Middle Columbia River steelhead recovery plans. Recent observations in Ham et al. 2019, and detections at the newly operated Lower Granite Dam Removable Spillway Weir (RSW) PIT system suggest that overshoot adult steelhead can pass rapidly once a surface passage route is provided.

2020 BiOp at 1399 [ACE001057618]. Adult steelhead also overshoot their natal streams at other projects in the Columbia River. Bowles Decl. ¶ 97. Overshoot is a particular threat to 80 percent of Oregon's Middle Columbia summer steelhead populations, especially wild-only populations. *Id.* ¶ 98.

Expanding surface-oriented spill consistent with Oregon's request will provide survival benefits and reduce irreparable harm to adult steelhead. *Id.* ¶ 83. The 2020 BiOp acknowledges that spillway passage is the safest and most effective route to pass adult steelhead back downstream:

Colotelo et al. (2013) also found that the survival rate of adult steelhead kelts through spillways and surface weirs was high (>95 percent) and survival through turbine units was lowest (<80 percent), indicating that overshoots survive at a higher rate when spill protection is provided when they migrate back downstream.

2020 BiOp at 906 [ACE001057125]. Fall-back related mortality occurs year-round and is not limited to the narrow window selected by NMFS for implementation of the surface-oriented spill operation. Bowles Decl. ¶ 100.

b. Expanded surface-oriented spill will improve survival of juvenile fish that are present in the mainstem during fall and winter.

Some listed species have fish present in mainstem habitat year-round. Expanded surface-oriented spill will provide a non-turbine passage route, and associated survival benefits, to listed species with juveniles overwintering and dispersing through mainstem habitats year-round. Bowles Decl. ¶ 104. Listed summer steelhead have diverse life history characteristics and are present in the mainstem and other freshwater habitat up to several years after emergence. *Id.* ¶ 102. Snake River fall Chinook also have unique life history characteristics in that they spawn and rear in the mainstem Snake River and lower mainstem of major tributaries. *Id.* ¶ 103. Subyearling fall Chinook move among and between mainstem CRS critical habitats year-round. *Id.* Oregon’s request for expanded surface-oriented spill will reduce the irreparable harm to all these fish.

c. Expanded surface-oriented spill is needed to protect the early portion of the migration run.

Voluntary spring spill has traditionally begun in early April, informed at least in part on prior observed run timing of the majority of outmigrating smolts. Bowles Decl. ¶ 105. However, (1) this timing fails to provide spill for the early portion of the run, which is key for species diversity and resilience to climate change, and (2) the overall run timing appears to be shifting earlier as a result of earlier snowpack melt due to climate change, increasing the proportion of fish that must navigate the dams without the benefit of voluntary spill. *Id.*

In 2017, “in light of the importance of the tails of a run for diversity and species adaptation,” the Court ordered the Action Agencies to operate the juvenile bypass and related Passive Integrated Transponder (“PIT”) tag detection system beginning March 1, 2018. *See NMFS*, 2017 WL 1829588, at *11. The Court found that early monitoring would provide data regarding the early “tail” of the salmon and steelhead runs, which would in turn “help inform future management decisions.” *Id.* Early monitoring would also benefit fish by providing an alternative to turbine passage for outmigrating fish during the pre-spill period. *Id.*

The data collected as a result of that Court-ordered earlier PIT monitoring shows that fish are moving past the dams during this earlier period. Bowles Decl. ¶ 107. “Although the number of daily observations of fish passing in the earlier part of March has been relatively low, it is very important to protect even these few fish when, as now, the population total abundances are extremely low.” *Id.* The early components of the migration run are also important for species diversity and may be increasingly important for resilience to climate change. *Id.* Oregon’s request for expanded surface-oriented spill will “provide a survival benefit to the fish in this early component of the run by providing them with a spillway passage route, thereby reducing irreparable harm to the fish.” *Id.*

d. Expanded surface-oriented spill operations will mitigate adverse impacts to fish from zero-flow operations.

Oregon’s requests as to surface-oriented spill will also prohibit zero-flow operations that Federal Defendants implement to benefit power generation but that are detrimental to fish. Bowles Decl. ¶ 108. Zero-flow operations completely shut off flows in all or portions of the lower Snake and lower Columbia rivers. *Id.* Zero-flow had been an operational allowance for the CRS in prior BiOps during winter months, as long as such operations did not start prior to December 1 and considered fish abundance criteria. *Id.* Even that limited fish consideration was rolled back in the 2020 BiOp and ROD, which now allow complete shutoff of nighttime flows in the Snake River as needed to benefit power starting as early as October 15. *Id.* The 2020 BiOp also removed the requirement to consider fish abundance criteria. *See* 2020 BiOp at 63 [ACE001056282]; Bowles Decl. ¶ 108. Oregon’s requested relief would foreclose Federal Defendants from completely shutting off all flow, because at least some limited surface-oriented spill would be required year-round. Bowles Decl. ¶ 108; Proposed Order § I.

3. Federal Defendants should operate lower Columbia River reservoirs at near MOP with a 1.5-foot operating range starting in 2026.

To date, the LCR reservoirs have not been required to operate at MOP and have not generally had biologically-constrained operating ranges, resulting in normal operating elevations

up to 6.5-feet above MOP depending on the project. *See* Bowles Decl. ¶ 120. To reduce irreparable harm, Oregon seeks for Federal Defendants to operate the McNary, Dalles, and Bonneville reservoirs at near MOP with a 1.5-foot operating range from March 1 through August 31, beginning in 2026. Proposed Order § II. For John Day, Oregon requests that Federal Defendants be required (1) to operate at MIP with a 1.5-foot operating range from March 1 through June 15, and at 1 foot above MIP with a 1.5-foot operating range from June 16 through August 31, beginning in 2026, and (2) to prepare a plan identifying and proposing solutions to actions necessary for the John Day reservoir to operate at MOP with a 1.5-foot operating range from March 1 through August 31. *Id.* That plan is an opportunity for Federal Defendants to identify and propose solutions to potential water supply impacts to municipalities, hatcheries, and irrigators. *Id.*

In the 1995 BiOp, NMFS recognized that “[d]rawdown reduces the cross-sectional area of the reservoir, increasing water velocity for a given flow. Since juvenile migrants travel faster with increased water velocities, drawdown to MOP is expected to provide faster emigration and improved survival through the pool.” 1995 BiOp at 113. The 1995 BiOp therefore required the Corps “to continue planning, design, and construction to continuously operate John Day pool near MOP by March 1996.” *Id.* The Corps never implemented such operations. Bowles Decl. ¶ 121. Operating John Day Reservoir at MOP with a 1.5-foot operating range is well-justified, given the long-recognized adverse impacts of the reservoir on fish and the availability of other alternatives to address avian predation. *Id.* ¶¶ 122–24.

Operating three (and eventually all four) LCR reservoirs at MOP with a 1.5-foot operating range will improve the likelihood of meeting the velocity equivalents of the flow objectives established for the lower Columbia River, improving associated fish travel time and survival, and help to ameliorate temperature risks. Bowles Decl. ¶ 123. A comparison by the Fish Passage Center of fish travel time through the John Day Reservoir based on various forebay elevations and flows at John Day Dam predicted substantial decreases in fish travel time when

dams are operated at MOP as compared to full pool or MIP; similar to Lower Granite, the most significant gains were at low flows. *Id.* Reductions in yearling Chinook travel time associated with MOP elevations ranged from 0.5 to 2 days (depending on flow) when compared to full pool and 0.2 to 0.9 days when compared to MIP. *Id.* Similar gains are predicted for steelhead (0.4 to 1.6 days when comparing MOP to full pool and 0.2 to 0.7 when comparing MOP to MIP). *Id.* These analyses indicate that important additional fish protections can be gained for juvenile outmigrants during the spring if lower Columbia River reservoirs are operating at MOP with a 1.5-foot operating range during that timeframe. *Id.* ¶ 102.

C. Federal Defendants should rescind rollbacks that were implemented to the detriment of fish.

1. Federal Defendants should rescind the rollbacks in summer spill that were implemented to meet Bonneville's power-cost objective.

The Flexible Spill Agreement reduced summer spill levels for the last two weeks in August to meet a power-cost objective (i.e., that Bonneville must, at a minimum, be no worse financially compared to the 2018 spring spill injunction). *See* Flexible Spill Agreement Attachment Table 1.4. (ECF No. 2298-1). The summer spill operation in the Selected Alternative and proposed action includes those reductions in spill for the last two weeks in August. *See* 2020 BiOp at 58 [ACE001056277] (Table 1.3-2). These reductions significantly lower spill proportion for the last two weeks of August, compared to the rest of the summer spill season and compared to prior years. Bowles Decl. ¶ 85. As defined more precisely in the Proposed Order, Federal Defendants should reinstate the higher (i.e., pre-Flexible Spill Agreement) spill levels and remove the August rollback in spill. Proposed Order § I. Federal Defendants should also be ordered to reinstate higher level spills at Ice Harbor and John Day, which were reduced in the Flexible Spill Agreement from the levels specified in the 2014 BiOp. Bowles Decl. ¶ 87. These requested measures will benefit fish.

2. The lower Snake River reservoirs should be operated at MOP with a 1-foot operating range allowance.

Prior to 2018, the Corps utilized a 1-foot operating range above MOP at the lower Snake River projects for fish protections, consistent with prior Biological Opinions. Bowles Decl. ¶ 117. The 2020 BiOp allows the Corps to increase the operating range above MOP to benefit economic sectors at the expense of these prior fish protections. *Id.*; 2020 BiOp at 58–59 [ACE001056277-78] (Table 1.3-3 nn.2–3). The Corps’ plans in recent years have allowed for expanded operating ranges raising LSR reservoirs up to 2 feet above MOP, depending on flows. Bowles Decl. ¶ 117. These increased operating ranges are detrimental to fish. *Id.* ¶ 118. In light of the current fish crisis, the Court should order Federal Defendants to restore operations that allowed for only a 1-foot operating range above MOP.

D. Federal Defendants should be required to implement critical actions to repair or replace critical fish passage infrastructure.

The above-described operational measures, on their own, are important but insufficient to appreciably reduce near-term risks to listed fish. To ensure that Federal Defendants can properly and fully implement the above-described flow and spill operations, they should be ordered to perform key repairs and improvements to certain dam infrastructure critical to fish passage. Bowles Decl. ¶¶ 109–115; Proposed Order § III. Many of these actions are long overdue, *see* Bowles Decl. ¶ 109, and are necessary for the benefits associated with operational relief to be fully realized. *Id.* Although deferral of maintenance and fish passage-related improvements are a broad problem throughout the CRS, Oregon’s requested infrastructure-related relief is specifically focused only on discrete components of the CRS that, once functioning properly, will boost benefits to listed species during migration.

E. Federal Defendants should be required to implement non-operational emergency conservation measures.

Oregon also seeks implementation of a suite of emergency non-operational conservation measures. *See* Bowles Decl. ¶¶ 125–146; Proposed Order § IV. Those measures include actions (1) to reduce predation by certain birds and non-native fish at specified locations, (2) to boost

steelhead kelt reconditioning efforts to increase numbers of repeat-spawning fish, and (3) to reduce the risk of genetic and demographic collapse for two especially imperiled populations (Snake River sockeye and Tucannon River spring Chinook). *Id.* Together with the requested operational changes, these near-term non-operational conservation measures will more meaningfully reduce irreparable harm caused by CRS operations. Implementation of these non-operational conservation-focused aspects of Oregon's requested relief is vital to afford some of the most imperiled listed fish a fighting chance against extinction pending further relief from the Court or a comprehensive long-term solution.

F. Oregon's requested relief is appropriately tailored.

Oregon's requested relief is appropriately tailored to address the specific harms alleged. This Court has "broad discretion in fashioning a remedy." *Melendres v. Arpaio*, 784 F.3d 1254, 1265 (9th Cir. 2015) (citation omitted). Further, an "enjoined party's history of noncompliance with prior orders can justify greater court involvement than is ordinarily permitted." *Id.* (quotations omitted). The entire suite of actions requested as temporary emergency relief will contribute to addressing the harm created by status quo operation of the CRS. Every incremental measure will play a role in helping prevent the slide into extinction for the populations of listed species that cannot avoid the CRS dams during their life cycles. The relief Oregon requests is urgently needed to require the Federal Defendants to prioritize the survival of the listed species consistent with the purpose of the ESA.

Further, some flexibility is built into the requested relief. It allows for Federal Defendants to make planned and/or unplanned adjustments to injunction spill levels. *See id.* Oregon's requested relief allows Federal Defendants to continue to make the adjustments allowed under the annual FOPs and specifically allows deference to the Action Agencies for energy emergencies, human safety, or infrastructure integrity emergencies. *See Proposed Order § I.B.3.*

V. Conclusion: the requested interim stop-gap measures are vital to reduce irreparable harm to listed fish.

The frequency, magnitude, and duration of downturns in population abundance, productivity, and environmental conditions all conspire against the inherent resilience of populations of listed fish, including their ability to withstand future downturns or respond to improved conditions. The amplified extinction risk is real and urgent, requiring immediate stop-gap actions to help mitigate the current situation before it is too late. Oregon therefore respectfully requests that the Court grant its Motion and order Federal Defendants to implement Oregon's requested injunctive relief.

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Respectfully submitted,

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