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12 **UNITED STATES DISTRICT COURT**  
13 **FOR THE EASTERN DISTRICT OF CALIFORNIA**

14  
15 PACIFIC COAST FEDERATION OF  
FISHERMEN'S ASSOCIATIONS, *et al.*,

16 Plaintiffs,

17 v.

18 GINA RAIMONDO, in her official  
19 capacity as Secretary of Commerce, *et al.*,

20 Defendants.

Case No. 1:20-cv-00431-DAD-EPG

**PLAINTIFFS' MOTION FOR  
PRELIMINARY INJUNCTION FOR 2022**

Hearing date: February 1, 2022\*  
Judge: Hon. Dale A. Drozd

Courtroom 5, 7th Floor  
2500 Tulare Street  
Fresno, California 93721

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26 \* Pursuant to General Order No. 618 and this Court's prior minute orders, all civil motions will  
27 be decided on the papers unless otherwise ordered by the Court. In light of these orders, and  
28 because filers are required to select a hearing date when filing a motion using the ECF system,  
plaintiffs have noticed this motion for hearing on the same date as the hearing identified in federal  
defendants' motion for voluntary remand (February 1, 2022).

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1 INTRODUCTION

2 Allowing the Central Valley Project (“CVP”) and State Water Project (“SWP”)  
3 (collectively, the “Water Projects”) to continue operating under the scientifically unsound and  
4 fatally flawed 2019 biological opinions issued by the National Marine Fisheries Service (“NMFS”)  
5 and the U.S. Fish and Wildlife Service (“FWS”) (collectively, the “2019 BiOps”) would violate  
6 the Endangered Species Act (“ESA”), particularly in light of the devastating impacts to winter-run  
7 and spring-run Chinook salmon, Central Valley steelhead, and the Delta Smelt that the 2019  
8 BiOps have already allowed. This harm was entirely foreseeable. The 2019 BiOps were designed,  
9 contrary to the requirements of the ESA, to “maximize water deliveries” to water contractors even  
10 in drought, at the expense of pushing these protected fish species toward extinction. Dkt. 85-10 at  
11 61789–90. The incidental take statement of the 2019 NMFS BiOp alone allows the Water Projects  
12 to kill off the entire new year class of winter-run Chinook salmon *three years in a row*, while  
13 arbitrarily concluding that such mortality does not jeopardize the continued survival or recovery in  
14 the wild of this species that has a three-year life cycle. Now, after two years of devastatingly low  
15 winter-run survival, federal defendants acknowledge the danger of continuing to rely on the 2019  
16 BiOps, but propose to leave the NMFS incidental take statement and many other harmful aspects  
17 of the 2019 BiOps in effect. *See* Dkt. 314 at 23.

18 Given the current perilous state of ESA-listed fish species in the San Francisco Bay Delta  
19 (“Bay Delta”), this is not the time for half-measures. In the coming water year, this Court should  
20 adopt scientifically based, enforceable measures designed to ensure that Water Project operations  
21 are lawful—*i.e.*, that they do not, directly or indirectly, diminish species’ numbers, reproduction,  
22 or distribution such that the likelihood of survival and recovery in the wild is appreciably reduced.  
23 16 U.S.C. §§1538(a)(1)(B), 1539(a)(2); 50 C.F.R. §402.02. And to secure the continued viability  
24 of these fish in 2022, Reclamation should be required to prioritize water supplies for the survival  
25 and recovery of these species after first meeting water needs for human health and safety.  
26 Plaintiffs’ proposed injunctive measures are tailored to meet these objectives.

27 The legal shortcomings in the 2019 BiOps and the U.S Bureau of Reclamation’s  
28 (“Reclamation”) Record of Decision on the Coordinated Long-Term Operation of the Water

1 Projects that plaintiffs identified in their earlier briefing, *see* Dkt. 86, have only become more  
2 obvious with the passage of time. Because plaintiffs have demonstrated a likelihood of success on  
3 their claims that the 2019 BiOps and Reclamation’s reliance on them are arbitrary, capricious, and  
4 contrary to law, and that continued operation of the Water Projects based on the 2019 BiOps will  
5 result in significant irreparable harm, plaintiffs are entitled to preliminary injunctive relief.

6 Plaintiffs’ proposed injunctive relief is narrowly tailored to ensure that Reclamation takes  
7 the measures necessary to avoid jeopardizing winter-run and spring-run Chinook salmon, Delta  
8 Smelt, and Central Valley steelhead. Plaintiffs propose (1) enforceable limits on pumping during  
9 critical months for these species that better reflect the science and conservation status of the  
10 species than the limits federal defendants propose in the Interim Operations Plan (“IOP”), Dkt.  
11 313-1; (2) enforceable Shasta Reservoir storage requirements, in-stream temperature requirements,  
12 maximum temperature-dependent mortality, and an obligation that Reclamation prioritize meeting  
13 these criteria; and (3) a requirement to prioritize operations in compliance with baseline water  
14 quality standards set forth in State Water Resources Control Board (“SWRCB”) Decision No.  
15 1641 (“D-1641”), which, shockingly, federal defendants are seeking to weaken in 2022. Plaintiffs  
16 also ask that the Court conform the incidental take statements of the 2019 BiOps to authorize  
17 incidental take only in compliance with the operational measures of their proposed injunction.

## 18 BACKGROUND

### 19 I. Water Project Operations Under The 2019 BiOps Threaten The Survival Of ESA- 20 Protected Fish.

21 Plaintiffs’ prior motion for a preliminary injunction detailed how Reclamation’s operation  
22 of the CVP, and the coordinated operations of the SWP—with their immense storage facilities and  
23 diversion and delivery of water from the major watersheds of the Sacramento and San Joaquin  
24 Rivers and those rivers’ estuary, the Bay Delta—have significant adverse impacts on federally  
25 protected fish living in the watersheds, including: pumping operations that kill fish and reduce  
26 survival through the Bay Delta; storage and diversion activities that radically affect in-stream  
27 temperatures and result in massive mortality of Chinook salmon; and storage, pumping, and  
28 diversion activities that greatly affect the amount of fresh water available for critical habitat. Dkt.

1 86 at 8–11.<sup>1</sup> Plaintiffs’ prior motion also provided the background on the ESA Section 7  
2 consultation that resulted in the challenged October 21, 2019 BiOps, including the preparation of a  
3 final NMFS biological opinion on July 1, 2019 that found the proposed operations plan *would*  
4 jeopardize protected Chinook salmon and steelhead and their critical habitat. *Id.* at 11–13 (citing  
5 Dkt. 85-13). Plaintiffs focus here on the sharp decline in protected fish populations that has  
6 occurred as a result of insufficient protective measures during the last two dry water years.

7 **A. Federally Protected Bay Delta Fish Populations Have Declined Since 2019.**

8 While threatened and endangered fish populations in the San Joaquin and Sacramento  
9 River watersheds have been in perilous condition for several years, the last two years have dealt a  
10 significant blow to their survival and recovery. In 2016, the Secretary of Interior warned that  
11 Delta Smelt and winter-run Chinook salmon may be headed toward extinction and increased  
12 protections were likely needed. Dkt. 85-3 at 2; *see also* Dkt. 85-1 (“FWS BiOp”) at 84–85, 88.  
13 And the 2019 NMFS BiOp acknowledged that endangered winter-run and spring-run Chinook, as  
14 well as Central Valley steelhead, were at high risk of extinction or further decline. Dkt. 85-2  
15 (“NMFS BiOp”) at 65, 75–76, 81, 94, 108.

16 Since adoption of the 2019 BiOps, winter-run Chinook salmon experienced very low egg  
17 to fry survival in 2020 (estimated at 11.46%) and catastrophic temperature-dependent mortality  
18 (75%) and record low survival in 2021 (when an estimated 2% of eggs survived to pass Red Bluff  
19 Diversion Dam as juvenile salmon), with even fewer surviving their downstream migration.  
20 Supplemental Decl. of Dr. Rosenfield (“Supp. Rosenfield Decl.”) ¶¶13, 16; *see also* Dkt. 313-1  
21 (IOP ¶12(i): admitting last two years’ cohorts experienced less than 15% egg to fry survival).  
22 Given the species’ three-year life cycle, significant losses in 2022 could push the species to  
23 extinction. Supp. Rosenfield Decl. ¶¶11, 17–18.

24 Spring-run Chinook salmon populations have also suffered the last two years, including  
25 significant losses of salmon prior to spawning, *id.* ¶¶20–21, and low survival as they migrated  
26 downstream during historically low flows, *id.* ¶22. Only a handful of Delta Smelt were caught in  
27

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28 <sup>1</sup> All page citations refer to the ECF pagination, except for the citations to the 2019 BiOps and  
2019 Final Biological Assessment (“BA”), which use original page numbers for ease of reference.

1 2021, *id.* ¶¶23–24, and conditions for their survival worsened in 2021 when Reclamation and  
2 DWR sought and obtained a Temporary Urgency Change Petition (“TUCP”) that allowed them to  
3 reduce Delta outflow in ways that the SWRCB acknowledged were “expected to negatively impact  
4 survival of juvenile Delta smelt June through August [2021].” Chisholm Decl. in Support of Pls.’  
5 Mot. (“Chisholm Decl.”), Exh. B at 20. The SWRCB also concluded in June 2021 that “steelhead  
6 survival will likely be low in all tributaries and migratory pathways and is likely to result in a  
7 smaller returning year class of steelhead.” *Id.* at 24; Supp. Rosenfield Decl. ¶¶25–26.

8 **B. Water Project Operations in 2020 and 2021 Significantly Worsened Conditions**  
9 **for Listed Fish.**

10 Federal defendants, while acknowledging that it is untenable to continue operating the  
11 Water Projects pursuant to the 2019 BiOps and that some “equitable” relief is necessary, seek to  
12 distract from the harms associated with the 2019 BiOps, stressing that the last two years have been  
13 one of the driest periods on record. Dkt. 314 at 23. Yet there can be no serious dispute that Water  
14 Project operations under the 2019 BiOps contributed to the dire situation that ESA-listed fish now  
15 face and it is important to understand the ways in which the 2019 BiOps failed the fish before  
16 fashioning appropriate injunctive relief.

17 Fish suffered from a lack of cold water and insufficient flows in 2020 and 2021. Supp.  
18 Rosenfield Decl. ¶¶10–26. Water was available for these purposes; it was simply allocated to  
19 other priorities by the CVP and SWP under the 2019 BiOps. In Water Year 2021, Reclamation  
20 and the California Department of Water Resources (“DWR”) allocated more than 4 million acre-  
21 feet (“MAF”) of water to Water Project contractors, primarily settlement and exchange  
22 contractors, from CVP and SWP reservoirs, even as Reclamation and DWR failed to meet June 1  
23 to August 15 Delta water quality standards. Dkt. 272-4 at 13–14. And despite the lack of  
24 adequate water in storage for salmon habitat in 2021, Reclamation refused to reduce discretionary  
25 water deliveries from Shasta Dam to Sacramento River Settlement Contractors. Dkt. 278 at 9–10;  
26 Dkt. 278-7 at 2–4. The 2019 BiOps not only fail to constrain water deliveries, but they provide  
27 incidental take coverage for full contract deliveries. NMFS BiOp at 798–99.

28 The 2019 BiOps simultaneously fail to require storage in Shasta Reservoir necessary for

1 temperature control. They do not include any end of April storage requirements, despite NMFS’  
2 and Reclamation’s recognition that end of April storage of 3.5 MAF may be necessary to meet  
3 water temperatures of 54-56°F at Clear Creek. NMFS BiOp at 207, Dkt. 120-5 (“Final BA”) at 4-  
4 30. End of April storage was well below this level in 2021. Dkt. 272-4 at 11–12. The BiOps also  
5 eliminated previous end of September carryover storage requirements. While Reclamation  
6 acknowledges that a minimum of 1.9 MAF in end of September is necessary to ensure a sufficient  
7 cold-water pool for temperature management in the following year, NMFS BiOp at 206; Dkt. 85-8  
8 at 35–40, Reclamation ended Water Year 2021 with the lowest carryover Shasta storage in the last  
9 25 years (1.07 MAF). Supp. Rosenfield Decl. ¶¶18, 39; *see also* Dkt. 313-1 ¶12(i).

10 The devastating effects of Reclamation’s failure to curtail water contractor deliveries to  
11 maintain adequate cold water for salmon are sharpened by the 2019 BiOps’ grossly inadequate  
12 standards for in-stream temperatures below Shasta Dam. In 2021, an estimated 75% of winter-run  
13 Chinook salmon eggs were killed simply by very high river temperatures (“temperature-dependent  
14 mortality”). Supp. Rosenfield Decl. ¶14 & Fig. 1 (temperatures ranged as high as 64.5°F); *id.* (in-  
15 stream temperatures far exceeded targets set by Reclamation’s temperature management plan);  
16 Chisholm Decl., Exh. A. Reclamation also released very hot water in April and May 2021 from  
17 Keswick Dam, killing approximately 6% of adult winter-run females before they could spawn, *id.*  
18 ¶15, and causing unauthorized take. Chisholm Decl., Exhs. F & N.

19 Spring-run Chinook salmon productivity was “catastrophically low” in 2021, in part due to  
20 pre-spawning mortality and reduced fertility of adults exposed to the same high Sacramento River  
21 temperatures in April and May 2021 that killed adult winter-run Chinook salmon. Supp.  
22 Rosenfield Decl. ¶¶20–21. The CVP also released extremely warm water into the American River  
23 that caused exceedances of the 2019 NMFS BiOp’s take limits for Central Valley steelhead.  
24 Chisholm Decl., Exh. F at 11–12.

25 Further, Reclamation failed to operate the CVP consistent with D-1641’s water quality  
26 standards in 2021 and seeks to do so again in 2022, even though these standards are foundational  
27 to the BiOps. *See, e.g.*, Dkt. 120-5 at 38–40, 51, 92–94 (meeting D-1641 water quality standards  
28 included in Final BA’s project description); NMFS BiOp at 15, 461, 583; Dkt. 120 (Record of

1 Decision) at 53. Reclamation violated those standards in April 2021, and thereafter sought and  
2 received approval of a TUCP that permitted reducing Delta outflow and increasing salinity in the  
3 Delta over the summer below the levels analyzed and required in the 2019 BiOps. Dkt. 272-4 at  
4 2–4. Harms associated with this TUCP included reduced survival of endangered and threatened  
5 salmon migrating through the Delta in June, *see* Dkt. 278-6 at 38–39, 49, 53–54; Dkt. 82  
6 (Rosenfield Decl.) ¶154, and reduced survival of juvenile Delta Smelt, *see* Dkt. 272-4 at 19; Dkt.  
7 82 ¶¶65, 69–70. Reclamation and DWR have now sought another TUCP for Water Year 2022—  
8 despite failing to account for the TUCP’s terms in their IOP. Chisholm Decl., Exh. C; *see also*  
9 Supp. Rosenfield Decl. ¶¶64 n.23, 83 (explaining how operations under TUCP would cause  
10 irreparable harm and result in a 1:2 ratio of San Joaquin River inflow to exports in 2022).

## 11 **II. Procedural Posture**

12 Plaintiffs cover much of the relevant procedural context in their concurrently filed  
13 opposition to federal defendants’ motion for voluntary remand without vacatur. The following  
14 summary focuses on aspects most pertinent to plaintiffs’ requested injunctive relief.

15 The parties and the Court do not approach this motion for a preliminary injunction with a  
16 blank slate. In early 2020, plaintiffs moved for a preliminary injunction and, separately, for a  
17 temporary restraining order with respect to the elimination of the San Joaquin River Inflow-to-  
18 Exports (“I:E”) Ratio. Dkt. 81; Dkt. 81-1; Dkt. 133. While the Court denied the request for a  
19 temporary restraining order, it granted plaintiffs’ preliminary injunction motion with respect to the  
20 San Joaquin River I:E Ratio. Dkt. 142; Dkt. 173. Specifically, the Court enjoined the “Proposed  
21 Action’s export operations in the south Delta to the extent that those operations [did] not comply  
22 with RPA Action IV.2.1 [the San Joaquin River I:E Ratio] from the 2009 NMFS BiOp from the  
23 date of [the] order up to and through May 31, 2020.” Dkt. 173 at 35. In doing so, the Court found  
24 there were serious questions with respect to whether NMFS had justified its position regarding the  
25 elimination of the San Joaquin River I:E Ratio, and concluded plaintiffs had established that  
26 operations inconsistent with the injunction would “irreparably harm” threatened Central Valley  
27 steelhead. *Id.* at 22, 31, 35. The Court’s subsequent order with respect to Shasta operations  
28

1 concluded that plaintiffs had not carried their burden to show that operations under the NMFS  
2 2009 BiOp would necessarily be better for ESA-listed species. Dkt. 203 at 18–19, 32.

3 On October 1, 2021, federal defendants reinitiated consultation on the long-term  
4 coordinated operations of the CVP and SWP. In doing so, Reclamation stated only that  
5 reinitiation was warranted “based on anticipated modifications to the Proposed Action” that might  
6 cause effects not analyzed in the 2019 BiOps and described the anticipated changes as addressing  
7 the reconciliation of CVP and SWP operating criteria, with no mention of the dire status of ESA-  
8 listed species. Dkt. 293-1. Moreover, federal defendants failed to acknowledge that reinitiation of  
9 consultation was required by law because the Water Projects had caused unauthorized take and  
10 were not operated in compliance with D-1641, causing additional impacts to listed species not  
11 analyzed in the 2019 BiOps. 50 C.F.R. §§402.16(a)(1), (3); Chisholm Decl., Exh. F. Federal  
12 defendants now propose to leave the 2019 BiOps in place for several years, subject only to limited  
13 equitable relief, which means that many harmful and unlawful provisions of the BiOps would be  
14 left in place, including the incidental take statements. *See also* Dkt. 86 at 19–21, 25–27.

### 15 ARGUMENT

16 It is no surprise that implementing the 2019 BiOps has worsened conditions for federally  
17 protected winter-run and spring-run Chinook salmon, Central Valley steelhead, and Delta Smelt.  
18 Plaintiffs have previously demonstrated why they are likely to succeed on their claims that the  
19 2019 BiOps are arbitrary, capricious, and contrary to the ESA, 16 U.S.C. §1536, and the  
20 Administrative Procedure Act, 5 U.S.C. §706. *See* Dkt. 86 at 18, 27–28; Dkt. 153 at 15–38. The  
21 2019 BiOps were expressly designed to maximize water deliveries; the opinions themselves  
22 acknowledged that the approved Water Project operations would result in increased mortality of  
23 threatened and endangered fish; and the opinions’ “no-jeopardy” conclusions were politically  
24 motivated and wholly unsupported by science. Two years after their adoption, federal defendants  
25 profess to have no interest in defending the 2019 BiOps, Dkt. 314-4 ¶7, while asking the Court to  
26 largely leave the BiOps in place with limited interim relief.

27 Plaintiffs’ proposed injunctive relief for 2022 includes measures to ensure that Water  
28 Project operations do not jeopardize the four species at issue in this case. Certainly, as federal

1 defendants implicitly acknowledge, continued reliance on the 2019 BiOps is untenable and would  
 2 be ruinous for these fish populations already on the brink of extinction. Unlike the half-measures  
 3 in the IOP, plaintiffs’ proposed injunction includes the minimum necessary protections to prevent  
 4 the Water Projects from devastating these species in the coming water year.

5 A preliminary injunction is warranted where, as here, plaintiffs have shown that they are  
 6 “likely to succeed on the merits,” that they are “likely to suffer irreparable harm in the absence of  
 7 preliminary relief, that the balance of equities tips in [their] favor, and that an injunction is in the  
 8 public interest.” *Winter v. Nat. Res. Def. Council, Inc.*, 555 U.S. 7, 20 (2008). An injunction is  
 9 also appropriate when “there are serious questions going to the merits—a lesser showing than  
 10 likelihood of success on the merits,” “the balance of hardships tips *sharply* in the plaintiff’s favor,  
 11 and the other two *Winter* factors are satisfied.” *All. for Wild Rockies v. Pena*, 865 F.3d 1211, 1217  
 12 (9th Cir. 2017) (internal citation and quotation marks omitted). In ESA cases, Congress has  
 13 “removed from the courts their traditional equitable discretion in injunction proceedings of  
 14 balancing the parties’ competing interests.” *Nat’l Wildlife Fed’n v. Nat’l Marine Fisheries Serv.*,  
 15 422 F.3d 782, 793–94 (9th Cir. 2005) (internal quotation marks omitted). When courts are  
 16 “confronted with requests for injunctive relief in ESA cases,” the other prongs of the preliminary  
 17 injunction standard—the equities and public interest factors—“always tip in favor of the protected  
 18 species.” *Cottonwood Env’t L. Ctr. v. U.S. Forest Serv.*, 789 F.3d 1075, 1091 (9th Cir. 2015).

19 **I. Plaintiffs Are Likely To Demonstrate That The 2019 BiOps, And Reclamation’s**  
 20 **Reliance On Them, Are Arbitrary, Capricious, And Contrary To Law.**

21 Plaintiffs’ prior motion for a preliminary injunction outlined the numerous reasons that the  
 22 2019 BiOps, and Reclamation’s reliance on them, are arbitrary, capricious, and contrary to law.  
 23 *See* Dkt. 86; Dkt. 153. Below we summarize some of the most glaring legal flaws.<sup>2</sup>

24 **A. The 2019 BiOps’ Ultimate Conclusions That Water Project Operations Will Not**  
 25 **Jeopardize ESA-Listed Species Are Arbitrary, Capricious, and Contrary to Law.**

26 Both BiOps conclude that the planned operations of the Water Projects are not likely to  
 27 appreciably reduce the likelihood of survival and recovery of ESA-listed fish in the Bay Delta, nor

28 <sup>2</sup> Cognizant of the number of issues to address, as well as federal defendants’ decision not defend the 2019 BiOps, plaintiffs do not discuss all of the reasons the 2019 BiOps are invalid.

1 destroy or adversely modify the critical habitat of those species. These no-jeopardy conclusions  
 2 are contrary to the best available science, not supported by any reasoned explanation, and  
 3 contradicted by the agencies' own findings.

4 2019 NMFS BiOp. NMFS' final no-jeopardy conclusion was preceded by a "jeopardy"  
 5 opinion issued July 1, 2019, which, along with numerous memos authored by agency staff,  
 6 demonstrate the lack of scientific integrity in the consultation process.<sup>3</sup> This disconnect between  
 7 NFMS' ultimate no-jeopardy conclusion and the agency's own analysis is apparent in the BiOp,  
 8 which finds that the fish species suffered precipitous declines and are in peril, *e.g.*, NMFS BiOp at  
 9 65, 75 (winter-run Chinook); 92, 94 (spring-run Chinook); 105–08 (steelhead). The 2019 NMFS  
 10 BiOp finds that Reclamation's new operations plan will likely significantly increase salvage of  
 11 winter-run and spring-run Chinook salmon, *see id.* at 683; decrease the abundance of endangered  
 12 winter-run Chinook salmon, *see id.* at 696–97; decrease survival of juvenile winter-run and  
 13 yearling spring-run Chinook salmon migrating through the Delta, *see id.* at 382–83, 402, 702–03;  
 14 and increase the risk of large population declines that threaten extinction, *see id.* at 707.

15 Indeed, the 2019 NMFS BiOp admits that:

16 Based on the analyses of expected effects of the proposed action to ESA-listed CV  
 17 Chinook salmon populations, *reductions in the survival and productivity of all CV*  
 18 *Chinook salmon populations (including fall-run and late fall-run Chinook salmon)*  
*are expected to occur throughout the proposed action, and the greatest effects will*  
*occur during the drier water years . . . .*

19 NMFS BiOp at 683 (emphasis added). NMFS concomitantly finds that the new Water Project  
 20 operations will "take," *i.e.*, harm or kill, more of these species than was permitted under the 2009  
 21 BiOp. *See, e.g., id.* at 801, 810.

22 It is well established that a species on the brink of extinction will be further jeopardized by  
 23 additional reductions in survival and productivity. *See Nat'l Wildlife Fed'n v. Nat'l Marine*

24 \_\_\_\_\_  
 25 <sup>3</sup> *See* Dkt. 85-13 (NMFS' July 2019 jeopardy opinion); Dkt. 308; Chisholm Decl., Exh. K (memo  
 26 to record from NMFS' Science Coordinator describing concerns about comments from  
 27 Reclamation suggesting that certain analysis be "changed or removed"); *id.*, Exh. L (memo raising  
 28 concern that consultation's lead "seemed biased" and that "it was clear to me that the pendulum  
 was always going to swing in the favor of political decisions being made by the Department of  
 Interior (DOI) at the expense of the ESA Section 7 process and scientific integrity"); *id.*, Exh. M;  
 Dkt. 228-9 (NMFS meeting notes from May 2019 describing FWS statements to NMFS that "the  
 schedule does not allow time" for a jeopardy opinion and NMFS' statement that the "2009 BiOp  
 was jeopardy, was upheld in court. Species hasn't improved, and has actually gotten worse.").

1 *Fisheries Serv.*, 524 F.3d 917, 930 (9th Cir. 2008) (“[A]n agency may not take action that will tip  
 2 a species from a state of precarious survival into a state of likely extinction.”); *Turtle Island*  
 3 *Restoration Network v. U.S. Dep’t of Commerce*, 878 F.3d 725, 737 (9th Cir. 2017) (even small  
 4 additional harms can jeopardize the species when population is declining under baseline  
 5 conditions). NMFS’ failure to follow this basic reasoning renders its decision irrational. *See S.*  
 6 *Yuba River Citizens League v. Nat’l Marine Fisheries Serv.*, 723 F. Supp. 2d 1247, 1266–67 (E.D.  
 7 Cal. 2010) (no rational connection between agency’s recognition that “past practices have caused a  
 8 decline” and statement that continuation of those actions would not cause jeopardy); *see also Nat.*  
 9 *Res. Def. Council v. Kempthorne*, 506 F. Supp. 2d 322, 373 (E.D. Cal. 2007) (“[I]t is arbitrary for  
 10 the agency to conclude that project operations will not result in jeopardy simply because the  
 11 projects will take relatively fewer smelt than they did in the past, in the face of the undisputed fact  
 12 that the smelt population has been declining steadily in recent years.”).

13 2019 FWS BiOp. The 2019 FWS BiOp’s no-jeopardy conclusion also runs counter to the  
 14 evidence and is arbitrary in light of the opinion’s findings that: (1) Delta Smelt, a critically  
 15 endangered species with a short, one-year life cycle that was once one of the most abundant  
 16 pelagic fishes in the estuary, is at record low abundance and at great risk of extinction, FWS BiOp  
 17 at 65, 84–88, 94, 210; (2) even under existing conditions the population of Delta Smelt is  
 18 anticipated to decline by 70–100% over the next decade, from the already record low abundance in  
 19 2018, FWS034109–FWS034121; and (3) the new Water Project operations will cause adverse  
 20 impacts to the remaining population, including increased harms to Delta Smelt from weakening  
 21 existing species protections, *see, e.g.*, FWS BiOp at 210–14, 393 (FWS “anticipates” that “export  
 22 of water from the Delta” will “kill or harm . . . all delta smelt within the south Delta affected by  
 23 water operations and other areas of the Delta affected by reduced habitat quality”). These facts are  
 24 simply irreconcilable with the FWS BiOp’s no-jeopardy conclusion, as independent peer reviewers  
 25 noted in finding that the proposed action would further worsen conditions for Delta Smelt, degrade  
 26 critical habitat and pose “great peril” for Delta Smelt. Dkt. 85-19 at 3.<sup>4</sup>

27 \_\_\_\_\_  
 28 <sup>4</sup> Another independent peer reviewer noted the disconnect between the fact that “Delta Smelt  
 abundance is the lowest ever observed and is expected to continue to decline,” and that the plan  
 still “includes an annual increase in water exports from the ecosystem.” *Id.* at 6.

1 That past Water Project operations have already imperiled the Delta Smelt is no excuse.  
 2 The Ninth Circuit has made clear that, “even where baseline conditions already jeopardize a  
 3 species, an agency may not take action that deepens the jeopardy by causing additional harm.”  
 4 *Nat’l Wildlife Fed’n*, 524 F.3d at 930. Because the FWS BiOp does not attempt to grapple with or  
 5 rationally address the Delta Smelt population’s decline and the Water Projects’ adverse effects on  
 6 the Delta Smelt, its no-jeopardy conclusion is arbitrary and capricious.

7 **B. The Incidental Take Statements of the 2019 BiOps Are Arbitrary, Capricious, and**  
 8 **Contrary to Law.**

9 NMFS Incidental Take Statement. The incidental take statement in the 2019 NMFS BiOp  
 10 fails to set adequate triggers for reinitiation of consultation, rendering the conclusion that the  
 11 permitted level of incidental take will not jeopardize the species arbitrary and capricious. *See Wild*  
 12 *Fish Conservancy v. Salazar*, 628 F.3d 513, 532 (9th Cir. 2010); *Ctr. for Biological Diversity v.*  
 13 *Bureau of Land Mgmt.*, 422 F. Supp. 2d 1115, 1131 (N.D. Cal. 2006).

14 With respect to winter-run Chinook salmon, the 2019 NMFS BiOp provides that incidental  
 15 take authorization is exceeded when there are “[t]wo consecutive years of egg-to-fry survival of  
 16 less than 15 percent followed by a third year of less than 21 percent based on fry production at Red  
 17 Bluff Diversion Dam.” NMFS BiOp at 801–02. This would allow three years of 0% egg to fry  
 18 survival of winter-run Chinook salmon below Shasta Dam—*i.e.*, *complete mortality of each year’s*  
 19 *newly-spawned population for three years in a row*—before reinitiation is required. Because  
 20 winter-run Chinook salmon generally only live three years, the take limit allows Water Project  
 21 operations to cause extinction of the species before reinitiating consultation. *See* Dkt. 85-18 at 23  
 22 (“The majority of winter-run return to spawn in 3 years, so a single catastrophe with effects that  
 23 persist for at least 3 years would affect all of the winter-run cohorts.”).

24 The NMFS incidental take statement is flawed in other aspects. It increases the number of  
 25 juvenile steelhead that can be killed at the Delta pumps to 5,800 per year, a level that is more than  
 26 twice the highest annual observed loss of steelhead since the 2009 BiOp took effect. NMFS BiOp  
 27 at 508, 810. It uses several surrogate take limits without “[d]escrib[ing] the causal link between  
 28 the surrogate and take of the listed species” that is required. 50 C.F.R. §402.14(i)(1)(i); *see* FWS

1 BiOp at 394–96; *see also Wild Fish Conservancy*, 628 F.3d at 531–32. And it provides take  
2 authorization for diversion of between 1.5 and 2.2 MAF of water from the Sacramento River  
3 below Shasta Dam pursuant to the Sacramento River Settlement contracts, despite not analyzing  
4 the effects of those deliveries over the life of the contract and despite the agencies repeatedly  
5 failing to protect listed species during droughts in order to make these water deliveries. NMFS  
6 BiOp at 52 (analyzing and authorizing operations through 2030), 798–99 (incidental take  
7 statement for contract deliveries, including non-discretionary deliveries).

8 FWS Incidental Take Statement. The incidental take statement for Delta Smelt in the 2019  
9 FWS BiOp is invalid on its face. It authorizes Reclamation, in implementing its new plan, to kill  
10 or injure unlimited numbers of Delta Smelt so long as Reclamation implements its plan. FWS  
11 BiOp at 393–96. It also eliminates all numerical limits on the number of adult Delta Smelt that  
12 can be killed at the Delta pumps and unlawfully defers to an uncertain future process the  
13 establishment of any limits on the number of juveniles that can be killed at the pumps. *Id.*

14 **C. The 2019 BiOps’ Elimination of Previous Protections and Reliance on Uncertain**  
15 **Mitigation Measures Is Arbitrary, Capricious, and Contrary to Law.**

16 The 2019 BiOps fail to explain how the elimination of previous protections for those  
17 species can sustain the no-jeopardy conclusions and rely on uncertain mitigation measures.  
18 Plaintiffs briefly address three aspects of this problem.

19 Pumping Limitations. NMFS has repeatedly found that pumping that results in negative  
20 flows in the Old and Middle Rivers (“OMR”) that are more negative than -5,000 cubic feet per  
21 second (“cfs”) is not protective of migrating salmon and steelhead; that it is not sufficient to allow  
22 pumping at OMR levels more negative than -5,000 cfs until such time as salmon “salvage” is  
23 observed (because such pumping injures and kills fish even before salvage is observable); and that  
24 eliminating the San Joaquin River I:E Ratio in April and May, which is designed to ensure  
25 adequate flows, would be detrimental to salmon and steelhead. Dkt. 85-18 at 24–25; Dkt. 85-21;  
26 Dkt. 85-22. Nevertheless, the 2019 NMFS BiOp approves unlimited pumping during storm events  
27 (with OMR more negative than -5,000 cfs) until very high salmon salvage is observed at the  
28 pumps, eliminates the I:E ratio, and weakens or eliminates other restrictions on Delta pumping

1 from the 2009 NMFS BiOp. Dkt. 86 at 13–16, 28–30; Dkt. 82 ¶¶118–19, 148–49, 195–96.  
 2 NMFS fails to provide a reasoned explanation why, in light of the need to strengthen protections in  
 3 the 2009 BiOp, *see* Dkt. 86 at 11–12 (citing Dkt. 85-8; Dkt. 85-3), the 2019 NMFS BiOp  
 4 authorizes eliminating these same protections it previously determined were necessary.

5 Shasta Operations. The NMFS BiOp also fails to provide a reasoned explanation for  
 6 omitting carryover storage and reservoir release requirements to conserve storage necessary to  
 7 meet water temperature and mortality limits below Shasta Dam, which it has consistently found  
 8 are crucial to preventing jeopardy to ESA-listed fish species. Dkt. 85-8 (2017 Shasta RPA  
 9 Amendment); Dkt. 85-13 at 208 (July 1 NMFS Jeopardy BiOp) (concluding that Reclamation’s  
 10 operations would jeopardize listed salmonids and identifying need for stronger limits on  
 11 temperature-dependent mortality below Shasta Dam).<sup>5</sup> Where an agency departs from its previous  
 12 findings, it must examine its own “prior factual findings [and] conclusions,” and “articulate a  
 13 satisfactory explanation when it changes its mind.” *Def. of Wildlife v. Zinke*, 856 F.3d 1248, 1262  
 14 (9th Cir. 2017) (internal quotations omitted). NMFS fails to do so in the 2019 BiOp.

15 Reliance on Protective Measures During Droughts. Both BiOps also unlawfully rely on  
 16 uncertain mitigation measures to reach their no-jeopardy conclusions, *see Nat’l Wildlife Fed’n*,  
 17 524 F.3d at 935–36, including by assuming that minimum flow and water quality standards under  
 18 D-1641 would be implemented during droughts, despite the fact that these and other protective  
 19 requirements were waived during the 2014-2015 drought and federal agencies had previously  
 20 concluded similar waivers were reasonably foreseeable. Dkt. 86 at 11, 30; *see* Dkt. 85-23; Dkt.  
 21 52-1 at 33–34. The failure to analyze the effects of TUCPs and other predictable measures that  
 22 weaken or waive protections during future droughts is arbitrary and capricious.

23 **II. Plaintiffs’ Proposed Interim Injunctive Relief Is Needed To Avoid Irreparable Harm**  
 24 **To Threatened And Endangered Fish During 2022.**

25 Plaintiffs’ proposed interim injunctive relief for 2022 Water Project operations is designed  
 26 to avoid irreparable harm to threatened and endangered fish in the Bay Delta. The requested relief

27 \_\_\_\_\_  
 28 <sup>5</sup> Reclamation’s modeling of operations (relied on by NMFS) shows mortality in Critically Dry  
 years double the level NMFS previously proposed. *Compare* Final BA, App. D at Table 1-3 (2019  
 BiOp: average 61% mortality), *with* Dkt. 85-8 at 14 (2017: mortality objective of less than 30%.

1 would not set the 2019 BiOps aside in their entirety, but as to critical measures, would enjoin  
 2 Reclamation and those acting in concert with Reclamation from operating the Water Projects in  
 3 contravention of the injunction's terms. It would further remove incidental take authorization to  
 4 the extent operations do not comport with the injunction's terms. *See* Pls.' Proposed Order.

5 Generally, in ESA cases, a "reasonably certain threat of imminent harm to a protected  
 6 species is sufficient for issuance of an injunction." *Marbled Murrelet v. Babbitt*, 83 F.3d 1060,  
 7 1066 (9th Cir. 1996), *as amended on denial of reh'g* (June 26, 1996).<sup>6</sup> Here, there is no dispute  
 8 that the 2019 BiOps authorize Water Project operations that kill and harm protected species.<sup>7</sup> And  
 9 although extinction-level harm is not required to support an injunction, *Yurok Tribe v. U.S. Bureau*  
 10 *of Reclamation*, 231 F. Supp. 3d 450, 483 (N.D. Cal. 2017), the listed fish species here are already  
 11 at critically low numbers, making them highly susceptible to extirpation if the 2019 BiOps'  
 12 measures remain in effect. Supp. Rosenfield Decl. ¶¶10–11; *see Nat'l Wildlife Fed'n*, 886 F.3d at  
 13 820–21 (finding likelihood of irreparable harm from water project operations where the species'  
 14 low abundance made it vulnerable to extinction).

15 **A. Plaintiffs' Proposed Injunctive Measures Limiting South of Delta Pumping Are**  
 16 **Necessary to Avoid Jeopardizing Central Valley Steelhead, Chinook Salmon, and**  
 17 **Delta Smelt.**

18 The 2019 BiOps, as compared to previously approved operations, allow for significantly  
 19 increased pumping out of the Delta, with pumping causing greater magnitude of reverse flow (*i.e.*,

20 <sup>6</sup> The Ninth Circuit has held that establishing likely harm to members of a protected species  
 21 constitutes a showing of irreparable harm "because '[o]nce a member of an endangered species has  
 22 been injured, the task of preserving that species becomes all the more difficult.'" *Nat'l*  
 23 *Wildlife Fed'n v. Nat'l Marine Fisheries Serv.*, 886 F.3d 803, 818 (9th Cir. 2018) (quoting *FCC*  
 24 *v. Rosboro Lumber*, 50 F.3d 781, 785 (9th Cir. 1995)).

25 <sup>7</sup> The 2019 BiOps authorize operations that will result in: (1) increased entrainment and mortality  
 26 of winter-run Chinook salmon, NMFS BiOp at 489; spring-run Chinook salmon, *id.* at 500;  
 27 Central Valley steelhead, *id.* at 509–10; and Delta Smelt, *see* Dkt. 82 ¶¶35, 47, 50, 53–54, 105;  
 28 (2) reduced survival of winter-run and spring-run salmon migrating through the Delta, NMFS  
 BiOp at 382; (3) higher water temperatures below Shasta Reservoir, which will harm and kill  
 salmon, Dkt. 82 ¶¶134–40, 161–64, 177–84, 209–21; (4) reduced abundance and increased risk of  
 extinction for winter-run Chinook salmon caused by large population declines, NMFS BiOp at  
 696, 706–07; and (5) reduced Delta outflow during the summer and fall months that will  
 significantly harm Delta Smelt, Dkt. 82 ¶¶70, 73. Moreover, the 2019 BiOps explicitly  
 contemplate that more protected species will be harmed or killed by Water Project operations  
 under Reclamation's 2019 plan than under the previous operations regime. *See, e.g.*, FWS BiOp at  
 153, 395–97; NMFS BiOp at 490, 528, 593, 800–10; Dkt. 82 ¶¶97, 113, 159, 161, 187–88. These  
 harms to listed fish species and their habitats in turn irreparably harm plaintiffs and their members.  
*See* Dkt. 83; Dkt. 84.

1 more negative flow) in the tributaries around the pumps (Old and Middle Rivers (OMR)) during  
 2 critical winter and spring months when Delta Smelt are susceptible to entrainment and juvenile  
 3 salmon and steelhead are migrating through the Delta. *See* Final BA, App. D at Table 40-3; *see*  
 4 *also* FWS BiOp 143–45, 151–53; NMFS BiOp at 65, 68, 84, 86, 97–98, 105–06, 403–09, 411–14,  
 5 764, 776–79. Plaintiffs’ proposed injunction would reinstate two critical limits on pumping and  
 6 exports that plaintiffs’ expert finds, and federal defendants previously found, are critical to the  
 7 survival and recovery of the imperiled populations of Delta Smelt, winter-run and spring-run  
 8 Chinook salmon, and Central Valley steelhead. It would also impose a new restriction designed to  
 9 prevent pumping operations from causing the extinction of the Delta Smelt.

10 1. Reinstate the San Joaquin River I:E Ratio in the 2009 NMFS BiOp (RPA Action  
 11 IV.2.1)

12 In May 2020, this Court entered a preliminary injunction requiring federal defendants to  
 13 comply with the San Joaquin River I:E Ratio, RPA Action IV.2.1 of the 2009 NMFS BiOp, which  
 14 imposes restrictions on pumping in April and May that were eliminated in the 2019 NMFS BiOp.  
 15 Dkt. 173 at 36. The Court should enter a similar injunction for 2022 Water Project operations.

16 Federal defendants’ argument in defense of the elimination of the I:E ratio was that the  
 17 single-year loss thresholds and performance measures set by the 2019 NMFS BiOp would be  
 18 sufficient to protect migrating Central Valley steelhead in April and May. Dkt. 119 at 9–10. The  
 19 Court previously rejected this argument and should do so again. Dkt. 173 at 18, 30 (noting  
 20 NMFS’ failure to conclude that its performance objectives offered the same level of protection as  
 21 the eliminated I:E ratio); *see also id.* at 19–20 (noting NMFS BiOp’s admission that its loss  
 22 estimates “*underestimate mortality* associated with south Delta pumping and fish salvage  
 23 operations”). As Dr. Rosenfield explains, the I:E measure proactively provides critical protection  
 24 for Central Valley steelhead, Delta Smelt, and spring-run Chinook salmon; in contrast, reducing  
 25 pumping after fish are salvaged is reactive and often comes too late to prevent irreparable harm,  
 26 particularly given the excessive salvage limits. Supp. Rosenfield Decl. ¶¶64–68; Dkt. 82 ¶ 97; *see*  
 27 *also* Dkt. 140-3 at 405, cited in Dkt. 173 at 17 (July 1 Jeopardy NMFS BiOp finding proposed  
 28 action was “considerably less protective” than the 2009 NMFS BiOp, “which provided substantial

1 export reductions in the April and May periods to protect San Joaquin basin CCV steelhead”).

2 Given that steelhead migration from the San Joaquin side of the system is likely to occur in  
3 April and May, Dkt. 173 at 28 (citing testimony by Dr. Rosenfield), it is necessary to limit  
4 pumping during April and May consistent with the I:E ratio established in the 2009 NMFS BiOp.  
5 Dkt. 173 at 31; *see also* Supp. Rosenfield Decl. ¶¶67–68 (describing irreparable harm to Delta  
6 Smelt and spring-run Chinook salmon in absence of I:E ratio).

7 2. Eliminate the harmful “storm flex” provision and require compliance with OMR  
8 requirements in the 2009 NMFS BiOp (RPA Action IV.2.3)

9 The 2019 BiOps greatly weaken the OMR limitations imposed by the 2008 and 2009  
10 BiOps. In particular, while the 2008/2009 BiOps required that OMR reverse flows be maintained  
11 within a range of -1,250 to -5,000 cfs from January to June, 2009 NMFS BiOp at 648–53; 2008  
12 FWS BiOp at 280–82, 347–68, the 2019 BiOps nominally cap OMR flows at -5,000 cfs during the  
13 winter and spring, while allowing unrestricted pumping “when precipitation falls in the Central  
14 Valley and Delta watersheds.” Final BA at 4–71. During such “storm-related” events, the 2019  
15 BiOps allow the Water Projects to divert up to maximum capacity, with no limit on reverse OMR  
16 flows during these events, nor any limit on the duration, magnitude, or frequency of these events  
17 during the year. *Id.*; FWS BiOp at 47–48; NMFS BiOp at 59–60. The NMFS BiOp recognizes  
18 the high risks to ESA-listed fish associated with such operations:

19 [S]ince listed salmonids tend to start migrating downstream in response to elevated  
20 flows in the Sacramento River basin and San Joaquin River basin waterways, there  
21 is a high probability that more fish will be present in the Delta exactly when the  
22 CVP and SWP increase their exports. Besides the fish entering the Delta on the  
23 elevated storm flows, listed salmonids (especially winter-run Chinook salmon) may  
24 already be present in the Delta due to migration earlier in the year. This overlap in  
25 fish presence and the potential for combined exports to reach 14,900 cfs can result  
26 in increased entrainment risk as a result of the potentially very negative Old and  
27 Middle River flows.

28 NMFS BiOp at 531.

Federal defendants argue that they have chosen not to invoke the storm flex provisions and  
offer—through their proposed IOP—to use the storm flex only up to a maximum negative OMR of  
-6,250 cfs. The fact remains, however, that there is no biological basis to conclude that pumping  
at OMR levels more negative than -5,000 cfs will not present serious risk to threatened and

1 endangered fish in the Delta. Supp. Rosenfield Decl. ¶49 (“[T]here is no biological rationale that  
 2 OMR flows as negative as -6,250 cfs are safe for the San Francisco Bay estuary’s endangered  
 3 fishes.”). And because mass entrainment can occur in just a few days, implementation of this  
 4 measure could “quickly become catastrophic.” *Id.* ¶50.

5 The Court should require federal defendants to operate the Water Projects consistent with  
 6 the OMR provision in the 2009 NMFS BiOp, which does not permit “storm flex operations,” and  
 7 which requires OMR flows to be less negative than -5,000 cfs on a fourteen-day running average  
 8 at all times from December through the end of June, and further requires OMR flows more  
 9 positive than -5,000 cfs whenever endangered fish species are at “moderate” or “high” risk of  
 10 entrainment under the 2009 NMFS BiOp. Dkt. 85-18 at 101–06. These measures in the  
 11 2008/2009 BiOps have previously been upheld by the Ninth Circuit, *see* Dkt. 86 at 11 n.4, and  
 12 federal defendants offer no reasonable justification for setting them aside.

13 3. Eliminate pumping at rates causing negative OMR flows if a Delta Smelt is  
 14 salvaged at the pumps

15 The current conservation status of the Delta Smelt is dire. Any additional mortality caused  
 16 from entrainment at the Water Project pumps will “significantly harm the species and increase the  
 17 likelihood that this species will become extinct in the very near future.” Supp. Rosenfield Decl.  
 18 ¶51 (citing USFWS researchers’ 2021 study finding that “[n]o additional mortality can be  
 19 sustained by the population”). Yet the 2019 FWS BiOp (and the IOP proposed by federal  
 20 defendants) does not limit exports if adult Delta Smelt are entrained and imposes inadequate  
 21 measures if juvenile Delta Smelt are killed. *Id.* ¶52. Given the extremely precarious status of the  
 22 species and in light of the undisputed significant risk of entrainment caused by negative flows, the  
 23 Court should require federal defendants to ensure OMR flows that are positive or zero for at least  
 24 seven consecutive days following salvage of any Delta Smelt (regardless of life stage). This will  
 25 offer some buffer against the risk of extinction posed by entrainment. *Id.* ¶53.

26 **B. Improved Temperature Management Is Necessary to Prevent Jeopardizing**  
**Winter-Run and Spring-Run Chinook Salmon.**

27 As federal defendants recognize, water temperature protections for winter-run Chinook  
 28 salmon below Shasta Dam must be improved compared to the requirements of the 2019 NMFS

1 BiOp if next year is Dry or Critically Dry, in light of the species' disastrously low survival rates in  
 2 2020 and 2021. *See* Dkt. 314 at 23–24. Indeed, NMFS anticipates that if 2022 is a Dry or  
 3 Critically Dry year, the 2019 BiOp would permit water temperatures in the Sacramento River at  
 4 the Clear Creek gauge equal to or greater than 56°F from May to October, resulting in 88-100% of  
 5 winter-run Chinook salmon eggs being killed by lethal water temperatures. Dkt. 314-3 ¶32. These  
 6 water temperatures and resulting level of mortality are unsustainable and jeopardize the continued  
 7 existence and recovery of the species. *Supp. Rosenfield Decl.* ¶¶33, 35. Additionally, given the  
 8 past two years of extremely low egg to fry survival of winter-run Chinook salmon, Dkt. 314 at 23,  
 9 the resulting egg to fry mortality is likely to violate even the scientifically unsound incidental take  
 10 limit established in the 2019 NMFS BiOp. *Supp. Rosenfield Decl.* ¶33. In short, absent injunctive  
 11 relief, there will be severe and irreparable harm to winter-run Chinook salmon.<sup>8</sup>

12 1. Water project operations should not exceed maximum in-stream temperatures and  
 13 maximum temperature-dependent mortality

14 The level of temperature-dependent mortality associated with anticipated water  
 15 temperatures under the 2019 NMFS BiOps if next year is Dry or Critically Dry—88-100%  
 16 mortality—is disastrous. At the same time, the experience of the last two years also shows that the  
 17 reliance on storage and temperature targets rather than enforceable requirements has resulted in  
 18 federal defendants consistently under-estimating in-stream temperatures and mortality. *Supp.*  
 19 *Rosenfield Decl.* ¶¶14–15; Dkt. 82 ¶¶165, 167–74. Dr. Rosenfield concludes that water  
 20 temperatures must not exceed 54.5°F in Critically Dry years, a temperature above which there will  
 21 be significant mortality that could threaten the species' survival. *Supp. Rosenfield Decl.* ¶¶33–35.  
 22 He urges a more protective maximum temperature of 53.5°F in Dry years. *Id.* ¶36. As he

23 <sup>8</sup> Federal defendants also acknowledge the need for “increased protections for winter-run  
 24 Chinook salmon specifically to protect the third year class from high mortality rates[,]” and  
 25 agree that the goal should be to “sustain the viability of the species given their three-year life  
 26 cycle, previous years of low survival, and expected low number of adults returning from those  
 27 previous cohorts.” Dkt. 314-3 ¶14. As discussed in plaintiffs' opposition to the motion to  
 28 remand, the measures proposed by federal defendants fall short of meeting this goal, including  
 because they are expressed as “targets” that may not be met, and because they allow for in-  
 stream water temperatures as high as 55°F at Clear Creek in a Critically Dry year, Dkt. 313-1  
 ¶¶12–15, which is likely to result in “extreme levels of temperature-dependent egg mortality  
 (TDM) that will further degrade the viability of endangered winter-run Chinook Salmon and that  
 portion of the spring-run Chinook Salmon population that spawns in the mainstem Sacramento  
 River.” *Supp. Rosenfield Decl.* ¶32.

1 explains, data from NMFS and Reclamation show that “in every year between 1996 to 2016 when  
2 average daily temperatures at the CCR gauge were greater than 54.5°F, modeled [temperature-  
3 dependent mortality] exceeded 40% and egg-to-fry survival was less than or equal to 17.5%.” *Id.*  
4 ¶33; *see* Dkt. 85-8 at 39.<sup>9</sup> This low survival rate (following survival rates of 11.46% and as low as  
5 2% in 2020 and 2021, respectively) would violate the existing incidental take statement, NMFS  
6 BiOp at 801, and would “significantly threaten the continued existence of winter-run Chinook  
7 Salmon in the wild.” Supp. Rosenfield Decl. ¶33.

8 Dr. Rosenfield also concludes that, to ensure viability of winter-run Chinook salmon, there  
9 should be a limit on temperature-dependent mortality: 30%, assuming next year is Critically Dry.  
10 Supp. Rosenfield Decl. ¶33 n.12; Dkt. 85-8 at 43. Dr. Rosenfield’s conclusion is consistent with  
11 NMFS’ 2017 proposed amendment to the 2009 NMFS BiOp. *See* Dkt. 85-8 at 43 (maximum 30%  
12 temperature-dependent mortality in a Critically Dry year and 8% in a Dry year); *see also* Dkt. 85-  
13 13 at 15 (RPA Action SD.1 in NMFS’ July 1, 2019 jeopardy BiOp, requiring that temperature-  
14 dependent mortality be 12% or less, or egg to fry survival be greater than 27%, in nine years out of  
15 ten). Certainly, NMFS’ anticipated 88-100% temperature-dependent mortality under the 2019  
16 NMFS BiOp if next year is Dry or Critically Dry, *see* Dkt. 314-3 ¶32, will not allow for a viable  
17 winter-run population. Supp. Rosenfield Decl. ¶33 n.12.

18 Plaintiffs propose an additional temperature measure to prevent a repeat of the  
19 unauthorized take of adult winter-run salmon before they spawn. In 2021, high water temperatures  
20 are estimated to have killed 6% of the female Chinook salmon before they could spawn (“pre-  
21 spawn mortality”). Supp. Rosenfield Decl. ¶15. Although NMFS and the U.S. Environmental  
22 Protection Agency have previously identified daily maximum water temperatures necessary to  
23 prevent pre-spawning mortality and sub-lethal effects for winter-run and spring-run Chinook  
24 salmon, including reduced fecundity of adult salmon (fewer viable eggs) and elevated risk for  
25 disease transmission, *id.* ¶31, the 2019 NMFS BiOp does not establish any maximum water

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26 <sup>9</sup> Federal defendants’ proposed IOP, which allows water temperatures of up to 55°F at the Clear  
27 Creek gauge in a Critically Dry year, is expected to result in temperature-dependent egg mortality  
28 ranging from 34-73%, Dkt. 314-3 (Brown Decl.) ¶32; the IOP is thus also likely to result in  
unsustainable temperature-dependent mortality and an egg to fry survival rate of less than 21%,  
which exceeds the current, arbitrary authorized take limits.

1 temperatures in April and May, when adult winter-run and spring-run Chinook salmon are in the  
2 river and preparing to spawn, *id.* ¶30. The Court should require that, from March 1 to May 15,  
3 Reclamation maintain a seven-day average of daily maximum temperatures below 61°F at the  
4 Jelly’s Ferry gauge on the Sacramento River. *Id.* ¶31.

5 2. Water Project operations must meet minimum Shasta storage levels necessary to  
6 achieve protective temperatures

7 The amount of water stored behind Shasta Dam is critically important to Reclamation’s  
8 ability to implement protective water temperatures downstream for salmon, and the failure to  
9 ensure adequate storage results in excessive water temperatures downstream. *See, e.g.*, NMFS  
10 BiOp at 14; Supp. Rosenfield Decl. ¶¶37, 40–41; Dkt. 85-8 at 11. The amount of water in storage  
11 behind Shasta Dam at the end of April is critical for maintaining temperature control over the rest  
12 of the year, with data from NMFS and Reclamation demonstrating that Shasta storage must be  
13 equal to or greater than 3.5 MAF at the end of April to maintain water temperatures of 56°F at  
14 Clear Creek. Supp. Rosenfield Decl. ¶37–38; Dkt. 85-8 at 11, 14; *see* NMFS BiOp at 206–07.  
15 Similarly, NMFS has repeatedly recognized that maintaining minimum Shasta storage levels at the  
16 end of September is essential for ensuring the ability to maintain protective water temperatures if  
17 the subsequent year is Dry or Critically Dry. Dkt. 85-8 at 14 (proposing to require end of  
18 September storage of 1.9 MAF in a Critically Dry year); Supp. Rosenfield Decl. ¶¶40–41.

19 But Reclamation’s latest modeling shows that under dry conditions, Shasta storage will fall  
20 far below the levels needed to maintain adequate water temperatures to protect endangered salmon  
21 in 2022—and the same will be true in 2023, if dry conditions continue. Chisholm Decl., Exh. G  
22 (Reclamation’s Nov. 30, 2021 modeling of CVP operations under dry conditions (90% exceedance  
23 forecast), estimating that Shasta storage would be only 2.0 MAF at the end of April 2022 and  
24 1.145 MAF at the end of September 2022). To avoid this outcome, and consistent with NMFS’  
25 prior findings, Dr. Rosenfield concludes that Shasta storage must be at least 3.5 MAF at the end of  
26 April and 1.9 MAF at the end of September if 2022 is Critically Dry, in order to provide minimally  
27 protective water temperatures for endangered salmon in 2022. Supp. Rosenfield Decl. ¶¶37–43.  
28

1           3. Federal defendants must prioritize protecting critical habitat over water project  
 2           allocations to contractors

3           As federal defendants have recognized, reducing releases from Shasta Dam for water  
 4           deliveries to contractors in the spring and summer months is essential to the Water Projects' ability  
 5           to avoid adversely affecting critical habitat and killing endangered salmon with excessive in-  
 6           stream water temperatures. Dkt. 82 ¶173; Supp. Rosenfield Decl. ¶¶39–41; Dkt. 85-8 at 11. This  
 7           is particularly true when Shasta storage is low. Modeling by NMFS in the spring of 2021  
 8           estimated that reducing water releases from Shasta by 500,000 acre-feet would have significantly  
 9           reduced temperature-dependent mortality of winter-run salmon in 2021 (from 80% to 50%) and  
 10          would have increased Shasta storage at the end of September (from 0.97 MAF to 1.47 MAF).  
 11          This, in turn, would have significantly improved the ability to maintain temperature control for  
 12          salmon if 2022 is Dry or Critically Dry—but these reductions in water deliveries were not  
 13          implemented. Supp. Rosenfield Decl. ¶41, Fig. 3 & Exh. B; Chisholm Decl., Exh. D.

14          Given extremely low reservoir storage, significant reductions in water deliveries are  
 15          necessary to achieve adequate storage to maintain temperature control for salmon if 2022 is Dry or  
 16          Critically Dry. Therefore, this Court should require Reclamation and those acting in concert with  
 17          Reclamation to reduce water supply allocations to all contractors except for: (1) water deliveries  
 18          necessary for human health and safety, as defined in section 878.1 of title 23 of the California  
 19          Code of Regulations;<sup>10</sup> and (2) water deliveries to wildlife refuges (Level 2), which is required by  
 20          section 3406(d) of the Central Valley Project Improvement Act, Public Law 102-575.

21          Modeling by DWR in support of the IOP demonstrates that reducing water supply  
 22          allocations to Water Project contractors significantly improves Shasta storage and the ability to  
 23          meet protective water temperatures.<sup>11</sup> Reducing allocations to more contractors could further

24          <sup>10</sup> While some documents inaccurately describe a minimum 1,500 cfs Delta pumping as necessary  
 25          for human health and safety, *see* NMFS BiOp at 419, that minimum pumping level includes  
 26          pumping of water deliveries for the San Joaquin River Exchange Contractors and wildlife refuges,  
 27          *see* Final BA at 4-55. Those water deliveries are not necessary for human health and safety under  
 28          California law or the IOP. Cal. Code Regs., tit. 23, §878.1; *see also* Dkt. 313-1 ¶12(i)(a).

27          <sup>11</sup> *Compare* Chisholm Decl., Exh. H at 14–15 (DWR presentation showing that if allocations for  
 28          certain settlement contractors were reduced to zero and the SWRCB approves TUCPs, there is a  
 80% chance that Shasta storage would be 1.9 MAF at the end of September 2022, including a 46%  
 chance if 2022 is Critically Dry), *with id.*, Exh I (DWR's Excel modeling showing there is an  
 approximately 65% chance Shasta storage would be 1.9 MAF in September 2022 if allocations for

1 conserve Shasta storage and the ability to maintain temperature control. *Id.*, Exh. H (DWR  
 2 presentation showing that with minimum 3,250 cfs releases from Shasta in 2022, there is an  
 3 approximately 85% chance that Shasta storage is greater than 1.9 MAF in Sept. 2022, including  
 4 61% chance if 2022 is Critically Dry).<sup>12</sup>

5 Plaintiffs recognize that the ability to meet some habitat requirements may be limited in the  
 6 event of extremely dry hydrology. Given the perilous state of the species, however, Reclamation  
 7 should only be excused from meeting critical storage, temperature, and temperature-dependent  
 8 mortality requirements upon a showing that compliance is impossible after contractor allocations  
 9 other than minimum health and safety and required refuge deliveries have been reduced.

10 Finally, plaintiffs note that Reclamation and DWR, in their recently submitted TUCP,  
 11 argue that allowing the Water Projects to violate state water quality requirements will potentially  
 12 conserve upstream storage. Chisholm Decl., Exh. C. Reclamation and DWR made similar  
 13 arguments in 2014 and 2015, but instead, the TUCPs that were approved caused devastating  
 14 impacts to endangered species in the Delta and failed entirely to provide adequate water storage or  
 15 in-stream temperatures for winter-run Chinook salmon below Shasta Dam, while allowing the  
 16 Water Projects to continue to deliver millions of acre-feet to their contractors. Supp. Rosenfield  
 17 Decl. ¶¶73, 80; *see* SWRCB, Water Rights Order 2015-0043 (corrected Jan. 19, 2016), 2015 WL  
 18 9943605, at \*28–29. As discussed below, the operations proposed in the TUCP would cause very  
 19 substantial additional harms to listed species that were not analyzed in or authorized by the 2019  
 20 BiOps, and that are inconsistent with minimum protections for threatened and endangered fish in  
 21 the Bay Delta in 2022. Supp. Rosenfield Decl. ¶¶88–90; *see also* Chisholm Decl., Exh. F at 4.

22  
 23  
 24 certain settlement contractors are reduced to 50% and the SWRCB approves TUCPs, with only an  
 25 18% chance if 2022 is Critically Dry).

26 <sup>12</sup> The IOP proposes to delay and potentially reduce allocations to Sacramento River Settlement  
 27 Contractors by more than 25%. Dkt. 313-1 ¶12. The IOP, however, does not propose to reduce  
 28 allocations to the CVP's and SWP's other settlement and exchange contractors, which were  
 allocated more than 585,000 acre-feet of water in 2021 from the State Water Project. Dkt. 272-4  
 at 13–14. At a minimum, Reclamation has discretion to make deliveries to some contractors such  
 as the San Joaquin River Exchange Contractors from Friant Dam rather than from Delta water  
 exports. *See Westlands Water District v. United States*, 337 F.3d 1092, 1095–97 (9th Cir. 2003).

1           **C. Requiring Compliance with Water Quality Standards Is Necessary to Protect**  
 2           **ESA-Listed Species.**

3           Plaintiffs ask the Court to require Reclamation to comply with the minimum water quality  
 4 standards protecting fish and wildlife, including Delta inflow, Delta outflow, and Delta Cross  
 5 Channel gate closure (“DCC Gates”) required by D-1641, absent a showing by Reclamation that,  
 6 having made reductions to water contractor allocations, it still cannot meet these minimum  
 7 standards.<sup>13</sup> Such an approach could still allow for the implementation of reduced Delta water  
 8 quality requirements, assuming SWRCB approves the TUCP, but only once Reclamation has taken  
 9 all other steps to meet D-1641’s requirements.

10           The requirements of D-1641 are part of the proposed action analyzed and authorized in the  
 11 2019 BiOps and compliance with these requirements is thus currently required to maintain the  
 12 incidental take coverage under the BiOps and to comply with the Record of Decision under NEPA,  
 13 particularly given the admission that violating D-1641 would cause significant adverse effects that  
 14 were not considered in the BiOps.

15           Nevertheless, when federal defendants and State plaintiffs submitted their IOP to this Court  
 16 on November 23, they did *not* notify the Court of their intention to weaken foundational D-1641  
 17 requirements, thereby worsening impacts to listed species. The December 1, 2021 TUCP  
 18 submitted to the SWRCB proposes substantial reductions in Delta inflows and Delta outflows and  
 19 allows for opening the DCC gates in February, March, and April. Chisholm Decl., Exh. C.<sup>14</sup>  
 20 Reclamation and DWR admit in the TUCP that the proposed operations would “appreciably”  
 21 reduce survival of salmon through the Delta. *Id.* at 1-14, 2-24, 2-33. This includes: “appreciable”  
 22 reductions in survival of winter run and spring run Chinook salmon through the Delta, with up to a  
 23 29% reduction in survival through the Delta in certain months, and increased entrainment into the  
 24 South Delta where survival is low, *see id.* at 2-19 to 2-22, 2-31 to 2-32; reduced survival of

25 <sup>13</sup> Plaintiffs’ proposed injunction with respect to D-1641 compliance takes an approach similar to  
 26 that with respect to the Shasta provisions: Reclamation should show that it, and those acting in  
 27 concert with it, have reduced all possible water deliveries, with exceptions for human health and  
 28 safety and refuge Level 2 water deliveries, before operations contravening D-1641 would be  
 permitted. *See* Pls.’ Proposed Order; *see also supra* Section II.B.3.

<sup>14</sup> Reclamation and DWR’s modeling anticipates that they will file additional TUCPs to weaken or  
 eliminate the requirement to comply with Delta inflow and outflow requirements in subsequent  
 months of 2022, if 2022 is Dry. Chisholm Decl., Exh. J.

1 steelhead migrating from the San Joaquin River by 15-23%, *see id.* at 2-36 to 2-37;<sup>15</sup> and  
 2 “negative impacts to delta smelt” from reduced Delta outflow and 12-88% increase in entrainment  
 3 of larval and juvenile smelt, *see id.* at 2-42, A-1.

4 Dr. Rosenfield similarly concludes that reductions in Delta inflows and Delta outflows and  
 5 opening of the DCC gates pursuant to the TUCP would cause severe, additional adverse impacts to  
 6 salmon and other ESA-listed species, including: reduced survival of migrating winter-run Chinook  
 7 salmon, *see* Supp. Rosenfield Decl. ¶¶77; reduced survival of migrating spring-run Chinook  
 8 salmon, *id.* ¶81; reduced survival and abundance of Delta Smelt, *id.* ¶¶74, 76; and adverse  
 9 modification of designated critical habitat, *id.* ¶75.<sup>16</sup> These significant impacts were *not*  
 10 considered in the 2019 BiOps, nor have they been presented to this Court by federal defendants.

11 To prevent or minimize the harms associated with the TUCP, the Court should enjoin  
 12 Reclamation from operating the Water Projects in a manner that does not meet the requirements of  
 13 D-1641, unless and until Reclamation can demonstrate that, after reducing water contractor  
 14 allocations, it cannot meet those minimum standards.

15 **D. Conforming the Authorization of Incidental Take to the Protective Operational**  
 16 **Measures Is Necessary to Ensure Species Protection.**

17 As described above, the incidental take statements included in the 2019 BiOps authorize  
 18 take of listed species that could easily jeopardize the species and result in extinction. This  
 19 includes both the coordinated Water Project operations authorized in the BiOps and the specific  
 20 terms of the incidental take statements, which allow extremely low levels or no survival of winter-  
 21 run Chinook salmon three years in a row, and which fail to provide any numerical limit on  
 22 incidental take of Delta Smelt. The protective measures proposed by plaintiffs for Water Project  
 23 operations represent the minimum actions to ensure that 2022, assuming it is Critically Dry or Dry,

24 <sup>15</sup> The TUCP proposes to significantly reduce Vernalis inflows, resulting in a 1:2 ratio of San  
 25 Joaquin River I:E ratio in the month of April (in other words, exports would be more than double  
 26 San Joaquin River inflows). *See* Chisholm Decl., Exh. C at 2–10. As noted above, this is  
 inconsistent with the 1:1 I:E ratio proposed by plaintiffs for a Critically Dry year; it is also  
 inconsistent with the IOP.

27 <sup>16</sup> The SWRCB has concluded that similar TUCPs approved in 2014 and 2015 were not  
 28 sustainable and were leading to extinction. Water Rights Order 2015-0043 (corrected Jan. 19,  
 2016), 2015 WL 9943605, at \*28. It also found that the TUCP approved in 2020 to allow  
 violations of D-1641 requirements “are expected to negatively impact survival of juvenile Delta  
 smelt June through August.” Chisholm Decl., Exh. B at 20.

1 does not spell the death knell for the Bay Delta’s endangered and threatened species.

2 The ESA prohibits incidental take that is likely to jeopardize the continued existence or  
3 recovery of listed species. 16 U.S.C. §§1538(a)(1)(B), 1539(a)(2); *Nat. Res. Def. Council v.*  
4 *Kemphorne*, No. 1:05-CV-01207 OWW GSA, 2007 WL 4462395, at \*21 (E.D. Cal. Dec. 14,  
5 2007). Therefore, no incidental take of winter-run or spring-run Chinook salmon, Central Valley  
6 steelhead, or Delta Smelt should be authorized if the Water Projects are not operated consistent  
7 with the operational protections included in plaintiffs’ proposed injunction. Plaintiffs request that  
8 this Court vacate the incidental take statement in the NMFS BiOp to the extent that Water Project  
9 operations are inconsistent with the operational terms of the Court’s injunction. Limited vacatur  
10 of the incidental take statement is necessary to comply with the ESA’s prohibition on incidental  
11 take that jeopardizes the continued existence and recovery of listed species.

12 **III. The Equities Tip Sharply In Favor Of An Injunction.**

13 “The plain intent of Congress in enacting [the ESA] was to halt and reverse the trend  
14 toward species extinction, whatever the cost.” *Tennessee Valley Auth. v. Hill*, 437 U.S. 153, 184  
15 (1978). Under well-settled Supreme Court precedent, “courts do not have discretion to balance the  
16 parties’ competing interests in ESA cases.” *Cottonwood*, 789 F.3d at 1090; *see also Nat’l*  
17 *Wildlife Fed’n*, 422 F.3d at 793–94 (courts may not “weigh economic harm to the public” in  
18 conducting the preliminary injunction analysis in ESA cases). When evaluating a request for  
19 injunctive relief under the ESA, the balance of hardships and public interest factors always “tip  
20 heavily in favor” of the protected species, *Sierra Club v. Marsh*, 816 F.2d 1376, 1383 (9th Cir.  
21 1987), and here, these factors sharply favor interim injunctive relief.

22 **CONCLUSION**

23 For the foregoing reasons, Plaintiffs respectfully request that the Court grant their motion  
24 for a preliminary injunction.

25 Respectfully submitted,

26 Dated: December 16, 2021

27 /s/ Barbara J. Chisholm

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**PROOF OF SERVICE**

CASE: *Pacific Coast Federation of Fishermen’s Associations, et al. v. Raimondo, et al.*

CASE NO: U.S. Dist. Ct., E.D. Cal., Case No. 1:20-cv-00431-DAD-EPG

I am employed in the City and County of San Francisco, California. I am over the age of eighteen years and not a party to the within action; my business address is 177 Post Street, Suite 300, San Francisco, California 94108. I hereby certify that on December 16th, 2021, I electronically filed the following with the Clerk of the Court for the United States District Court for the Eastern District by using the CM/ECF system:

**PLAINTIFFS’ MOTION FOR PRELIMINARY INJUNCTION  
DECLARATION OF BARBARA J. CHISHOLM AND EXHIBITS A  
THROUGH O**

**SUPPLEMENTAL DECLARATION OF DR. JONATHAN ROSENFELD AND  
EXHIBITS A AND B**

All participants in the case are registered CM/ECF users and will be served by the CM/ECF system.

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct. Executed this 16th day of December, 2021, at Berkeley, California.

/s/ Barbara J. Chisholm  
Barbara J. Chisholm