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UNITED STATES DISTRICT COURT
EASTERN DISTRICT OF CALIFORNIA

SOUTH YUBA RIVER CITIZENS
LEAGUE and FRIENDS OF THE
RIVER,

NO. CIV. S-06-2845 LKK/JFM

Plaintiffs,

v.

O R D E R

NATIONAL MARINE FISHERIES
SERVICE, et al.,

Defendants.

_____ /

This order addresses whether any interim measures are appropriate during the remand period where the federal defendants were found to have violated the Endangered Species' Act ("ESA"). In an order issued on July 8, 2010, (the "July Order") this court held that the National Marine Fishery Service acted arbitrarily and capriciously in issuing a 2007 Biological Opinion ("BiOp") that concluded that operations associated with the Englebright and Daguerre dams on the Yuba River posed no jeopardy to the survival

1 of spring-run Chinook salmon ("chinook"), Central Valley Steelhead
2 ("steelhead"), and green sturgeon, all of which are on the
3 threatened species list. In an order issued on April 29, 2011, this
4 court remanded the matter back to the National Marine Fishery
5 Service ("NMFS") to prepare a new BiOp consistent with the court's
6 July Order. The April order requires the NMFS to complete the BiOp
7 by December 12, 2011. See ECF No. 378.

8 Plaintiffs seek injunctive relief in the form of nine interim
9 measures to protect the species until a new BiOp is prepared by the
10 agency. Defendants argue that the only appropriate remedy is to
11 remand the matter to the NMFS. For the reasons stated below, the
12 plaintiffs' motion is GRANTED in part and DENIED in part.

13 **I. Procedural Background**

14 This court's July Order addressed claims by plaintiff that
15 the National Marine Fishery Service acted arbitrarily and
16 capriciously in adopting the BiOp, in violation of Section 7 of the
17 Endangered Species Act. This court held that the BiOp was arbitrary
18 and capricious because it concluded that the operation of the dams
19 would pose "no jeopardy" to the threatened fish, when that
20 conclusion was not supported by the record. Upon a finding that a
21 project poses no jeopardy to the survival or recovery of a
22 threatened species, an agency may operate the project pursuant to
23 an Incidental Take Statement ("ITS"). The ITS specifies (1) what
24 incidental "takings" of individual species will result from the
25 project, (2) the mitigation measures that are necessary to minimize
26 the takings, and (3) the terms and conditions that must be complied

1 with to implement those mitigation measures. The court held that
2 the NMFS had not sufficiently supported its no-jeopardy conclusion,
3 "but not that a jeopardy conclusion was inescapable." July 8 Order
4 16:18. In particular, the court found the following defects in the
5 BiOp:

6 (1) The BiOp did not conclude that the populations of the
7 three listed fish are stable, yet it concluded that the project's
8 unmitigated effects would not jeopardize the species. Any
9 conclusion about the effects of the project must take the current
10 status of the population into account. Without a finding that the
11 three listed fish populations are stable, the BiOp cannot
12 rationally conclude that the unmitigated effects of the project
13 would not jeopardize the species. July Order 19.

14 (2) The BiOp concludes that the project will continue to
15 impose stressors on listed species without explaining why these
16 stressors will not jeopardize the species. Those stressors are:
17 migration barriers caused by Daguerre Point Dam and Engelbright Dam;
18 irregular flow regimes and temperature, leading to pre-spawning
19 mortality and reduced reproductive success; interference with
20 gravel accumulation and compromised spawning habitat below
21 Englebright Dam; and entrainment and impingement.¹ Because the BiOp
22 failed "to discuss (through some method) the magnitude of the
23

24 ¹ Where water is diverted, a screen is used to keep fish from
25 being "entrained," i.e., diverted from the river to the diversion
26 channel. Although these screens are necessary to protect fish, they
also present a risk to fish, as fish can be "impinged," i.e.,
trapped against the screen by the force of water.

1 stressors' impact, the populations' ability to tolerate this
2 impact, and the reason why any decline will not reduce the overall
3 likelihood of survival or recovery," it could not properly
4 determine that the stressors will not cause a decline in
5 reproduction, population, distribution, or diversity-the factors
6 necessary for the species to survive. July Order 38.

7 (3) The BiOp omits any analysis of the possibility of a period
8 of increased entrainment due to the cumulative effect of the
9 challenged project and the Wheatland project. Additionally, the
10 BiOp did not support its conclusion that the Corps' operations,
11 when considered in the context of the Wheatland project, will not
12 jeopardize the green sturgeon population.

13 (4) The BiOp does not discuss other stressors that might
14 jeopardize the listed species. Those stressors are: hatcheries, the
15 San Francisco Bay Delta, the species' overall depressed conditions,
16 global warming, and poaching. Even if the agency determined these
17 factors to be unimportant, it must provide a reasoned explanation
18 for that conclusion.

19 (5) With respect to critical habitat for the listed species,
20 the BiOp does not support its conclusion that the restoration
21 measures described in the BiOp will provide benefits whose
22 magnitude outweighs the project's impacts.

23 The court ordered additional briefing on the issue of whether
24 the Corps violated the terms and conditions of the ITS, and whether
25 the plaintiffs would be entitled to preliminary relief if such a
26 violation had occurred. On November 16, 2010, after supplemental

1 briefing on the issue the court dismissed as prudentially moot
2 plaintiffs' claim that the Corps had violated the ITS, and denied
3 plaintiffs' motions for a preliminary injunction. On November 23,
4 2010, this court entered an order approving a stipulation by the
5 parties. In that stipulation, the parties agreed, *inter alia*, that
6 the BiOp and ITS should not be vacated during remand. Thus, the
7 project is currently operating pursuant to the 2007 BiOp and the
8 ITS.

9 In April 2011, the court remanded the matter back to the NMFS
10 to complete a new BiOp consistent with the July Order by December
11 12, 2011.

12 **II. Analysis**

13 Plaintiffs propose an injunction requiring the defendants to
14 comply with nine measures, which plaintiffs argue are necessary to
15 prevent the project from jeopardizing the survival or recovery of
16 the listed species while a new BiOp is prepared. Plaintiffs'
17 proposed interim measures are:

- 18 (1) developing and implementing a written operation plan
- 19 for optimum operation and maintenance of the Daguerre
- 20 fish ladders, (2) developing and implementing a plan for
- 21 optimum placement of movable flash boards on the
- 22 Daguerre dam spillway to try to concentrate flows over
- 23 the spillway toward the dam's center, away from the fish
- 24 ladders which are to either side of the dam, (3)
- 25 installing and operating devices to alert the Corps of
- 26 debris blockages in the Daguerre fish ladders, (4)

1 promptly clearing debris blockages from the Daguerre
2 fish ladders, (5) adopting a revised plan for managing
3 sediment build-up above Daguerre and a plan for
4 re-engineering the south bank of the Yuba River and the
5 main channel of the Yuba River as needed to improve
6 flows to the Daguerre south fish ladder, (6) installing
7 grates over the Daguerre fish ladders to prevent fish
8 from jumping out of these ladders and to prevent
9 poaching, (7) installing a temporary, seasonal
10 artificial segregation weir within the Yuba River below
11 Englebright to create a temporary, impassable barrier
12 segregating spring Chinook from fall run Chinook and
13 allowing the former to spawn without competition from
14 the fall-run Chinook, (8) adopting and commencing
15 implementation of an improved, comprehensive final
16 long-term gravel augmentation plan for creating new
17 spawning habitat in the Yuba River below Englebright,
18 and (9) developing and implementing a plan for securing
19 better wood-related structures and native riparian
20 vegetation in the Yuba River reach from Englebright to
21 Daguerre.

22 Pls.' Final Remedy Brief ("Pls.' Remedy Brief") 3:13-4:4, ECF No
23 363. Plaintiffs also request that defendants file quarterly status
24 reports describing compliance with these measures.

25 Defendants argue that remand is the only appropriate remedy.

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1 **A. Standard of Review for Injunctive Relief under the ESA**

2 As a preliminary matter, the parties disagree sharply as to
3 the standard of review to be applied for issuing an injunction
4 under the Endangered Species Act. In particular, the parties have
5 differing views with respect to the necessity of showing
6 irreparable harm. Plaintiffs argue that under the ESA, an
7 injunction may issue absent a showing of irreparable harm if there
8 is a substantial violation of ESA's procedural requirements. Pls.'
9 Remedy Brief 6. Alternatively, plaintiffs argue that if a showing
10 of irreparable harm is required, the burden is on the defendants
11 to show that no irreparable harm will occur absent the injunction.
12 Pls.' Remedy Brief 7. Additionally, plaintiffs argue that the
13 listed species will suffer irreparable harm absent injunctive
14 relief. Id. at 7. Defendants argue that a showing of irreparable
15 harm is always required in order to obtain an injunction, including
16 under the ESA.

17 The parties discuss the standard for granting injunctive
18 relief under the ESA without distinguishing between the standard
19 for preliminary versus permanent relief. Typically, "a preliminary
20 injunction is effective pendente lite until a decision has been
21 reached on the merits," whereas "a permanent injunction will issue
22 only after a right thereto has been established at a trial on the
23 merits." 11A WRIGHT & MILLER, FEDERAL PRACTICE AND PROCEDURE § 2941 (2d ed.
24 1995). Courts evaluating injunctive relief in environmental cases
25 have also conflated the two types of injunctions. In Monsanto, the
26 Court reviewed the *preliminary* injunction granted by the district

1 court in Geertson Farms, Inc. v. Johanns, 2007 U.S. Dist. LEXIS
2 21491 (N.D. Cal. 2007), but recited the four-factor test for
3 permanent injunctions: "A plaintiff seeking a *permanent* injunction
4 must satisfy a four-factor test before a court may grant such
5 relief. A plaintiff must demonstrate: (1) that it has suffered an
6 irreparable injury; (2) that remedies available at law, such as
7 monetary damages, are inadequate to compensate for that injury; (3)
8 that, considering the balance of hardships between the plaintiff
9 and defendant, a remedy in equity is warranted; and (4) that the
10 public interest would not be disserved by a permanent injunction."
11 Monsanto Co. v. Geertson Seed Farms, 130 S. Ct. 2743, 2756
12 (2010) (emphasis added) (quoting eBay Inc. v. MercExchange, L.L.C.,
13 547 U.S. 388, 391 (2006)). The Court went on to state, "the
14 traditional four-factor test applies when a plaintiff seeks a
15 *permanent injunction* to remedy a NEPA violation," (emphasis added)
16 citing Winter v. NRDC, Inc., 555 U.S. 7 (U.S. 2008), for this
17 proposition even though Winter involved preliminary injunctive
18 relief. In Winter, the Court set forth a different four-factor test
19 to determine whether to grant a preliminary injunction. "A
20 plaintiff seeking a preliminary injunction must establish that he
21 is likely to succeed on the merits, that he is likely to suffer
22 irreparable harm in the absence of preliminary relief, that the
23 balance of equities tips in his favor, and that an injunction is
24 in the public interest." Winter, 555 U.S. at 20. Admittedly, the
25 tests are quite similar. Indeed, "[t]he standard for a preliminary
26 injunction is essentially the same as for a permanent injunction

1 with the exception that the plaintiff must show a likelihood of
2 success on the merits rather than actual success." Amoco Prod. Co.
3 v. Vill. of Gambell, 480 U.S. 531, 546 (U.S. 1987).² This court
4 nonetheless finds it necessary to set forth precisely the standard
5 to apply to plaintiffs' motion.

6 In this case, plaintiffs seek nine interim measures that would
7 remain in place until the defendants have remedied their ESA
8 violation by completing a new BiOp. The requested measures are not
9 preliminary in the conventional sense in that the court has already
10 decided the merits of this case. However, the measures are not
11 permanent in the conventional sense in that they may be lifted once
12 the defendants comply with this courts remand order by preparing
13 a new BiOp. Additionally, the circumstances of this case differ
14 from a typical permanent injunction request in that plaintiffs
15 request measures to prevent future irreparable harm, even if they
16 have not proven that irreparable harm has already resulted from
17 defendants' liable conduct. Having already determined that the
18 defendants are liable for a violation of the ESA, there is no need
19 for the court to evaluate plaintiffs' likelihood of success on the
20 merits. The court will therefore look at the following factors to
21 determine whether interim injunctive measures are appropriate in
22 this case: whether the measures are necessary to prevent
23

24 ² Additionally, the preliminary injunction standard does not
25 include evaluation of whether there are adequate remedies at law,
26 although that question is certainly intertwined with the inquiry
as to whether the type of harm likely to be suffered is
"irreparable."

1 irreparable injury; whether remedies available at law are
2 inadequate to compensate for that injury; whether the balance of
3 hardships weigh in favor of injunctive relief; and whether the
4 public interest would be served by the injunction.

5 **i. The Balance of Hardships and the Public Interest**

6 Under the Endangered Species Act, the third and fourth factors
7 always tip in favor of protecting the species. Tennessee Valley
8 Authority v. Hill, 437 U.S. 153 (1978) ("Congress has spoken in the
9 plainest of words, making it abundantly clear that the balance has
10 been struck in favor of affording endangered species the highest
11 of priorities."). Thus, "the balance of hardships and the public
12 interest tip heavily in favor of endangered species. We may not use
13 equity's scales to strike a different balance." Sierra Club v.
14 Marsh, 816 F.2d 1376, 1383 (9th Cir. 1987). In this case, the
15 parties agree that Monsanto's holding that the four-factor test
16 applies to injunctions issued to remedy violations of the National
17 Environmental Policy Act ("NEPA") does not undo Congress'
18 conclusion that, under the ESA, the balance of hardships and the
19 public interest factors tip towards protecting the species. Fed.
20 Defs.' Remedy Brief 7:3-5; Pls.' Remedy Brief 5:26-6:3. Indeed, the
21 Court could not undo Congress' command in this regard.

22 Accordingly, the court finds that the balance of hardships and
23 the public interest factors support granting injunctive relief in
24 this case.

25 **ii. Irreparable Injury**

26 Plaintiffs, however, take their argument a step further by

1 urging that the standard of review under ESA also differs from the
2 traditional analysis for injunctions in that no showing of
3 irreparable harm is required when there is a substantial procedural
4 violation of the ESA in connection with a federal project. Pls.’
5 Remedy Brief 6-7. Prior to Monsanto, the Ninth Circuit had held
6 that a substantial procedural violation of the ESA could warrant
7 issuance of an injunction. In Thomas v. Peterson, 753 F.2d 754 (9th
8 Cir. 1985), the Ninth Circuit found that defendants’ complete failure to
9 prepare a BiOp under the circumstances was a substantial procedural
10 violation, for which “the remedy must be an injunction of the
11 project pending compliance with the ESA.” Id. at 764. This holding
12 was rooted in prior Ninth Circuit cases decided under the National
13 Environmental Policy Act (“NEPA”): “Our cases repeatedly have held
14 that, absent ‘unusual circumstances,’ an injunction is the
15 appropriate remedy for a violation of NEPA’s procedural
16 requirements. Irreparable damage is presumed to flow from a failure
17 properly to evaluate the environmental impact of a major federal
18 action. We see no reason that the same principle should not apply
19 to procedural violations of the ESA.” Id. (internal citations
20 omitted). The Thomas court’s reliance on earlier NEPA cases
21 undercuts plaintiffs’ assertion that Monsanto, a NEPA case, “does
22 not alter the law governing injunctions under the ESA.” Pls.’ Brief
23 6:4-5. In Monsanto, the Court rejected lower court holdings insofar
24 as they “presume[d] that an injunction is the proper remedy for a
25 NEPA violation except in unusual circumstances.” 130 S. Ct. at
26 2757. Instead of a presumption in favor of issuing an injunction,

1 "a court must determine that an injunction *should* issue under the
2 traditional four-factor test set out above." Id. The Court went on
3 to conclude that the test had not been satisfied in the case before
4 it, because "[m]ost importantly, respondents cannot show that they
5 will suffer irreparable injury if [defendant] APHIS is allowed to
6 proceed with any partial deregulation." Id. at 2760.

7 Plaintiffs' argument is not completely defeated by Monsanto,
8 since in Thomas, the Ninth Circuit distinguished between ESA's and
9 NEPA's procedural provisions, holding that "the strict substantive
10 provisions of the ESA justify *more* stringent enforcement of its
11 procedural requirements [than NEPA's procedural requirements],
12 because [ESA's] procedural requirements are designed to ensure
13 compliance with the substantive provisions," whereas NEPA does not
14 contain substantive provisions. Thomas 753 F.2d at 764. The court
15 went on to conclude that where a project is allowed to proceed
16 without compliance with procedural requirements, "there can be no
17 assurance that a violation of the ESA's substantive provisions will
18 not result." Id. Since ESA's substantive provisions prohibit
19 jeopardizing the survival or recovery of a species--clearly an
20 irreparable injury--plaintiffs here argue that no independent
21 showing of irreparable injury is required once a substantial
22 procedural violation is shown. Absent other Ninth Circuit precedent
23 to the contrary, the court might be convinced of plaintiffs'
24 position.

25 However, in Nat'l Wildlife Fed'n v. Nat'l Marine Fisheries
26 Serv., 422 F.3d 782 (9th Cir. 2005), the Ninth Circuit held that

1 rejection by the district court of a BiOp *and* a finding of
2 irreparable harm were "precisely the circumstances in which our
3 precedent indicates that the issuance of an injunction is
4 appropriate." Id. at 796. Further, in National Wildlife Fed'n v.
5 Burlington N. R.R., 23 F.3d 1508 (9th Cir. 1994), the court held
6 "these [Tennessee Valley Authority line of] cases do not stand for
7 the proposition that courts no longer must look at the likelihood
8 of future harm before deciding whether to grant an injunction under
9 the ESA." Id. at 1511 (internal citations omitted).

10 In addition to these precedents, reason dictates that
11 plaintiffs make a showing that the particular injunction they
12 request is necessary to prevent irreparable harm caused by the
13 defendants' violation of the ESA. It could not be the case that any
14 time defendants are found liable for a significant violation of the
15 ESA's procedural provisions, the plaintiffs are entitled to any
16 form of injunctive relief that they request. Indeed, "injunctive
17 relief must be tailored to remedy the specific harm alleged." NRDC
18 v. Winter 508 F.3d 885, 886 (9th Cir. 2007). As a practical matter,
19 the court must decide what irreparable harms are likely to occur
20 to the species in order to craft an appropriately tailored
21 injunction. Here, plaintiff is only entitled to an injunction that
22 prevents irreparable harm caused by defendants' violation of the
23 Endangered Species Act. Thus, even if a showing of irreparable harm
24 was not necessary for an injunction to issue, such a showing is
25 required in order to justify the specific measures that plaintiffs'
26 request. Accordingly, the court holds that plaintiff must show that

1 irreparable harm to the listed species will result from defendants'
2 violation of the ESA in the absence of each measure plaintiffs
3 request.

4 **iii. Adequacy of Remedies at Law**

5 In environmental cases, it is presumed that remedies at law
6 are inadequate. "Environmental injury, by its nature, can seldom
7 be adequately remedied by money damages and is often permanent or
8 at least of long duration, i.e., irreparable. Cal. ex rel. Lockyer
9 v. United States Dep't of Agric., 2009 U.S. App. LEXIS 19219 (9th
10 Cir. 2009).

11 **B. Plaintiffs' Requested Relief**

12 Plaintiffs argue that, given the current degraded condition
13 of the population of the three protected species of fish,
14 injunctive relief is necessary to prevent irreparable harm to those
15 species. A species' condition is measured using four criteria:
16 abundance, productivity, spatial structure, and genetic or life
17 history diversity. Plaintiffs provide evidence that the population
18 of all three fish at issue suffer from low abundance. In addition,
19 the chinook population's productivity is in decline, and its
20 spatial distribution is low. Plaintiffs argue that against this
21 backdrop, the Englebright and Daguerre dams and related operations
22 put the species in jeopardy of extinction while the new BiOp is
23 being produced. This position is consistent with the July Order,
24 which held that the BiOp was arbitrary and capricious because it
25 concluded that the project's unmitigated effects would not
26 jeopardize the species, without first concluding that the species

1 was in a stable condition. Plaintiff argues that nine remedial
2 measures are necessary to improve the species' chances of survival
3 while a new BiOp is prepared.

4 The defendants argue generally that the measures are
5 unnecessary to prevent irreparable harm.

6 Because plaintiff is entitled to injunctive relief only
7 insofar as it prevents irreparable harm caused by defendants'
8 violation of the ESA, the court analyzes each of the plaintiffs'
9 requested measures in relation to the deficiencies that the court
10 found in the BiOp. Although the court did not reach any conclusions
11 as to what findings a properly conducted BiOp might reach, the
12 court did note some areas of deficiency upon which it based its
13 conclusion that the issuance of the BiOp was arbitrary and
14 capricious. The court analyzes the plaintiffs' requested measures
15 in that context. That is, the measures must bear some relation to
16 the deficiencies in the BiOp for which the court held that the
17 defendants were liable for a violation of the ESA.

18 However, because of the BiOp's failure to produce the data and
19 analysis necessary to determine what measures, precisely, are
20 needed in order to avoid jeopardizing the listed species, it is
21 impossible for the court to tailor a remedy that goes no further
22 than the bare minimum needed to protect the species. Since the
23 irreparable harm that the court is obligated to prevent is jeopardy
24 to the very survival of the species, the court will err on the side
25 of a more protective injunction.

26 Plaintiffs' burden is also slightly diminished since the

1 project is currently operating pursuant to a BiOp that this court
2 found to be inadequate. Under the ESA, "take" of listed species is
3 prohibited, ESA § 9(a); 16 U.S.C § 1538(a), and a project may not
4 operate if it will result in take. Once a valid BiOp determines
5 that the project poses no jeopardy to the survival, "incidental
6 take" is permitted if it is "in compliance with the terms and
7 conditions specified in a written incidental take statement." ESA
8 § 7(o)(2); 16 U.S.C § 1536(o)(2). The ITS functions to immunize the
9 Corps for otherwise-prohibited take of listed species. In this case
10 the Corps already determined that the project was likely to affect
11 the three listed species. This determination triggered an
12 obligation on the part of the Corps to seek a BiOp and ITS. In
13 cases where a BiOp relating to a new project has been found to be
14 inadequate, a court could enjoin the new project entirely. See,
15 e.g., Thomas v. Peterson, 753 F.2d 754 (9th Cir. 1985). In this case,
16 plaintiffs do not seek to enjoin operation of the South Yuba dams
17 entirely. Without suggesting that such an injunction would have
18 been granted, the court notes that absent the stipulation by the
19 parties that allows the project to continue to operate pursuant to
20 the 2007 BiOp and ITS, the Corps might not be shielded from
21 liability for take resulting from the operation of Englebright and
22 Daguerre dams.

23 The court analyzes plaintiffs' proposed measures in turn.

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1 **1. Measures 1-6 Designed to Correct Upstream Migration Problems**

2 **(i) Measure 1: Reduce the impediment to spring Chinook and**
3 **steelhead passage by developing and implementing a written**
4 **operation plan for optimum operation and maintenance of the**
5 **Daguerre fish ladders.**

6 Plaintiffs request that the Corps be required to install flow
7 meters to measure the volume of water passing through the Daguerre
8 fish ladders, and to use information collected from the meters and
9 from an existing VAKI device (a device that records the number of
10 fish using the ladders) to develop data and conclusions as to the
11 optimum flow for promoting fish passage. Plaintiffs request that
12 the Corps complete and implement a written operation plan by no
13 later than December 31, 2011.

14 The July Order recognized deficiencies in the BiOp's
15 discussion of upstream migration through the Daguerre Dam.
16 Specifically, the July Order noted that the BiOp states that four
17 impediments to upstream migration through Daguerre are not
18 mitigated and constitute a 'stressor' on the Chinook and steelhead,
19 but that the BiOp concluded nonetheless that the stressor posed no
20 jeopardy to the species. This conclusion was not supported by the
21 record:

22 In order to determine that the stressors will not cause a
23 decline in the reproduction, population, distribution, or
24 diversity, the BiOp must discuss (through some method) the
25 magnitude of the stressors' impact, the populations' ability
26 to tolerate this impact, and the reason why a decline will
not reduce the overall likelihood of survival or recovery. .
. Because the BiOp concludes that the project will continue
to impose stressors on listed species without explaining why
these stressors will not jeopardize the species, the BiOp's

1 no-jeopardy conclusion is arbitrary and capricious.

2 July Order at 39.

3 While the July Order noted the defendants' failure to support
4 its conclusion that the stressors imposed by Daguerre did not pose
5 jeopardy to the species, plaintiffs have submitted evidence showing
6 that the populations of the listed fish species are unstable or in
7 decline, and that against that backdrop, impassable fish ladders
8 at Daguerre do indeed jeopardize the survival and/or recovery of
9 the species.

10 In her declaration, Dr. Christine Swanson stated that the
11 extinction risk for spring chinook is increasing. The abundance,
12 productivity, spatial structure, and diversity for spring chinook
13 have all declined over the past six years. For example, in 2009,
14 a total of less than 2500 spring chinook returned to three streams
15 that support genetically distinct spring chinook. This was a 78%
16 decline from the average number of spring Chinook returning to
17 those streams each year from 1998 to 2005. 2010 Swanson Decl., ¶
18 13, 14, ECF No. 362. Impassable dams in the Sacramento-San Joaquin
19 watershed contribute to the decline in the viability of steelhead
20 and spring chinook because those two species depend on access to
21 freshwater rivers for spawning and rearing. Impassable dams
22 restrict access to spawning and rearing habitat.

23 Defendants' cited expert declaration does little to rebut this
24 evidence. Defendant argues that, although the conditions are not
25 optimal, spring Chinook and steelhead are able to use the fish
26 ladders at Daguerre to migrate upstream. However, defendants'

1 opposition and evidence submitted therewith suffer from the same
2 flaw as the BiOP: they fail to address the effects of Daguerre
3 given the already-unstable condition of the fish population at
4 issue. Mr. Sprague's declaration, perhaps unintentionally,
5 highlights this point: "the level of adverse impact associated with
6 the operation of Daguerre Point Dam would not *in and of itself*
7 result in irreparable harm to the species during the interim
8 period." Decl. Gary Sprague ¶ 13, ECF No. 372-2 (emphasis added).
9 Moreover, Mr. Sprague's declaration assumes what it concludes: "for
10 the purposes of this declaration, I assumed that the Yuba River
11 populations of spring-run Chinook and steelhead will not experience
12 an increase in their risk of extinction during the interim period."
13 Id. ¶ 9. This assumption is contrary to evidence submitted by Dr.
14 Swanson, which shows that spring chinook populations are in sharp
15 decline in the Sacramento-San Joaquin river basin.³ Additionally,
16 Mr. Cavallo notes that the assumption is unreasonable, given the
17 fluctuation in chinook and steelhead populations in the Yuba River
18 over the last ten years, and the likelihood of factors that would
19 cause a downward fluctuation in the species' population levels of
20 viability characteristics to occur. Cavallo Reply Decl. ¶ 6. For

21

22 ³ Confusingly, defendants cite Ex. Q, at 2 of the Reedy
23 Declaration (ECF No. 365-2) in an attempt to counter Dr. Swanson's
24 conclusions. Defendants state "by contrast to other rivers, 2010
25 numbers indicate increased passage on the Yuba—approximately 3000
26 fish through Daguerre in May-August 2010, the spring-run
immigration period." However, the chart in Ex. Q, at 2 appears to
cover a period starting in September 2010 and ending in November,
and does not appear to the court to indicate anything about fish
passage through Daguerre.

1 example, oceanic up-swelling, drought, wildfires, and disease
2 outbreaks are factors that have some likelihood of occurring in the
3 interim period, and would increase the risk of extinction of the
4 species. Id.

5 Defendants' argument about Measure 1's feasibility has more
6 merit. Defendants assert that drawing conclusions about the
7 correlation between flow and passage would require assessment over
8 several spawning runs, and that it is not feasible to develop a new
9 flow plan prior to the issuance of the BiOp. Ellrott Decl., 6, ECF.
10 No. 321-2. Declaration testimony from plaintiffs' witness, Brad
11 Cavallo, supports this assertion. Cavallo described a schedule in
12 which flow meter data gathered throughout 2011 would render a
13 conclusion, "no later than December 31, 2011." Cavallo Decl. 6,
14 ECF. No. 363-2. This is much later than the plaintiffs' proposed
15 BiOp deadline, and shortly after the December 12, 2011 BiOp
16 completion date ordered by this court. Defendants argue that since
17 a completed study and plan for optimum fish passage is not likely
18 to be implemented prior to the release of the new BiOp, this remedy
19 would not prevent the harm that occurs in the interim period.

20 Plaintiffs argue that the data collected in the interim period
21 is still likely to prevent harm caused by the defendants' ESA
22 violation. It may well be that the new BiOp and incidental take
23 statement are very likely to require that the Corps collect data
24 and implement a program for maintaining optimal flow levels over
25 the ladders in order to facilitate upstream migration. Absent the
26 interim measure proposed by plaintiff, data collection would not

1 begin until after completion of the new BiOp and incidental take
2 statement, and implementation of the program would not occur until
3 sufficient data has been collected. According to plaintiff, it
4 would take approximately one year to collect the data, complete a
5 study, and implement a plan. See Cavallo Decl. ¶ 18. Data collected
6 in the interim period will shorten the amount of time overall that
7 less-than-optimal flow levels impede chinook and steelhead
8 migration over the Daguerre fish ladders. As put by plaintiffs'
9 expert, even after "the new biological opinion is issued there
10 necessarily will be a substantial lag (perhaps years) before any
11 of the remedial terms and conditions it specifies will be
12 implemented and begin to have benefits for promoting survival and
13 recovery of spring Chinook and steelhead. Accordingly, in terms of
14 avoiding harms that could jeopardize these fishes' survival and
15 recovery, it makes more sense to focus on the time between now and
16 when these new biological measures are likely to be implemented."
17 Cavallo Reply Decl. ¶ 5.

18 Nonetheless, the court declines to order an interim measure
19 that will provide no benefit to the listed species in the interim
20 period. Accordingly, plaintiffs request for Measure 1 is DENIED.

21 **ii. Measure 2: Develop a written plan for systematic use of**
22 **moveable flash boards on Daguerre to manipulate the flows through**
23 **the fish ladder in order to optimize conditions.**

24 Measure 2 is closely related to Measure 1. Flash boards can
25 be used to manipulate the flow levels in the fish ladders. Flash
26 boards can divert more water to flow over the ladders or can divert

1 water away from the ladders. Plaintiffs argue that no systematic
2 criteria is presently used to govern the use of flash boards to
3 optimize flow levels. With proper use, flash boards can contribute
4 to optimal conditions for fish passage through the Daguerre fish
5 ladders by "reducing the tendency of the spillway flow to confuse
6 the fish and preclude them from finding the fish ladders and. . .
7 increasing the head behind the dam, thereby forcing more water into
8 the fish ladders during dry conditions and improving fish
9 attraction to and passage through the ladders." Cavallo Decl. ¶ 21
10 . When not managed properly, flash boards can cause "collection of
11 debris that traps fish attempting to migrate past the flash boards,
12 the impingement of juveniles on the flash boards, and the promotion
13 of predation." Id. ¶ 22.

14 As discussed above, the July Order held that impediments to
15 upstream migration through Daguerre constitute a stressor on the
16 protected species, and that stressor was not properly accounted for
17 in the BiOp. Accordingly, Measure 2 is related to an arbitrary and
18 capricious conclusion adopted in the BiOp, because proper
19 utilization of flash boards would reduce impediments to migration
20 through Daguerre.

21 Plaintiffs have submitted evidence, discussed under Measure
22 1 above, showing that the populations of spring chinook and
23 steelhead are on the decline and are vulnerable to further
24 population degradation because of impediments to upstream migration
25 to spawning and rearing habitat. Plaintiffs have also submitted an
26 expert declaration showing that the proper use of flash boards

1 would ease the stressor caused by Daguerre, but that improper
2 placement of the flash boards increases the risk that the listed
3 species will get trapped in debris, impinged on the flash boards,
4 or preyed upon thus jeopardizing the survival and recovery of the
5 species.

6 Defendants proffer two arguments against implementation of
7 Measure 2. First, defendants argue that it is unnecessary because
8 fish passage at Daguerre is adequate. To support that proposition,
9 defendants cite a paragraph of the Sprague declaration which reads,
10 "improved management for fish passage will reduce adverse impacts,
11 and benefit federally listed Chinook and steelhead, but it is not
12 a measure that is likely to avoid irreparable harm to these species
13 during the interim period. Take associated with poor management of
14 the dam flash boards is likely to result through delays in upstream
15 migration, and potentially through increase predation on
16 juveniles." Sprague Decl. ¶ 15. In short, the paragraph cited does
17 not stand for defendants' proposition that fish passage is already
18 adequate. Rather, Mr. Sprague appears to agree with plaintiffs that
19 poor management of the flash boards results in take of the listed
20 species, and that the species would benefit from proper management.
21 Additionally, this court, in its July Order, rejected the BiOp's
22 conclusion that fish passage through Daguerre was adequate, holding
23 that the BiOp did not take into account the compromised condition
24 of the listed species when reaching that conclusion.

25 Defendants' second argument is that this measure is
26 impractical because the placement of the flash boards is controlled

1 by an entity outside of the Corps' control. The declaration that
2 defendants submit to support this assertion, however, states that
3 the entity, Cordua Irrigation District ("CID"), installs the flash
4 boards pursuant to a license issued to it by the Corp. According
5 to the declaration, the license requires CID to coordinate its
6 activities with the Corps and other defendant agencies. Decl.
7 Grothe 8:25-9:1. The court is therefore unconvinced that Measure
8 2 is impractical for the reasons stated by the defendant.

9 It appears to the court that the parties' experts are in
10 agreement that improved management of the flash boards at Daguerre
11 would benefit the listed species by improving the ability of the
12 fish to migrate upstream to spawning and rearing habitats.
13 Currently, impediments to upstream migration threaten the survival
14 and recovery of the species. Accordingly, the court concludes that
15 better management of the flash boards is necessary to prevent
16 irreparable harm in the interim period.

17 The court therefore ORDERS the Corps to develop a written plan
18 within six weeks of the issuance of this order that specifies how
19 the flash boards can be used to maximize fish passage at Daguerre,
20 what Yuba River flow conditions will prompt the placement or
21 removal of the flash board, where the flash boards will be placed
22 under different river flow scenarios, and any other pertinent
23 criteria related to operating the flash boards in the way that best
24 facilitates fish passage at Daguerre. Additionally, the plan shall
25 specify that the Corps will monitor the flash boards at least once
26 per week to make sure that they have not collected debris that

1 might contribute to juvenile fish mortality, and that the Corps
2 will continually adjust the plan for operation and maintenance of
3 flash boards based upon the information generated through
4 monitoring efforts.

5 **iii. Measures 3 and 4: Monitoring and Removal of Debris in Daguerre**

6 These measures are requested by plaintiff in order to prevent
7 debris from accumulating in the Daguerre fish ladders, causing low
8 flow levels in the ladders and acting as an impediment to fish
9 using the ladders. Measure 3 is to install "pressure transducers"
10 in the ladders, which would record the water pressure in the
11 ladders in order to alert the dam operator that debris in the
12 ladder was causing reduced water pressure. Measure 4 would require
13 the Corps to promptly clear debris blockages from the ladders.

14 The BiOp acknowledged that upstream migration through Daguerre
15 is hampered when woody debris collects in the fish ladders, see
16 July Order at 21, and that due to debris and other impediments,
17 "upstream passage conditions at Daguerre Point Dam are . . .
18 considered inadequate for Chinook salmon and steelhead throughout
19 much of the year." BiOp at 26, 31. The accumulation of debris in
20 the Daguerre ladders is one of the impediments to upstream
21 migration that the July Order concluded the BiOp did not
22 sufficiently account for in reaching its no-jeopardy conclusion.

23 Defendants argue that plaintiffs have no evidentiary basis for
24 the assertion that debris causes blockages for extended periods of
25 time, and that in the absence of such evidence, "there is no need
26 for inflexible debris removal timelines, which could require unsafe

1 entry into the river at high flows." Def's Remedy Brief 23.
2 Plaintiffs' primary offered evidence is a Corps inspection log with
3 a September 16, 2009 entry that states "Both sides flowing well.
4 Dome debris at intake of the south side ladder. Appears to have
5 been placed by beavers, chew marks on sticks. Checked all warning
6 lights . . ." Ex. 1 to Weisselberg Decl., ECF No. 350-1. The same
7 inspection log states that on September 23, 2009, the inspector
8 observed, "both sides flowing well. Debris at intake ladder is
9 gone, probably removed by Fish & Game." Id. Plaintiffs characterize
10 the chewed-upon sticks as a "beaver dam within the presence of the
11 fish ladder," that the Corps "for some reason failed to clear."
12 Pls.' Remedy Brief at 17. While the court agrees that plaintiffs
13 have mischaracterized the evidence somewhat, the inspection log
14 does indicate that the Corps did not promptly remove debris that
15 was discovered during inspections. In addition, inspection logs
16 submitted by defendants show similar incidents of debris being
17 discovered during inspections, but not removed.⁴ Ex. 2 of Groethe
18 Decl., ECF No. 372-4.

19 Moreover, the declaration of defendants' expert Brian J.
20 Ellrott provides that: "What is necessary is that the ladders are
21 maintained clear of surface and subsurface debris. . . Frequent
22 inspections of the ladders for surface and sub-surface debris and
23

24 ⁴ Plaintiffs, in their reply, also state that "the recent
25 inspection conducted by plaintiffs" shows that the Corps has failed
26 to actually clear debris discovered by inspectors, but plaintiffs
do not cite any evidence of those inspections. See Pls.' Reply
Brief at 10.

1 the prompt removal of any ladder blockages would be beneficial to
2 spring-run and steelhead during the interim period. . . Consistent
3 with the operations stated in the 2007 biological opinion, any
4 removal of small debris loads should be done immediately," and
5 large debris should be removed as soon as equipment can be
6 mobilized to the site. Ellrott Decl. at 5-6.

7 Despite their own expert's testimony, defendants maintain that
8 the debris in the ladders is not a problem so long as there is
9 sufficient flow through the ladders. Defs.' Remedy Brief 23.
10 However, defendants' submitted expert report calls for immediate
11 removal of debris, flow levels notwithstanding.

12 In light of the BiOp's finding that migration is hampered by
13 debris in the ladders, plaintiffs' submitted evidence showing that
14 debris was discovered but not removed by the Corps on several
15 occasions, and defendants' expert's testimony stating that
16 maintaining the ladders clear of surface and subsurface debris is
17 necessary, the court finds that Measures 3 and 4 are warranted,
18 with two modifications.

19 The first modification is in response to defendants' assertion
20 that installing pressure transducers is impracticable because there
21 is no hard-wired electrical source on top of the dam. Perhaps
22 anticipating this argument, plaintiffs have requested, in the
23 alternative, that the Corps be required to inspect the ladders for
24 surface and subsurface debris weekly during routine flows, and
25 daily during flows of 4,200 cfs or greater. The court finds the
26 defendants' impracticability argument convincing, and that manual

1 inspections of debris in the Daguerre fish ladders is a prudent
2 alternative.

3 The second modification of plaintiffs' proposed measure is
4 that the court declines to adopt strict time limits on removal of
5 the debris, and leaves that matter, which implicates the safety of
6 Corps employees, to the discretion of the Corps, so long as the
7 debris is removed as promptly as feasible, given any safety
8 concerns.

9 Accordingly, the court orders as follows: the Corps SHALL
10 conduct weekly manual inspections of the ladders for surface and
11 subsurface debris during routine flows. During flows of 4,200 cfs
12 or greater, the Corps SHALL conduct daily manual inspections. Upon
13 discovering debris in the ladders, the Corps SHALL remove it within
14 twelve (12) hours, even if the Corps determines that flow levels
15 are adequate for fish passage. If conditions do not allow for safe
16 immediate removal of the debris, the Corps SHALL remove the debris
17 within twelve (12) hours after flows have returned to safe levels.

18 **iv. Measure 5: Adoption of a revised sediment management plan to**
19 **improve flows to the south fish ladder.**

20 The July Order identifies the formation of a gravel sediment
21 bar upstream from Daguerre as a barrier to upstream migration.
22 Chinook and steelhead require an adequately spacious channel
23 through which to migrate once they pass upstream through the
24 Daguerre fish ladders. Sediment buildup can also block the flow of
25 water that attracts fish to the ladders. July Order 22:2-6.
26 Measure 5 is intended to address that impediment. Plaintiffs seek

1 an order that would require the Corps to adopt a revised plan to
2 manage the sediment, including inspection of the area twice per
3 year, and after all major winter storm events and to dredge the
4 area as necessary. Measure 5 also calls for the Corps to adopt a
5 plan to re-engineer the south bank of the Yuba River. Finally,
6 Measure 5 would require the Corps to place back into the Yuba River
7 any gravel-containing sediments that it dredges in locations to
8 ensure maximum benefits to the River's substrate.

9 **a. Inspection and Dredging**

10 Plaintiffs contend that this measure is necessary because the
11 Corps' current plan only requires annual inspections, and the
12 channel could be too shallow, or even blocked, for a considerable
13 time in between the inspections. Plaintiffs also argue that the
14 "plan lacks provisions to ensure that the dredging is conducted to
15 minimize impacts on the listed species." Pls' Remedy Brief 18.
16 Currently, the sediment management plan required by the operative
17 BiOp calls for the Corps to inspect the channel upstream from
18 Daguerre in June, and to dredge the channel if necessary. Id. The
19 channel is inadequate for passage if it is less than three feet
20 deep and thirty feet wide. 2010 Cavallo Decl. ¶ 13.

21 Defendants argue that this measure is redundant, since a
22 sediment management plan is in place, and the Corps has dredged the
23 area in August 2009 and August 2010. Defendants' expert Mr. Sprague
24 state that, given the Corps' plan to address sediment management
25 in a manner to provide fish passage above Daguerre Point, he does
26 "not expect impacts associated with sediment management to rise to

1 the level of irreparable harm to the Chinook and steelhead stocks
2 in the Yuba River during the interim period." Sprague Decl. ¶ 21.

3 It appears that at least one of defendants' experts is in
4 agreement with plaintiff that inspection of the channel after a
5 "high flow event," and dredging to restore clear passage channels
6 is necessary. Defendants' expert Ellrott stated "inspecting and
7 keeping the river channels immediately upstream of DPD [Daguerre
8 Point Dam] sufficiently deep to allow unimpeded passage for fish
9 to exit the ladders is necessary in the longer term and could
10 benefit steelhead during the interim period if a high flow event
11 this winter clogged the river channels with sediment, necessitating
12 the Corps to restore clear passage channels by implementing a
13 dredging operation as soon as flows recede enough to do so."
14 Ellrott Decl. VI. 8 (emphasis added). A high flow event is defined
15 as a storm "that generates Yuba River flow exceeding 20,000 cubic
16 feet per second as measured at the Marysville flow gauge or flow
17 that is sufficient to move sediment loads into the bed of the
18 river. Cavallo Decl. ¶ 29.

19 The court finds that inspections following high flow events
20 as defined above, in addition to the annual inspections required
21 by the current sediment management plan, are necessary to prevent
22 irreparable harm to the listed species. Accordingly, the Corps
23 SHALL inspect the channel immediately following a high flow event,
24 as defined above. If the inspections reveal significant sediment
25 buildup that risks impairing fish passage, the Corps SHALL dredge
26 the channel in a manner that minimizes adverse impact risks to the

1 fish. This order does not obviate the Corps' inspection and
2 dredging obligations under the existing sediment management plan
3 pursuant to the 2007 BiOp and ITS.

4 **b. Plan for Re-engineering the South Bank of the River**

5 Plaintiff argues that a more fundamental problem with upstream
6 sediment is that the river has shifted northward in the area near
7 Daguerre, causing the area upstream of the south fish ladder to be
8 perpetually shallow and inadequate for passage and attraction. To
9 remedy this problem, plaintiffs seek an order requiring defendants
10 to create a plan to re-engineer the river channel upstream of
11 Daguerre to improve flows through the south ladder.

12 The court's July Order makes no mention of this issue in its
13 discussion of the deficiencies of the BiOp. Therefore, there is no
14 finding of liability on the part of the Corps for failing to
15 address, in the BiOp, the impact of any morphological changes in
16 the river near Daguerre. Moreover, although plaintiffs' expert
17 states that flows to the south ladder are perpetually low due to
18 these changes and that a "fundamental change to the geomorphology
19 of the river" would improve flows to the south ladder he does not
20 explain whether passage through only the north ladder at Daguerre
21 is inadequate in the interim period. See Cavallo Decl. ¶ 30.
22 Accordingly, the court declines to adopt this component of Measure
23 5.

24 **c. Placing Dredged Gravel back into the Yuba River**

25 Gravel substrate provides spawning and rearing habitat for
26 salmonids, but the quality of gravel substrate is diminished in the

1 Yuba River. Cavallo Decl. ¶ 32. Plaintiffs request that the Corps
2 be required to place back into the river, or on the river's bank
3 any gravel-containing sediments that it dredges from the river.
4 Defendants make no argument, in their brief or in their submitted
5 expert reports, against a requirement that they be required to
6 place dredged gravel-containing sediment back into the river or on
7 the river's bank.

8 The parties' briefing on this component of Measure 5 is non-
9 existent. Mr. Cavallo is the only expert to address it, he does not
10 expressly state that it is necessary to prevent irreparable harm.
11 Instead he states only that absent this component, the problem of
12 diminished gravel substrate quality would be exacerbated. Moreover
13 the July Order did not discuss the diminished quality of gravel
14 substrate around Daguerre as a stressor that was inadequately
15 addressed in the BiOp. To the contrary, the order stated that while
16 "Englebright limits recruitment of gravel and large woody material
17 [required for salmonid spawning]. . . the BiOp does not indicate
18 that Daguerre separately interferes with gravel, and plaintiffs do
19 not contend that this is the case." July Order 28-29. Although
20 defendants did not provide any statements or arguments in
21 opposition to plaintiffs' request to have gravel-containing
22 sediment placed back into the river or on its banks, the court
23 concludes that plaintiff did not carry its burden of showing that
24 irreparable harm will occur in the absence of an injunction
25 requiring this component.

26 ////

1 **vi. Measure 6: Installation of locked grates to prevent poaching**
2 **from the Daguerre fish ladders.**

3 Defendants' failure to discuss in the BiOp the problem of
4 poaching was one of the bases upon which this court concluded that
5 the BiOp was arbitrary and capricious. July Order 56. The court
6 held that "poaching is not insignificant . . . and not
7 discountable." Id. To prevent poaching, as well as to prevent fish
8 from jumping from the ladders and perishing on dry land, plaintiffs
9 request an order requiring the installation of locked grates over
10 the Daguerre ladders.

11 In their Final Remedy Brief, plaintiffs do not assert or
12 provide any evidence about the quantity of poaching or its impact
13 on the survival of the species. The evidence that plaintiffs offer
14 to support their request for Measure 6 pertains to fish jumping
15 from the ladders onto dry land, and not to poaching. For example,
16 Mr. Cavallo stated that six chinook were found on dry land near the
17 south ladder at Daguerre in September and October 2010. Cavallo
18 Decl. ¶ 33. Mr. Reedy's declaration and attached exhibits describe
19 chinook carcasses found on dry land near the south ladder, which
20 Mr. Reedy states are likely to be those spring Chinook having leapt
21 from the ladder. Reedy Decl. ¶ 36-37. Although poaching is
22 purportedly the problem underlying the need for locked gates over
23 the ladders, plaintiffs do not offer any evidence that poaching is
24 a threat to the recovery or survival of the species. Despite this
25 lack of evidence, plaintiffs argue "the Federal Defendants have
26 done nothing to counter the evidence presented by plaintiffs."

1 Reply Brief 12.

2 Plaintiffs' lack of evidence is understandable, since poaching
3 necessarily takes place unobserved. Although it is plaintiffs'
4 burden to present evidence to the court that irreparable harm is
5 likely to occur absent this measure, the court finds that in this
6 case, the July Order, combined with statements in the 2007 BiOp and
7 statements by defendants' experts lead to a conclusion that locked
8 gates are necessary to prevent irreparable harm due to poaching.
9 In the July Order, the court noted that poaching was an ongoing
10 problem at Daguerre in 1998 and 2001. July Order 55. In 1998, the
11 Spring Run Chinook Status report stated that poaching was an
12 ongoing problem at Daguerre. In 2001, the Corps determined that
13 poaching of salmon from the ladders at Daguerre was "a persistent
14 problem." Id. Without explanation as to how the problem of poaching
15 was diminished from 2001, the 2007 BiOp failed to explain the
16 impact of poaching on the survival and recovery of the species.
17 Statements by defendants' expert indicate that the problem of
18 poaching has not been diminished, potentially causing irreparable
19 harm to the species. In his declaration, Mr. Sprague stated:
20 "Poaching, if in large numbers, does have the potential to cause
21 irreparable harm to a species because listed stocks by the very
22 nature of being listed are already at low abundance. Poaching can
23 potentially significantly reduce a population's abundance." Sprague
24 Decl. ¶ 23. Abundance (along with productivity, spatial structure,
25 and genetic diversity) is one of the factors used to determine a
26 species' viability.

1 Given Mr. Sprague's acknowledgment that poaching can cause
2 irreparable harm to a species, coupled with the July Order's
3 conclusion based on the evidence that poaching is likely to
4 continue, July Order at 56, the court concludes that poaching from
5 the Daguerre fish ladders is likely to cause irreparable harm
6 absent an injunctive measure to prevent poaching.

7 Defendants argue that the installation of locked grates may
8 cause injury to the fish due to sharp edges on the grates
9 themselves. Defs.' Remedy Brief 25; Grothe Decl. 11. In response,
10 plaintiffs offer expert testimony stating "metal grates currently
11 exist over the upper bays of both ladders where fish counting
12 equipment is located and I am aware of no evidence that these
13 grates have harmed fish." Reedy Decl. ¶ 26. Photographs attached
14 to Mr. Reedy's declaration indicate that there are no sharp exposed
15 edges. Ex. 9 to Reedy Decl. Accordingly, the court concludes that
16 installation of locked metal grates over the Daguerre fish ladders
17 is necessary to prevent irreparable harm to the survival and
18 recovery of the species during the interim period.⁵ Defendants are
19 ORDERED to install locking metal grates over the Daguerre fish
20 ladders within six (6) weeks of the issuance of this order.

21
22 ⁵ Although the court declines plaintiffs' invitation to
23 speculate as to whether it is a worse injury for an individual
24 salmon to be cut by sharp metal edges or die on dry land, Pls.'
25 Reply Brief 12, the court will note that in this case the court is
26 most concerned with the survival and recovery of the species, and
not the comfort of any individual salmon moving its way up the
ladder. Put another way, "logic clearly dictates that the needs of
the many outweigh the needs of the. . . one." STAR TREK II; THE WRATH
OF KHAN (Paramount Pictures 1982).

1 **2. Measures to correct loss of genetic diversity, reproductive**
2 **success, and suitable habitat of the listed species.**

3 **i. Measure 7: Study and develop a plan to promote secure physical**
4 **segregation of spring Chinook from fall Chinook, to prevent cross-**
5 **breeding.**

6 Measure 7 is intended to preserve the genetic diversity of
7 spring Chinook. Genetic diversity is one of the four factors that
8 contribute to a species' survival and recovery. The July Order
9 noted that the defendants' failure to consider the impact of
10 hatcheries rendered the BiOp arbitrary and capricious, and that
11 the BiOp acknowledged that interbreeding between spring and fall
12 run Chinook was a threat to the survival or recovery of the spring
13 Chinook. July Order 49, 50. According to plaintiffs, the genetic
14 diversity of spring Chinook is currently threatened because
15 Englebright Dam forces fall and spring Chinook to co-inhabit the
16 same area, placing them in competition with each other and reducing
17 spring chinook's spawning success. Spring chinook's genetic
18 diversity is also threatened by hatchery-produced fish in the Yuba
19 River, which create risk of interbreeding between hatchery-produced
20 fish and spring chinook. Cavallo Decl. 11; see also Reedy Decl.,
21 Ex. H. To prevent this harm, plaintiffs' request an order requiring
22 defendants to create a plan for a temporary segregation weir to
23 segregate spring- from fall-run chinook. Plaintiffs request that
24 the plan also include measures to counter the influence of hatchery
25 fish on the genetic diversity of spring chinook.

26 In support of their request, plaintiffs' expert declarations

1 and exhibits stating "superimposition and competition for
2 appropriate spawning habitat can limit spring-run Chinook salmon
3 spawning success." Reedy Decl. Ex. H. Englebright Dam currently
4 limits the spawning habitat accessible to each species, forcing the
5 overlap that threatens spring-chinook spawning success. Absent the
6 Englebright Dam, natural segregation of the two species would
7 occur. Id. Placement of an artificial weir to separate species of
8 salmon has been used successfully on other Sacramento River
9 streams. Id.

10 Defendants argue that placement of a weir, "without adequate
11 study has the potential to result in take of a listed species."
12 Defs.' Oppo. 26:4. The measure that plaintiffs request, however,
13 is for the Corps to study and develop a plan to place the weir.
14 Plaintiffs do not request placement of a weir without adequate
15 study. Additionally, defendants state that the Corps lacks the
16 statutory authority to implement the requested measure. Defendant
17 cites the August 6, 2010 declaration of Douglas Grothe, a Park
18 Manager, who in fact states merely that the declarant is "not
19 certain" whether the Corps has authority to implement the measure.

20 Additionally, defendants' expert, Mr. Ellrott, states: "In
21 order for a spring-run population to persist in the Yuba River,
22 reproductive isolation from fall-run Chinook salmon is necessary."
23 Ellrott Decl. 9, ECF No. 321-2. Mr. Ellrott also states that, given
24 current conditions on the Yuba River, "a segregation weir and
25 restoring access to habitats upstream of Englebright Dam would
26 likely be necessary in order to begin to restore reproductive

1 isolation between fall-run and spring-run in the Yuba River.” Id.

2 Defendants have not rebutted plaintiffs’ argument, supported
3 by this court’s July Order and the BiOp, that interbreeding poses
4 a threat to the survival of the species, and that a plan to
5 segregate spring Chinook is required in order to prevent
6 irreparable harm. Accordingly, defendants are ORDERED to study and
7 develop a plan for measures that will promote and secure physical
8 segregation/separation of spring Chinook from fall run Chinook in
9 the Yuba River, allowing the former to spawn without competition
10 from or cross-breeding with the fall run Chinook. The plan shall
11 propose a seasonal segregation weir within the Yuba River below
12 Englebright. The plan shall further propose measures for impeding
13 the migration of stray hatchery fish into the Yuba River to
14 locations where hatchery fish could compete with spring Chinook
15 spawners and/or interbreed with spring Chinook. The Corps SHALL
16 provide its plan for review and comment to the California
17 Department of Fish and Game “CDFG”), NMFS, and to plaintiffs within
18 eight (8) weeks of the issuance of this order. The Corps shall then
19 implement the plan if and as approved by CDFG and NMFS.

20 **ii. Measure 8: Develop and implement a long-term gravel**
21 **augmentation plan to create a new spawning habitat for spring**
22 **Chinook and steelhead.**

23 The July Order noted that Englebright dam limits the amount
24 of gravel that can accumulate downstream from it. Salmonids require
25 clean gravel beds in which to spawn, as well as woody material for
26 protection. Recognizing Englebright interferes with gravel

1 accumulation, the Corps adopted a plan to inject additional gravel
2 into the river. The 2007 BiOp required implementation of a gravel
3 augmentation plan to restore spawning habitat below Englebright by
4 November 2010. Reedy Decl. 4. This court noted that the Corps'
5 "reliance on the proposed gravel injection program was reasonable"
6 even though the program had not yet commenced at the time the BiOp
7 was issued, since at the time the BiOp was issued, the plan was
8 reasonably certain to occur. July Order 28 n. 14. Since the
9 adoption of the BiOp, the gravel augmentation implementation plan
10 has indeed commenced. In November 2007, the Corps injected a small
11 amount of gravel as a pilot program. The purpose of the pilot
12 program was to inject a small amount of gravel during a low-flow
13 period, and then waiting to see where the gravel moved during the
14 high-flow period. In September 2010, the Corps issued a Gravel
15 Augmentation Implementation Plan ("GAIP"), which the Corps intended
16 to satisfy the requirements of the 2007 BiOp. The GAIP recommends
17 an adaptive management approach, which involves monitoring the
18 movement of injected gravel, and placing additional gravel based
19 on results of the monitoring. Grothe Decl. 12. In November, 2010,
20 the Corps began placing gravel into the Englebright Dam Reach.
21 Pursuant to the stipulation between the parties, the 2007 BiOp and
22 Incidental Take Statement, including the requirement that the Corps
23 implement a gravel augmentation plan, is currently in effect.

24 Plaintiffs argue that the Corps' placement of gravel around
25 Englebright, pursuant to the GAIP, has been inadequate to offset
26 Englebright's adverse impacts on spawning habitat. Pls.' Remedy

1 Brief 23. Plaintiffs provide expert opinions stating that the
2 amount of gravel to be injected is inadequate, and that the GAIP
3 project area is too small, given the large area for which
4 Englebright cuts off gravel supply. In Mr. Reedy's opinion, the
5 GAIP is inadequate "because it is based on an incorrect conclusion
6 that the only area the Corps' gravel augmentation project should
7 encompass is the 300-700 foot section between the Narrows I pool
8 to the top of the rapid downstream of the gaging station." The GAIP
9 does not require augmentation in the other nearby sections of the
10 river affected by Englebright. Reedy Decl. 5. Mr. Reedy cites a
11 Final Habitat Expansion Plan ("HEP"), prepared by the California
12 Department of Water Resources, which calls for gravel augmentation
13 for a one-mile area starting about one-half mile downstream from
14 Englebright, continuing to one and a half miles downstream from
15 Englebright. Reedy Decl. 7; Reedy Decl. EX. D at 66.

16 Defendants counter that the GAIP is adequate. According to
17 defendants, the GAIP is a long-term plan, developed by a leader in
18 the field of gravel augmentation, and based on exhaustive modeling
19 of various methods of gravel placements. The GAIP calls for
20 replacement of 15,000 tons of gravel to the area, beginning with
21 an injection of 5,000 tons that commenced in November 2010. The
22 GAIP's incremental approach "yields a more resilient and time-
23 tested outcome," according to the GAIP. Defs.' Remedy Brief 27.
24 Defendants argue that Mr. Reedy mischaracterizes the scope of the
25 GAIP. The GAIP itself states that its goal is for "the gravel
26 deficit for the whole [Englebright Dam] reach [to] be erased." GAIP

1 at 73, Reedy Decl. Ex. D. The Englebright Dam Reach is the canyon
2 between Englebright Dam and the Yuba River's confluence with Deer
3 Creek. This is the same area covered by the recommendations in the
4 HEP, cited by plaintiffs' expert Mr. Reedy.

5 The court concludes that plaintiffs have not met their burden
6 of showing that irreparable injury is likely to occur in the
7 absence of an order that includes plaintiffs' proposed Measure 8.
8 Although Mr. Reedy argues persuasively that requiring the measures
9 described in the Habitat Expansion Plan would benefit spring
10 chinook by restoring gravel spawning habitat to the area around
11 Englebright, the court is not convinced that any interim measure
12 is required, given the Corps' existing obligation to comply with
13 the 2007 BiOp and the GAIP. The court notes that the July Order
14 specifically found that the Corps' reliance, when preparing the
15 BiOp, on a future plan to adopt a gravel augmentation plan was
16 reasonable, since the plan "reasonably certain to occur." July
17 Order 28 n. 14. The court specifically found that it was *not*
18 arbitrary or capricious for the BiOp to rely on the proposed plan.
19 The court is disinclined to order an interim measure that is
20 unrelated to a specific deficiency found in the BiOp. Defendants
21 have shown that they continue to comply with the GAIP by injecting
22 gravel into the area and monitoring its movement downstream.

23 Accordingly, plaintiffs' request for interim Measure 8 is
24 DENIED.

25 ////

26 ////

1 **iii. Measure 9: Develop a plan for riparian planting and wood**
2 **structure.**

3 Woody debris is a necessary element of spawning habitat for
4 salmonids, as it provides a cover from predators and a refuge from
5 fast-moving water. Englebright Dam traps woody debris, preventing
6 it from flowing downstream. The July Order recognized the lack of
7 woody debris as a stressor on the listed species. July Order 28.
8 Measure 9 seeks to address this problem by requiring the Corps to
9 develop a final plan and implement a project to plant native
10 riparian vegetation on a parcel of land on the lower Yuba River.
11 The plan to be implemented is identified as "Project 10" of a
12 "Rehabilitation Concepts for the Parks Bar to Hammon Bar Reach of
13 the Lower Yuba River," prepared in November 2010. Ex. R of Reedy
14 Decl.

15 Plaintiffs' proposed Measure 9 is similar to a measure called
16 for in the ITS issued pursuant to the 2007 BiOp, which is currently
17 in effect. Defendants argue that this makes the measure redundant
18 because a wood installation plan is scheduled to be implemented in
19 November 2011. Plaintiffs' final remedy brief calls the loss of
20 woody debris an "impact," but does not explain or argue that it is
21 the cause of irreparable harm. Nor does the declaration of Brad
22 Cavallo, which states that "the increase presence of native
23 riparian vegetation and large wood . . . would be very beneficial
24 to spring Chinook and steelhead." Decl. Cavallo 16:2-3. Plaintiffs
25 have not shown that an irreparable injury will occur in the absence
26 of Measure 9. The court, therefore, declines to adopt it.

1 **III. Conclusion**

2 For the foregoing reasons, the court ORDERS as follows:

3 [1] Plaintiffs' Motion for Final Remedies, ECF No.
4 363, is GRANTED in part and DENIED in part.

5 [2] Corps SHALL develop a written plan within six
6 weeks of the issuance of this order that specifies how
7 the flash boards can be used to maximize fish passage
8 at Daguerre, what Yuba River flow conditions will
9 prompt the placement or removal of the flash boards,
10 where the flash boards will be placed under different
11 river flow scenarios, and any other pertinent criteria
12 related to operating the flash boards in the way that
13 best facilitates fish passage at Daguerre.

14 Additionally, the plan shall specify that the Corps
15 will monitor the flash boards at least once per week
16 to make sure that they have not collected debris that
17 might contribute to juvenile fish mortality, and that
18 the Corps will continually adjust the plan for
19 operation and maintenance of flash boards based upon
20 the information generated through monitoring efforts.

21 [3] The Corps SHALL conduct weekly manual inspections
22 the Daguerre ladders for surface and subsurface debris
23 weekly during routine flows. During flows of 4,200 cfs
24 or greater, the Corps SHALL conduct daily manual
25 inspections. Upon discovering debris in the ladders,
26 the Corps SHALL remove it within twelve (12) hours,

1 even if the Corps determines that flow levels are
2 adequate for fish passage. If conditions do not allow
3 for safe immediate removal of the debris, the Corps
4 SHALL remove the debris within twelve (12) hours after
5 flows have returned to safe levels.

6 [4] The Corps SHALL inspect the channel upstream from
7 Daguerre immediately following a high flow event, as
8 defined above. If the inspections reveal significant
9 sediment buildup that risks impairing fish passage,
10 the Corps SHALL dredge the channel in a manner that
11 minimizes adverse impact risks to the fish. This order
12 does not obviate the Corps' inspection and dredging
13 obligations under the existing sediment management
14 plan pursuant to the 2007 BiOp and ITS.

15 [5] The Corps SHALL install locking metal grates over
16 the Daguerre fish ladders within six (6) weeks of the
17 issuance of this order.

18 [6] The Corps SHALL study and develop a plan for
19 measures that will promote and secure physical
20 segregation/separation of spring Chinook from fall run
21 Chinook in the Yuba River, allowing the former to
22 spawn without competition from or cross-breeding with
23 the fall run Chinook. The plan shall propose a
24 seasonal segregation weir within the Yuba River below
25 Englebright. The plan shall further propose measures
26 for impeding the migration of stray hatchery fish into

1 the Yuba River to locations where hatchery fish could
2 compete with spring Chinook spawners and/or interbreed
3 with spring Chinook. The Corps SHALL provide its plan
4 for review and comment to the California Department of
5 Fish and Game "CDFG"), NMFS, and to plaintiffs within
6 eight (6) weeks of the issuance of this order. The
7 Corps shall then implement the plan if and as approved
8 by DDFG and NMFS.


9 [8] Defendants MAY move for relief from judgment upon
10 a showing that they have complied with this court's
11 remand order, ECF No. 398.

12 [9] Defendants' Motion to Strike and/or Exclude
13 Evidence, ECF No. 380, is DENIED.

14 [10] American Rivers, Inc.'s unopposed Motion for
15 Leave to File an Amicus Brief, ECF No. 392, is
16 GRANTED.

17 IT IS SO ORDERED.

18 DATED: July 25, 2011.

19
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21 
22 LAWRENCE K. KARLTON
23 SENIOR JUDGE
24 UNITED STATES DISTRICT COURT
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