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.

_____/

The remaining claims in this suit concern two dams and related water diversions on the Yuba River. The dams are operated by the Army Corps of Engineers ("Corps"). The river is home to populations of Chinook salmon, steelhead, and green sturgeon listed as threatened under the Endangered Species Act ("ESA"), 16 U.S.C. § 1531 *et seq.* In 2007, the National Marine Fisheries Service ("NMFS") issued a Biological Opinion ("BiOp") concluding that the Corps' future operations would not violate the ESA. Plaintiffs,

two environmental groups, claim that NMFS's BiOp is arbitrary and capricious and that the Corps' operations are causing take of protected salmon and steelhead.[1] Remaining defendants in this case are NMFS, the Corps, and various federal officials, collectively the "Federal Defendants."

Pending before the court are four motions. In one, plaintiffs seek summary judgment solely on the issue of plaintiffs' standing to bring their claims. Separately, plaintiffs and Federal Defendants have filed cross motions for summary judgment as to liability. Finally, plaintiffs seek a preliminary injunction pending final resolution of this suit.

For the reasons stated below, the court concludes that plaintiffs have standing and that the BiOp is arbitrary and capricious. Plaintiffs' claim regarding take raises two theories of liability. The court grants summary judgment to defendants as to the first and requests supplemental briefing as to the second. The court further requests supplemental briefing as to plaintiffs' motion for a preliminary injunction, regarding mootness and the effect of the Supreme Court's intervening decision in Monsanto Co. v. Geertson Seed Farms, ___ U.S. ___, 2010 WL 2471057, 2010 U.S.

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[1] In a separate claim, plaintiffs further alleged that NMFS had unreasonably delayed publication of a rule specifying the protection owed to the green sturgeon under section 4(d) of the ESA, 16 U.S.C. § 1533(d). NMFS has since published such a rule. Endangered and Threatened Wildlife and Plants: Final Rulemaking To Establish Take Prohibitions for the Threatened Southern Distinct Population Segment of North American Green Sturgeon, 75 Fed. Reg. 30,714 (June 2, 2010). The court agrees with the parties that this claim is now moot.

LEXIS 4980 (U.S. June 21, 2010).

I. Background

A. The Endangered Species Act

As recently reiterated by the Ninth Circuit, the ESA may be "'the most comprehensive legislation for the preservation of endangered species ever enacted by any nation'" and "reflects 'a conscious decision by Congress to give endangered species priority over the 'primary missions' of federal agencies.'" Cal. ex rel. Lockyer v. United States Dep't of Agric., 575 F.3d 999, 1018 (9th Cir. 2009) (quoting Tenn. Valley Auth. v. Hill, 437 U.S. 153, 180, 185 (1978)).

The ESA's protection is triggered when species are "listed" as "threatened" or "endangered" by the applicable federal agency--in this suit, NMFS. ESA § 4(c); 16 U.S.C. § 1533(c); 50 C.F.R. § 402.01.[2] "Species," for purposes of the ESA, means not only taxonomic species, but also "any subspecies . . . or distinct population segment of any species . . . which interbreeds when mature." ESA § 3(16); 16 U.S.C. § 1532(16). In the particular context of salmon, NMFS treats a population as a "species" if it is an "evolutionar[il]y significant unit," ("ESU") which is a

[2] The ESA regulations were amended effective January 15, 2009. Interagency Cooperation Under The Endangered Species Act, 73 Fed. Reg. 76,272 (Dec. 16, 2008) (to be codified at 50 C.F.R. pt. 402). These amendments were repealed, and the former regulations adopted, on May 4, 2009. Interagency Cooperation Under The Endangered Species Act, 74 Fed. Reg. 20,421 (May 4, 2009) (to be codified at 50 C.F.R. pt. 402). Accordingly, the regulations presently in effect are the same as the regulations in effect at the time the BiOp was issued.

population that is "substantially reproductively isolated from other conspecific population units; and [that] . . . represent[s] an important component in the evolutionary legacy of the species." Trout Unlimited v. Lohn, 559 F.3d 946, 950 (9th Cir. 2009) (quoting Policy on Applying the Definition of Species, 56 Fed. Reg. 58,612, 58,618 (Nov. 20, 1991)).

Three threatened species are at issue in this suit; the ESU of Central Valley spring run Chinook salmon ("spring run Chinook"), the distinct population segment of Central Valley steelhead ("steelhead"), and the southern distinct population segment of North American green sturgeon ("green sturgeon"). 50 C.F.R. §§ 223.102(c)(1), (c)(4), (c)(17).

Plaintiffs invoke two of the ESA's mechanisms for protecting listed species, sections 7(a)(2) and 9. Section 7(a)(2) provides that

> Each Federal agency shall, in consultation with and with the assistance of the Secretary [of Commerce or the Interior], insure that any action authorized, funded, or carried out by such agency . . . is not likely to jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification of habitat of such species which is determined by the Secretary . . . to be critical . . .

ESA § 7(a)(2); 16 U.S.C. § 1536(a)(2). In this suit, the Corps determined that the project was likely to affect the three listed species. Section 7 therefore obliged the Corps to seek a BiOp from NMFS regarding whether these effects exceed the limits set by section 7(a)(2). ESA § 7(b)(3); 16 U.S.C. § 1536(b)(3); 50 C.F.R.

§ 402.12(a), (k). That BiOp is the subject of plaintiffs' third claim.

The ESA also generally prohibits "take" of endangered species. ESA § 9(a); 16 U.S.C. § 1538(a). Roughly stated, whereas section 7 looks to populations, section 9 looks to individual organisms. ESA § 3(19); 16 U.S.C. § 1532(19). When a species is listed as threatened, rather than endangered, the Service must determine whether to apply section 9's protections to the species. Id., see also ESA § 4(d); 16 U.S.C. § 1533(d). When this suit was filed, take of steelhead and spring run Chinook was largely prohibited, but take of green sturgeon was not. See 50 C.F.R. §§ 223.101, 223.203.

NMFS may relax the prohibition on take when take is incidental to activity for which NMFS has issued a "no jeopardy" BiOp. This relaxation takes the form of an "Incidental Take Statement," which is

> a written statement that --
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> (i) specifies the impact of such incidental taking on the species,
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> (ii) specifies those reasonable and prudent measures that the Secretary considers necessary or appropriate to minimize such impact,
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> (iii) . . . , and
>
> (iv) sets forth the terms and conditions (including, but not limited to, reporting requirements) that must be complied with by the Federal agency or applicant (if any), or both, to implement the measures specified under clauses (ii) and (iii).

ESA § 7(b)(4); 16 U.S.C. § 1536(b)(4). "[A]ny taking that is in compliance with the terms and conditions specified in a written [incidental take statement] . . . shall not be considered to be a prohibited taking of the species concerned." ESA § 7(o)(2); 16 U.S.C. § 1536(o)(2).

B. Biology of The Three Species

In reviewing the biology of the three species, the court relies on the November 2007 BiOp at issue in this suit (hereinafter "BiOp"), supplemented by the administrative record.

1. Spring Run Chinook Salmon

Salmon are anadromous fish, meaning they hatch in freshwater streams, migrate to the ocean to mature, then return to freshwater to spawn. Spring run Chinook salmon generally begin their freshwater migration in January, reach their natal streams from March to July, hold in the river over summer, and spawn from August to October. BiOp at 6-7. This timing historically allowed spring run Chinook to spawn farther upstream than the more plentiful fall run, reproductively isolating the two populations. Id. at 25. Juvenile spring run Chinook typically spend a year or more in freshwater habitats before migrating downstream to the ocean. Id. at 6-7.

For spawning, salmon require clean, loose gravel in swift, relatively shallow riffles (patches of stream with rough water), suitable depths and velocities for construction of redds (the gravel "nests" in which eggs are deposited), and adequate

oxygenation for incubating eggs. Id. at 7. Juveniles need bank cover such as overhanging and submerged vegetation, root wads, and fallen woody debris. Id. at 7. Salmon are sensitive to water temperature throughout their life cycle. Id. at 6.

According to documents included in the NMFS administrative record, "more than 20 'historically large populations' of spring run chinook have been extirpated or reduced nearly to zero since 1940." Admin. Record ("AR") 11334-35 (Cal. Dept. of Fish and Game, "Fish Species of Special Concern in California," at 39-40 (June 1995)) (hereinafter "Species of Special Concern").[3] The average abundance for the entire ESU was 12,590 for the period of 1969 to 1979, 13,334 for the period of 1980 to 1990, 6,554 from 1991 to 2001, and 16,349 since 2002. BiOp at 10. However, there is very little information regarding abundance within the lower Yuba River. Id. at 18-19.

2. Steelhead

The BiOp explains that steelhead have life histories and habitat requirements that are similar to salmon, except that steelhead may spawn in multiple years. The BiOp discusses the needs of steelhead and spring run salmon together, referring to the species collectively as salmonids. Steelhead are also in similar decline. Historic populations were 1 to 2 million adults, reduced to about 40,000 in the early 1960s, to a spawning population of

[3] In this case, both NMFS and the Corps submitted administrative records. The court's citations refer to the NMFS record unless otherwise specified.

only about 3,600 female steelhead in 2005. BiOp at 11-12.

3. Green Sturgeon

Like salmon and steelhead, green sturgeon migrate between the ocean and freshwater. BiOp at 9. Adults generally migrate upstream beginning in February and spawn between March and July. Id. Spawning requires deep, turbulent, cold-water pools with large cobble substrate. Id. Juveniles spend from one to four years in fresh and estuarine waters before dispersing to marine waters. Id. at 10. The mainstem Sacramento River population is the only remaining spawning population for the southern distinct population segment of the green sturgeon (the "species" at issue here). Id. at 9. The best available evidence indicates that range-wide green sturgeon abundance is currently declining, mainly due to loss of historic habitat caused by impassable dams. BiOp at 12; see also Proposed Threatened Status for Southern Distinct Population Segment of North American Green Sturgeon, 70 Fed. Reg. 17,386, 17,391 (Apr. 6, 2005).

C. The Challenged Project

The project at issue here is the Corps' "operations associated with Englebright and Daguerre Point Dams on the Yuba River in Yuba and Nevada Counties, CA." BiOp at 2.[4] This includes operation of

[4] In another case, the undersigned held that, by operation of Section 8 of the Reclamation Act of 1902, California Fish and Game Code § 5937 applied to dams operated by the Bureau of Reclamation. Natural Res. Def. Council v. Patterson, 791 F. Supp. 1425, 1435 (E.D. Cal. 1992), Natural Res. Def. Council v. Patterson, 333 F. Supp. 2d 906, 917 (E.D. Cal. 2004). Plaintiffs have not invoked § 5937 here. Accordingly, the court does not discuss it.

the dams themselves, including the fish ladders at Daguerre Point Dam ("Daguerre"), together with the Corps' "issuance of permits, licences and easements to non-Federal entities for their operations of water diversions and hydroelectric facilities at or near the dams." Id. Non-federal actions permitted or licensed by the Corps include operation of two hydroelectric generation facilities at Englebright and three diversions in the vicinity of Daguerre--the Brown's Valley, South-Yuba-Brophy, and Hallwood-Cordua diversions.

Pursuant to a request by the Corps, NMFS issued the long-term biological opinion for this project on November 21, 2007. BiOp at 1.

D. Procedural History

Plaintiffs, the South Yuba River Citizens League and the Friends of the River, filed suit in December 2006, challenging a 2002 BiOp and bringing various other claims. After a protracted series of amendments and litigation of these other claims, the plaintiffs filed the operative Sixth Amended Complaint, which challenges the November 2007 BiOp described above. This complaint alleges four claims pertinent to the present motions. First, plaintiffs claim that NMFS acted arbitrarily and capriciously by adopting the BiOp in violation of section 7 of the ESA (plaintiffs' third claim). Second, plaintiffs claim that the Corps violated section 9 of the ESA by operating the dams in a way that causes take, notwithstanding the fact that the BiOp includes an incidental take statement (plaintiffs' fourth claim). This claim includes two theories of liability, which the Federal Defendants helpfully label

as claims 4A and 4B. Claim 4A alleges that the incidental take statement was invalid ab initio, such that it could never shield the Corps from liability for take. Claim 4B alleges that the Corps has violated the terms and conditions imposed by the incidental take statement, thereby exceeding the scope of its protection. Third, plaintiffs argued that the Yuba County Water Agency ("YCWA") violated section 9 for largely the same reasons--invalidity of the incidental take statement and the Corps' failure to comply with the terms and conditions (plaintiffs' sixth claim). Plaintiffs settled this claim concurrently with the filing of the motion for summary judgment on liability. Pursuant to this court-approved settlement, YCWA remains party to the case as an intervenor, and YCWA has filed briefs opposing plaintiffs' motions. Various other non-federal entities have also intervened in this suit as defendants but largely have not filed briefing on the instant motions. Fourth and finally, plaintiffs claimed that NMFS had unreasonably delayed publication of rules protecting the green sturgeon under section 4(d) of the ESA. As noted above, the parties properly agree that this claim has been rendered moot by subsequent publication of such a 4(d) rule.

Accordingly, the claims at issue are plaintiffs' claim that the BiOp was arbitrary and capricious and plaintiffs' claim that the Corps is causing take prohibited by section 9.

II. Standing

Constitutional standing requires that the plaintiff allege an injury in fact that is fairly traceable to the complained of harm

and that is likely to be redressable by the court. Friends of the Earth, Inc. v. Laidlaw Envtl. Servs. (TOC), Inc., 528 U.S. 167, 180-81 (2000).

Plaintiffs argue that they have standing because the organizations' members regularly use the affected area of the Yuba River "for recreational, educational, aesthetic and spiritual enjoyment," including interest in the listed species. These assertions are supported by declarations from individual members of the plaintiff organizations. Plaintiffs allege that the operations harm fish, limiting plaintiffs' ability to derive enjoyment therefrom, and that a court order remanding the BiOp and enjoining take will protect fish and remedy this injury.

Plaintiffs filed a motion solely seeking a judicial determination of the above. YCWA opposed this motion prior to settling the claims against it. YCWA argued, in essence, that because plaintiffs' claims would fail on the merits, plaintiffs had failed to show injury sufficient to grant standing. This argument misconstrues the standing inquiry, the purpose of which "is to ensure that the plaintiff has a concrete dispute with the defendant, not that the plaintiff will ultimately prevail against the defendant." Hall v. Norton, 266 F.3d 969, 976-77 (9th Cir. 2001).

Federal Defendants explicitly state that they do not dispute plaintiffs' standing. Indeed, Federal Defendants argue that standing was not in dispute, such that plaintiffs should not be entitled to fees in connection with the above motion. Aside from

noting that this argument is in some tension with YCWA's decision to argue that plaintiffs lack standing, the court does not resolve this question here. The present questions regarding liability are complicated enough that discussion of fees may be postponed to another day.

Federal Defendants further argue that plaintiffs' freestanding motion on standing is procedurally improper. The Ninth Circuit has not addressed whether Fed. R. Civ. P. 56 permits a motion seeking partial adjudication of issues other than liability. An apparent majority of courts outside the Ninth Circuit, including the Second, Third, and Seventh Circuits, have held that a motion for summary judgment must seek a judicial determination that at least fully resolves liability on a claim.[5] Under that rule, a defendant may move for summary judgment solely on the ground that a plaintiff lacks standing, but a plaintiff may not bring a converse motion because granting the latter would not determine liability on the claim. Most district courts within the Ninth Circuit, however, have held that Rule 56 permits motions of the latter type.[6]

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[5] See Commonwealth Ins. Co. of N.Y. v. O. Henry Tent and Awning Co., 266 F. 2d 200, 201 (7th Cir. 1959), Coffman v. Federal Laboratories, 171 F.2d 94 (3rd Cir. 1949), Audi Vision, Inc. v. RCA Mfg. Co., 136 F.2d 621 (2d Cir. 1943); see also, e.g., SEC v. Thrasher, 152 F. Supp. 2d 291, 295 (S.D.N.Y. 2001) (quoting Arado v. Gen. Fire Extinguisher Corp., 626 F. Supp. 506, 509 (N.D. Ill. 1985)) ("Rule 56(d)'s issue-narrowing provision operates only in the wake of an unsuccessful (and proper) motion under Rule 56(a) or 56(b) . . . There is no such thing as an independent motion under Rule 56(d)."); but see, e.g., Monge v. Cortes, 413 F. Supp. 2d 54, 59 (D.P.R. 2006).

[6] See ASIS Internet Services v. Optin Global, Inc. 2008 WL 1902217 *15 n.10 (N.D. Cal. 2008) (in dicta, considering and

In the context of the pending cross-motions on liability, the court may plainly determine standing; indeed, the court has an independent obligation to do so. Accordingly, the procedural argument raised by the Federal Defendants is only relevant to plaintiffs' potential fee recovery. Again, the court postpones this issue until another day.

III. Liability

Plaintiffs' third claim argues that NMFS's BiOp is arbitrary and capricious in its no-jeopardy conclusion, in its critical habitat designation, and in the attached incidental take statement. The court agrees with these ultimate conclusions, although the court rejects some of plaintiffs' underlying arguments.

Plaintiffs' fourth claim argues that the Corps has caused take. The court rejects the legal theory underlying claim 4A, that the incidental take statement was void ab initio. As to claim 4B, it appears that factual questions remain, but that this claim has been rendered moot.

A. Standards of Review

Plaintiffs' various arguments regarding the sufficiency of the

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rejecting Arado), In re Hat, Nos. 4-32497-B, 05-2506-B, 2007 WL 2580688 (Bankr. E.D. Cal. Sept. 4, 2007) (holding that local rule 56-260 and the policy underlying Fed. R. Civ. P. 56 both supported allowing free-standing motions for partial adjudication of parts of claims), Bushnell v. Vis Corp., 1996 WL 506914 *11 (N.D. Cal. 1996), Advanced Semiconductor Materials America, Inc. v. Applied Materials, Inc. 1995 WL 419747 *3 (N.D. Cal. 1995), State Farm Fire & Acualty Co. v. Geary, 699 F. Supp. 756, 759 (N.D. Cal. 1987), DiSandro v. Makuhuena Corp., 588 F. Supp. 889, 892 (D. Haw. 1984); but see Cal. Sportfishing Prot. Alliance v. Diablo Grande, Inc., 209 F. Supp. 2d 1059, 1065 (E.D. Cal. 2002).

BiOp challenge final agency actions subject to "arbitrary and capricious" review under the Administrative Procedure Act. 5 U.S.C. § 706(2)(A); Bennett v. Spear, 520 U.S. 154, 178 (1997). Under such review, the court does not employ the usual summary judgment standard for determining whether a genuine issue of material fact exists. Conservation Cong. v. United States Forest Serv., 555 F. Supp. 2d 1093, 1100 (E.D. Cal. 2008). This is because the court is not generally called upon to resolve facts in reviewing agency action. Occidental Eng'g Co. v. INS, 753 F.2d 766, 769-70 (9th Cir. 1985). Instead, the court's function is to determine whether or not, as a matter of law, the evidence in the administrative record permitted the agency to make the decision it did. Id.

The APA authorizes the court to set aside agency action that is "arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with the law." 5 U.S.C. § 706(2)(A); Nw. Envt'l Def. Ctr. v. Bonneville Power Admin., 477 F.3d 668, 682 (9th Cir. 2007). An agency decision is arbitrary and capricious where the agency "relied on factors Congress did not intend it to consider, entirely failed to consider an important aspect of the problem, or offered an explanation that runs counter to the evidence before the agency or is so implausible that it could not be ascribed to a difference in view or the product of agency expertise." Lands Council v. McNair, 537 F.3d 981, 987 (9th Cir. 2008) (en banc) (quotations omitted). The agency "must articulate a rational connection between the facts found and the conclusions reached."

Earth Island Inst. v. United States Forest Serv., 442 F.3d 1147, 1157 (9th Cir. 2006) (citing Midwater Trawlers Co-op v. Envtl. Def. Ctr., 282 F.3d 710, 716 (9th Cir. 2002)).

This relatively deferential standard is especially appropriate when reviewing factual determinations that implicate an agency's scientific expertise. Ariz. Cattle Growers' Ass'n v. United States Fish & Wildlife, BLM, 273 F.3d 1229, 1236 (9th Cir. 2001). Even for scientific questions, however, a court must intervene when the agency's determination is counter to the evidence or otherwise unsupported. See, e.g., Sierra Club v. United States EPA, 346 F.3d 955, 962 (9th Cir. 2003), amended by 352 F.3d 1187 (9th Cir. 2003) (rejecting agency's factual conclusion about cause of air quality exceedance).

Plaintiffs' fourth claim, which alleges that the Corps has caused take, is not wholly subject to arbitrary and capricious review, as explained by the court's Order filed December 23, 2008 (Dkt. No. 184). In that order, the court explained that plaintiffs' claim that the incidental take statement was invalid (claim 4A) would be subject to arbitrary and capricious review no matter how that argument was packaged. Order at 19-20.[7] The allegations that the defendants had violated the terms and

[7] This order concerned reconsideration of an order by the Magistrate Judge regarding compulsion of discovery. The order expressed no opinion as to the viability or merits of the above claims, instead recognizing that such questions went beyond the scope of the discovery dispute. Order at 21 (citing 8 C. Wright, A. Miller, & R. Marcus, Federal Practice and Procedure § 2008 (2d ed.)).

conditions of the incidental take statement and actually caused take (claim 4B), however, require the court to look beyond the administrative record. Id. at 21. The latter allegations therefore implicate the ordinary summary judgment standard under Fed. R. Civ. P. 56. Because the court's analysis of this claim requires only fleeting discussion of this standard, the court does not repeat it here.

B. Jeopardy Analysis

The BiOp concludes that the project will not "jeopardize the continued existence of" listed species. See ESA § 7(a)(2); 16 U.S.C. § 1536(a)(2). In part, plaintiffs challenge the sufficiency of NMFS's analysis, alleging that NMFS failed to consider aspects of the problem or to explain the basis for its conclusions. See Sixth Amended Complaint ¶¶ 101, 104-09. Beyond these "show your work" arguments, plaintiffs argue that the evidence compelled a jeopardy conclusion. See id. ¶¶ 102-03. Upon careful review, the record demonstrates that NMFS has not supported its position, but not that a jeopardy conclusion was inescapable.

The applicable regulations define "jeopardize the continued existence of" to mean "to engage in an action that reasonably would be expected, directly or indirectly, to reduce appreciably the likelihood of both the survival and recovery of a listed species in the wild by reducing the reproduction, numbers, or distribution of that species." 50 C.F.R. § 402.02; see also Nat'l Wildlife Fed'n v. NMFS, 524 F.3d 917, 933 (9th Cir. 2008) (survival and

recovery are distinct).[8] The BiOp provides "genetic and life-history diversity" as a fourth criteria, and the court defers to NMFS's interpretation of its own regulation here. BiOp at 32. Coeur Alaska, Inc. v. Se. Alaska Conservation Council, ___ U.S. ___, ___ 129 S. Ct. 2458, 2468 (2009) (citing Auer v. Robbins, 519 U.S. 452, 461 (1997)).

Federal Defendants correctly note that both "jeopardize" and "reduce" are verbs. "Agency action can only 'jeopardize' a species' existence if that agency action *causes some deterioration* in the species' pre-action condition." Nat'l Wildlife Fed'n, 524 F.3d at 930 (emphasis added).

Although the focus of the jeopardy inquiry is on the effects of agency action, these effects can only be understood in context. This context includes "the current status of the listed species," the "environmental baseline," and future "cumulative effects." 50 C.F.R. §§ 402.02, 402.14(g)(2)-(3). The regulations define the environmental baseline to include "the past and present impacts of all Federal, State or private actions and other human activities in the action area" and "the anticipated impacts of all proposed Federal projects in the action area that have already undergone

[8] This appeal resulted in two published opinions. The initial opinion was published at Nat'l Wildlife Fed'n v. NMFS, 481 F.3d 1224 (9th Cir. 2007). The panel then granted a petition for rehearing, subsequently issuing an amended opinion published at 524 F.3d 917 (9th Cir. 2008). This amended opinion discussed, among other things, the intervening decision in Nat'l Ass'n of Home Builders v. Defenders of Wildlife, 551 U.S. 644 (2007). Plaintiffs primarily and inexplicably cite to the former opinion. Although both reached the same conclusion, this court cites solely to the later.

formal or early section 7 consultation." 50 C.F.R. § 402.02.[9] Cumulative effects are "those effects of future State or private activities, not involving Federal activities, that are reasonably certain to occur within the action area of the Federal action subject to consultation." Id.

In light of the complexity of this case, the court summarizes its analysis of the no-jeopardy conclusion before discussing the issues in detail. Plaintiffs argue that numerous effects of the project, the environmental baseline, and future non-federal projects are harmful to listed species. Some, but not all, of these effects are recognized by the BiOp. As Federal Defendants now characterize it, the BiOp concludes that these recognized effects would not jeopardize the species because (1) the local populations of the three listed species are "stable" notwithstanding these ongoing harmful effects, (2) to the extent that the project changes local conditions, these changes will be favorable to local populations of listed fish, and (3) various future projects will further benefit the three species. Fed.

[9] As noted above, the court owes some deference to an agency's interpretation of its own regulation. Deference is not the same as abrogating responsibility. Auer recognized that an agency interpretation will not be upheld when "inconsistent with the regulation." 519 U.S. at 461 (quotations omitted). Similarly, both the interpretation and the regulation itself must be consistent with the governing statute. See, e.g., Gifford Pinchot Task Force v. United States Fish & Wildlife Serv., 378 F.3d 1059, 1069, amended by 387 F.3d 968 (9th Cir. Wash. 2004) (citing Chevron U.S.A., Inc. v. Natural Res. Def. Council, 467 U.S. 837 (1984)) (rejecting regulation as contrary to the ESA). As the court explains in part III(B)(4)(a) below, the court rejects in part the interpretation of the quoted regulatory language offered by Federal Defendants in this case.

Defs.' Summ. J. Mem. at 10, 14. In other words, if the status quo is acceptable and the project will improve conditions, the project will not jeopardize the species. The court cannot accept this argument because, contrary to Federal Defendants' arguments in this litigation, the BiOp does not conclude that local populations are stable. Without this predicate, the BiOp offers no basis for concluding that the project's unmitigated effects would not jeopardize the species. The BiOp therefore fails to provide a "rational connection" between the facts found and the no-jeopardy conclusion. Earth Island Inst., 442 F.3d at 1157.

Separate from this argument, plaintiffs argue that the BiOp failed to discuss various other effects caused by the project or constituting part of the environmental background, thereby failing to consider important aspects of the problem. McNair, 537 F.3d at 987. If the species were found to be stable, a top-down analysis predicated on stability *might* have rendered discussion of these omitted impacts unnecessary. Absent such a finding, many of these effects were sufficiently "important" to require discussion.

1. Effects Recognized by the BiOp

The court begins with the BiOp's discussion of effects of the project and the environmental baseline harmful to listed fish. Federal Defendants refer to these effects as "stressors." The stressors recognized by the BiOp include impairments to migration, effects on flow regimes, effects on spawning habitat, and entrainment and impingement at diversions. Although these categories are not wholly distinct, they provide structure to the

analysis. With the apparent exception of effects on regulated flow regimes, the BiOp attributes all of the following stressors to the project rather than the baseline.

a. Migration Barriers

The primary effects on migration stem from Daguerre Point Dam and Englebright Dam.

i. Daguerre Point Dam's Effect on Migration

Daguerre, the smaller and farther downstream of the two dams within the project area, detrimentally affects both upstream and downstream migration. Beginning with upstream migration, although the dam itself blocks upstream fish passage, salmonids (but not sturgeon) may circumvent this barrier through two fish ladders. These ladders were most recently "reconstructed" in 1964. Fed. Defs.' Statement of Undisputed Facts #23. The BiOp acknowledges four problems with these ladders, three of which the project attempts to mitigate. BiOp at 26. First, the ladders must be closed entirely at high flows. Id.; see also AR 12793 (U.S. Army Corps of Engineers, Sacramento District, "Daguerre Point Dam, Yuba River, California, Preliminary Fish Passage Improvement Study," at 12 (August 2001)) (hereinafter "Preliminary Passage Study") (explaining that ladders must be closed at flows over 15,000 cubic feet per second). The BiOp does not describe the duration of these closures, but evidence in the record indicates that the duration can exceed a month. AR 4614 (Cal. Dept. Fish and Game, "A Status Review of the Spring Run Chinook Salmon (Oncorhyncus Tshawytscha) in The Sacramento River Drainage," at § VII p. 49 (June 1998))

(hereinafter "Spring Run Chinook Status"). High flows coincide with the conditions under which spring run Chinook and steelhead migrate upstream. BiOp at 26.

Second, when flows are high but not so high as to require closure of the ladders, fish have difficulty finding the ladders. Id. Fish find the ladders because of the water flowing down them, which forms an "attraction flow." During high flows, "a very small percentage of attraction flows com[es] out of the ladders compared to the massive sheet flow coming over the dam. The angle of the orifices and proximity to the plunge pool also increases the difficulty for fish to find the entrances to the ladders." Id., see also id. at 22 ("Daguerre Point Dam includes suboptimal ladder design and sheet flow across the dam spillway that may obscure attraction to the ladder entrances, particularly during high flow periods"), AR 12793 (Preliminary Passage Study at 12). Since 2001, the Corps has attempted to mitigate this problem by installing seasonal flash boards that direct additional flows toward the ladders. BiOp at 22. The BiOp asserts that monitoring data since 2006 indicates that this has "resulted in an immediate and dramatic increase in the passage of salmon up the ladders." Id.

Upstream migration is also hampered when woody debris collects in the ladders. Id. (debris "clog[s]" the ladders). The Corps has installed a log boom to keep debris out of the northern ladder (where the problem is more severe), and the Corps and/or the California Department of Fish and Game ("DFG") ordinarily inspects both ladders weekly in order to clear out debris. Id. at 22, 32-

33.[10]

The fourth barrier to upstream migration at Daguerre is the formation of a gravel and sediment bar immediately upstream from the fish ladders. BiOp at 22. Gravel buildup can itself block fish passage, as well as further reduce attraction flows on the ladders. Id. at 22. The Corps has implemented a plan to ensure that a 30 foot by 3 foot channel remains open to facilitate fish passage and avoid blocking attraction flows. Id.

Although the Corps has attempted to ameliorate the above four impediments to upstream migration, the BiOp does not take a clear position on the efficacy of these efforts. The BiOp states that "[u]pstream passage conditions at Daguerre Point Dam are . . . considered inadequate for Chinook salmon and steelhead throughout much of the year" and that "[u]pstream passage at Daguerre Point Dam is often problematic for migrating salmonids due to inadequacies of the fish ladders." Id. at 26, 31. These

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[10] Plaintiffs assert that the Corps is unable to clean the ladders at periods of high flows. The only evidence in the administrative record cited in support of this assertion is a January 10, 2006 email sent by Corps employee Doug Grothe, which states "now that the flows have subsided a bit, we have scheduled an excavator to be out on Wednesday to remove the rest of the debris in the ladder." AR 9113. This document provides only imperfect support for plaintiffs' position. The same page of the record describes cleaning efforts that occurred on January 7, 2006, the email makes no mention of whether the excavator *could not* have been brought in earlier, and provides no indication of whether this is a recurring problem. This has led to a request for admission from the Corps, which in turn raises questions about the propriety of such evidence in claims reviewed under section 706(2) of the APA. See Order filed Dec. 23, 2008 at 31. Because the underlying fact has little, if any, bearing on the resolution of this suit, the court does not further address it.

statements use the present tense, and occur in the BiOp's discussion of the effects of the action. Thus, the BiOp indicates that the recent efforts have not totally cured these inadequacies and problems. The BiOp notes that even when salmonids successfully navigate the fish ladders, the ladders' inadequacies often delay migration, which depletes salmonids' energy stores, makes fish susceptible to predation, decreases egg viability, and changes the spatial distribution of spawners. Id. at 27, 31.

Daguerre also interferes with downstream migration. Id. at 27. "The large pool at the base of the dam creates an area of unnatural advantage for predatory fish . . . where juvenile salmonids can be disoriented or injured as they plunge over the face of the dam into the turbulent waters at the base." Id. The BiOp does not describe any actions taken to mitigate this effect.

ii. Englebright Dam's Effect on Migration

The farther upstream of the two dams in the project is Englebright Dam. The BiOp states that "[t]he greatest impact to listed salmonids associated with the Corps' operations on the Yuba River" is the absolute barrier to migration posed by Englebright dam. BiOp at 31.[11] Englebright contains no fish ladders. Id. at 2, 25. This prevents access to otherwise suitable habitat for salmonids. "[T]he majority of historical spawning and holding habitat for spring-run Chinook salmon and steelhead occurred above Englebright Dam." Id. at 25. Blocking access to this habitat not

[11] Englebright would also be a barrier to sturgeon migration, except that Daguerre prevents sturgeon from reaching Englebright.

only decreases the total amount of available habitat, it also increases the spatial overlap between spring run and fall run Chinook, allowing the species to interbreed and thereby decreasing the species' genetic diversity. Id. at 25. Later-spawning fall run Chinook can also physically disrupt spring run eggs by digging spawning redds in locations where spring run eggs are incubating. Id. Another dimension of this impact is that by concentrating populations, Englebright increases the populations' susceptibility to a catastrophic event such as a chemical spill or massive flood. Id. The BiOp discusses no efforts to mitigate these impacts.

The parties dispute whether, for purposes of the jeopardy analysis, Englebright's prevention of migration is an effect of the project or instead part of the baseline. As noted above, section 7 prohibits federal agency action that would "jeopardize" species. The section 7 analysis therefore looks to effects on species caused by agency action. Nat'l Wildlife Fed'n, 524 F.3d at 930. Effects not attributable to agency action, whether directly or indirectly, cannot themselves demonstrate a violation of section 7. In another case concerning ongoing dam operation, the Ninth Circuit explained that "existence of the dams must be included in the environmental baseline" of effects that are not "caused" by the project under consideration. Id. at 931. Where the federal agency retains discretion regarding a dam's operation, however, section 7 requires consideration of whether effects attributable to this operation jeopardize the species. Id. This distinction is easy to state but hard to apply. In this case, the Federal Defendants argue that

Englebright Dam's effect as a migration barrier results from the existence of the dam. Plaintiffs contend that this effect is attributable to the Corps' ongoing operation of the dam, which plaintiffs contend should include provision of a fish ladder to enable upstream migration, a service to involuntarily transport juveniles to enable downstream migration, and various other efforts included in the operation of some analogous dams.

Regardless of the Federal Defendants' litigation position, the BiOp itself discussed Englebright's prevention of *future* migration as part of the analysis of the "effects of the action," rather than as part of the baseline, distinguishing these future effects from past effects on migration. BiOp at 18, 25. Even if the BiOp could have used a different assumption, that possibility does not provide a basis for upholding the decision the agency actually made. Motor Vehicle Mfrs. Ass'n v. State Farm Mut. Auto. Ins. Co., 463 U.S. 29, 50 (1983) ("an agency's action must be upheld, if at all, on the basis articulated by the agency itself."). Alternatively, even if the court were to conclude that the BiOp treated these future effects as part of the baseline and that this treatment was permissible under the ESA, the BiOp's jeopardy analysis would still be deficient. Assuming that there was some method by which the court could 'subtract out' Englebright's impacts on migration and attribute these to the baseline, the BiOp would still fail to adequately discuss the other unmitigated stressors.

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b. Flow Regimes and Temperature

"Low Summer flows (both natural and controlled)" in the project area "can cause elevated water temperatures in spring-run holding and spawning habitat, resulting in pre-spawning mortality and reduced reproductive success." BiOp at 17. Salmon and steelhead at all life stages are harmed by these increased temperatures. Id. at 6.

Englebright formerly contributed to this problem in two ways, although the BiOp concludes that the first has been ameliorated. This first effect was through irregularity, as Englebright would periodically (and unexpectedly) halt flows. Id. at 22. Englebright releases water almost exclusively through two hydroelectric facilities. Id. at 2. Historically, when these facilities unexpectedly shut down--whether accidentally or because of an emergency--downstream flows were immediately and drastically curtailed, with harsh effects on downstream salmonids. Id. at 22. In 2006, a flow bypass system was installed in the larger of the two powerhouses, which allows 88% of that facility's flow to be released in event of a shutdown. Id. The BiOp concludes that this eliminated the problem of unexpected flow disruption. Id. at 23.

Separate from the problem of unexpected flow interruption, the scheduled releases from Englebright and Daguerre can be "insufficient" for listed species. Id. at 17. This problem results from diversion of water to other users. Id. at 23. Plaintiffs have not argued that the Corps has authority over these flow regimes, and thus the court accepts the BiOp's attribution of

this effect to the environmental baseline. Id. at 17.[12]

The BiOp indicates that this stressor has been partially ameliorated. A decision of the California State Water Resources Control Board in 2003 imposed "new minimum flow requirements and flow fluctuation criteria on the lower Yuba River." Id. These flows "did not provide the level of flow protection recommended by DFG or NMFS," although they constituted an improvement over prior practice. Id. at 23-24. More recently, the Yuba Accord Fisheries Agreement ("Yuba Accord") proposes to further "manag[e] flows from . . . Englebright Lake to further enhance critical habitat and water temperature in the Yuba River." Id. at 4-5, 24. The benefits of this management extend to the "lower Yuba River," and thus appear to encompass areas below Daguerre as well as areas immediately below Englebright. Id. at 24. The Yuba Accord's flow schedules were adopted on an interim basis in 2005. Id. In 2007, when the BiOp was adopted, the agreement was "expected to be finalized and implemented in early 2008." Id. The new management "improve[s] flow schedules" for fish, providing benefits "that are at least equal to but often greater than" those provided by 2003 schedules. Id. at 24. As with other mitigation efforts, however, the BiOp does not quantify this improvement. In particular, the BiOp's statements comparing the Yuba Accord flows and the 2003 flows suggest that the neither regime meets the recommendations of NMFS or DFG. Insofar as these flow regimes fall short of those

[12] But see footnote 4, supra.

recommended by NMFS, they apparently constitute a continuing stressor.[13]

c. Gravel and Spawning Habitat

Englebright limits recruitment of gravel and large woody material. As noted above, salmonids require clean gravel beds in which to spawn. Woody material is also necessary for the protection of salmonids as it provides a cover from predators and a velocity refuge. BiOp at 7-8. Historically, the river would carry these materials downstream past the dam site, but these materials are now trapped behind the dam. Id. at 26. Englebright's elimination of this effect "has practically eliminated viable spawning habitat in the area immediately below the dam [and] down through the Narrows Canyon," and this effect is felt to a lesser degree throughout the river below the dam. Id. at 29.

In response to Englebright's interference with gravel recruitment, the Corps planned to adopt a gravel augmentation program, which injects additional gravel into the river. Id. at 5. At the time the BiOp was prepared, this program had not yet begun. Id.[14] The BiOp does not indicate that Daguerre separately

[13] Plaintiffs also argue that the proposed Wheatland diversion and global warming will alter flow regimes. The court discusses these issues below.

[14] This gravel injection program has since commenced. Although future events cannot themselves retroactively justify a decision, the fact that this program has in fact occurred provides some indication that, at the time the BiOp was adopted, it was reasonably certain to occur. On the facts of this case, the court concludes that the BiOp's reliance on the proposed gravel injection

interferes with gravel, and plaintiffs do not contend that this is the case.

The incidental take statement requires a similar program for injecting woody material below Englebright. Id. at 40. This program has not yet begun, and neither party discusses its potential effectiveness. See, e.g., Fed. Defs.' Statement of Undisputed Facts #64.

d. Entrainment and Impingement

Where water is diverted, a screen is used to keep fish from being "entrained," i.e., diverted from the river to the diversion 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.

The BiOp criticizes the screen at the South-Yuba/Brophy diversion above Daguerre as presenting both risks. This screen "fails to meet many of the criteria developed by NMFS and DFG for adequate fish screen operation and fish safety." BiOp at 28. Specifically, the interstitial spaces between rocks making up the weir are large enough to let fish through, there is no adequate "sweeping flow" which can prevent impingement, and juvenile salmonids become "entrained behind the barrier either by passing through the weir or being washed over the top during high flows." Id. The BiOp noted that the Corps was working to remedy these problems, but that "there [were] no guarantees that a new screen

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program was itself reasonable.

[would] be constructed." Id.

Two other diversions have superior screens. The Brown's Valley Diversion, built in 1999, is "state of the art[,] . . . meets all current NMFS and DFG screening criteria[,] and is no longer considered to pose a threat to entrainment of juvenile salmonids." Id. at 28. The Hallwood-Cordua diversion was rebuilt in 2000. Id. at 28. The screen still "does not fully meet all DFG and NMFS criteria," but the rebuilding "greatly improved the effectiveness of the screen." Id.

2. Whether The Recognized Stressors Jeopardize the Species' Likelihood of Survival

As the above shows, the BiOp recognizes that numerous mechanisms stress listed fish. In this litigation, Federal Defendants argue that the BiOp identified measures that would "greatly decrease[]," "significantly ameliorate[]," and "substantially mitigate" the effects of some stressors. These efforts target only a narrow subset of the stressors affecting listed species. See Fed. Defs.' Summ. J. Mem. at 15 (conceding this point). Even for the ameliorated stressors, the BiOp suggests that amelioration is wholly successful for only two, the fish screen at the Brown's Valley diversion and the flow bypass mechanism at the Narrows II powerhouse. Thus, of the effects the BiOp attributes to the proposed action, Englebright's prevention of migration, Daguerre's interference with downstream salmonid migration, and Daguerre's prevention of sturgeon migration are wholly unmitigated. Mitigation is only partial with regard to

Daguerre's impacts on upstream salmonid migration and fish screening at the Hallwood Cordura diversion. Brophy's problems with entrainment and impingement and the dams' effects on deposition of gravel and wooden material have not yet been mitigated. The BiOp also indicates that problems with flow regimes have not been fully eliminated, such that flows continue to stress fish, but the BiOp apparently treats this stressor as part of the baseline.

Imposition of a stressor on a species does not necessarily decrease the reproduction, numbers, distribution or diversity of the local population. In principle, for example, any stretch of stream has a finite carrying capacity for juvenile salmonids. If, notwithstanding a migration barrier, the number of adults reaching the spawning ground each year is sufficient to produce juveniles in excess of this capacity, then the migration barrier may not reduce the local population. See, e.g., U.S. Fish & Wildlife Serv. & Nat'l Marine Fisheries Serv., Endangered Species Consultation Handbook: Procedures for Conducting Consultation and Conference Activities Under Section 7 of the Endangered Species Act 4-24 to 4-25, 4-30 to 4-31 (1998) (hereinafter "Section 7 Handbook") (describing populations' abilities to absorb some impacts).[15]

[15] Although this principle may underlie the BiOp's analysis, neither NMFS's briefing in this case, the BiOp, nor the handbook cited above provide an example illustrating this principle. This court has created the above factual example from whole cloth, and may misstate this principle. Moreover, this example is meant purely for illustration. Nothing suggests that the example describes the facts in this case.

NMFS's handbook contemplates a method of analysis wherein NMFS will calculate the magnitude of the stressor and then determine whether the local population can absorb this impact without a long-term decline. Id. This inquiry is obviously context sensitive, as exposure to one stressor limits a population's ability to tolerate others.

Even where stressors will cause a decline in one or more of the four viability factors identified by the BiOp, the magnitude of this decline may be low enough that the decline does not jeopardize the species as a whole. See, e.g., Selkirk, 336 F.3d at 957 (upholding BiOp's conclusion that although project's impacts were incompletely mitigated, they were mitigated enough so as to avoid jeopardizing the species at issue); see also Butte Envtl. Council v. United States Army Corps of Eng'rs, ___ F.3d ___, ___ 2010 WL 2163186, *7, 2010 U.S. App. LEXIS 11024 *26 (9th Cir. Cal. June 1, 2010) (reaching a similar conclusion for critical habitat analysis).

The court therefore turns to the BiOp's analysis of whether the stressors imposed by the proposed project would jeopardize the species' survival. The court quotes this analysis at length:

> Lack of access to diverse habitats upstream of the dams reduces all four viability factors (abundance, productivity, spatial structure and genetic diversity) for these species. Juvenile losses from diversions, predation, and low-quality rearing habitat affect abundance and productivity of the populations. Reductions in spawning gravels affect productivity and spatial structure of the species, and the forced overlap of spawning habitat between spring-run and fall-run

> Chinook salmon affects the genetic diversity of the threatened spring-run Chinook salmon.
>
> It is likely that the facilities and operational procedures used in the past, if left uncorrected, would cause continued declines in population viability of these species and in the conservation value of critical habitat. However, there have been several recent changes to the facilities and operational procedures related to the Corp's Yuba River operations which are expected to improve conditions for Yuba River fisheries. And recent salmonid monitoring data, while insufficient to allow detection of definite trends, do not suggest any significant, ongoing decline of salmonid populations or habitat variables in the lower Yuba River.
>
> . . .
>
> In considering the current baseline conditions, future cumulative effects, and the above listed recent actions taken to improve conditions on the lower Yuba River, NMFS has determined that the level of effects caused by Corps operations will be unlikely to cause a reduction in the population numbers, reproductive success or the distribution of listed fish in the Yuba River to the point of appreciably reducing these populations' likelihood of survival into the future.

BiOp, 32-33. In the omitted passage of this analysis, the BiOp summarizes six "recent actions" referred to in the second and third paragraphs quoted above: improvements to the Browns Valley and Cordura Hallwood diversions, use of flash boards at Daguerre, debris cleaning at the Daguerre ladders, channel cleaning upstream of Daguerre, and use of a flow bypass system at the larger powerhouse below Englebright. As noted above, these six changes do not fully eliminate the project's impacts.

Plaintiffs argue that without discussing the magnitude of the

unmitigated stressors' impact, the BiOp cannot support the conclusion that these impacts will not jeopardize the species. Federal Defendants argue that although the BiOp did not discuss the impacts of the unmitigated stressors individually, the BiOp considered their net effect.

It appears that NMFS may employ an analytic method that captures aggregate impact without discussing impacts individually. In Selkirk, plaintiffs claimed that the BiOp failed to discuss future private forestry projects as part of the cumulative effects analysis. 336 F.3d at 964. Rather than discuss individual projects separately, the BiOp in Selkirk had analyzed an umbrella agreement governing these projects. The Ninth Circuit rejected plaintiffs' claim, holding that the Fish and Wildlife Service did not need to "list, detail, and discuss" every individual project so long as it employed a device that accurately captured their cumulative effects, and that the umbrella agreement discussed in that case was such a device. Id. This caveat is crucial. A broad-level analysis is impermissible where it will mask individual effects rather than measure them. Pac. Coast Fed'n of Fishermen's Ass'ns v. NMFS, 265 F.3d 1028, 1036-37 (9th Cir. 2001) (analysis on a large spatial scale insufficient to support no-jeopardy opinion where scale would ignore "projects with a relatively small area of impact but that carried a high risk of degradation," which might have significant aggregate impacts).

The BiOp in this case does not explicitly adopt a net impacts analysis. At most, the discussion of population monitoring data

in the analysis quoted above provides some implication of such an approach. In briefing the present motions, Federal Defendants argue that the BiOp determined "that populations on the Yuba are at least stable, and that the actions proposed as part of the project are likely to improve habitat quality." Fed. Defs.' Summ. J. Mem. at 14. If NMFS had concluded that populations were stable in recent history despite the persistence of stressors, this would provide some indication that the populations could withstand the stressors.[16] Because the stressors discussed above will be no worse than those in recent history, it would follow that the project would not cause a decline.

Contrary to defendants' litigation position, however, the BiOp carefully avoids reaching the underlying conclusion of stability. The BiOp simply notes that the data do not allow for detection of "definite trends" and that the data "do not suggest any significant, ongoing decline of salmonid populations or habitat variables." BiOp at 32. The BiOp does not discuss population trends for green sturgeon at all. The statement that the data "do not suggest any significant, ongoing decline" does not mean that the data "suggest that populations are not in significant, ongoing decline" or "suggest that salmonid populations are stable." No such affirmation of stability appears in the BiOp, nor have Federal

[16] Put differently, NMFS might not need to know why every individual fish dies if NMFS knows that the aggregate number of deaths does not reduce the likelihood of survival and recovery.

Defendants cited such a statement in the administrative record.[17] In sum, while the data "do not suggest" a decline, that is because they are so inconclusive that they "do not suggest" anything at all.[18] Presumably in recognition of this problem, at oral argument Federal Defendants explicitly disclaimed any reliance on population trend data in the BiOp's jeopardy analysis. Federal Defendants

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[17] Further recognizing the mixed and inconclusive nature of this data, the Federal Defendants state that as measured through one technique, "the recent data from 2006 through 2008 indicates a reduction in total [salmonid] abundance compared to 2003-2005, [but that] passage in May (the primary spring-run migration month) of 2007, was the highest detected in that month" since monitoring began. Fed. Defs.' Statement of Undisputed Facts #36. The BiOp indicated that NMFS could not even determine whether any green sturgeon spawned in the project area. BiOp at 21.

Because the BiOp does not conclude that populations are stable, the court does not address whether such a conclusion would be "counter to the evidence." McNair, 537 F.3d at 987. Thus, the court does not impose a requirement of significance or confidence on the data. The court merely defers to NMFS's own conclusion that the data reveal neither a "definite trend" nor a "suggestion." This case is therefore unlike Stop H-3 Ass'n v. Dole, 740 F.2d 1442, 1460 (9th Cir. 1984), where the agency concluded that the data, although weak, allowed the agency to draw conclusions used in the jeopardy analysis. See also Conservation Cong., 555 F. Supp. 2d at 1103 (where agency concluded that "available data is not sufficient to conclude the causes of" range wide decline in a species, including whether this decline was caused by changes in habitat, agency's concurrent decision to use habitat as proxy for species health under the National Forest Management Act was arbitrary and capricious).

[18] Plaintiffs argue that the data demonstrate a downward trend, such that even the determination that the data "do not suggest any . . . decline" was counter to the evidence. Pls.' Reply to Fed. Defs.' Opp'n, at 4. As to spring run Chinook, the court's lay reading of the numbers is that the totals from recent years are smaller. See Fed. Defs.' Statement of Undisputed Facts #35, 38. NMFS contends that problems with the monitoring and changes in surveying times preclude an apples to apples comparison of these figures. In light of this explanation and in the absence of further argument on the issue, the court defers to NMFS's limited determination on this issue.

have not identified any other method of net effects analysis.

The court further notes that the BiOp itself concludes that survival and recovery must be evaluated in light of four viability factors, but Federal Defendants' "stability" argument appears to implicate only one of these factors, abundance. The available data appear to be limited to monitoring at the Daguerre fish ladders. Neither the BiOp nor Federal Defendants explain how such data measures productivity, spatial distribution or genetic diversity. BiOp at 32, see also Fed. Defs.' Statement of Undisputed Facts #36 (discussing monitoring data's indications of abundance, but not other factors).

Accordingly, the BiOp recognizes that past practices have caused a decline, recognizes that some of these practices (including numerous effects attributed to the action itself) are ongoing but have not been fully mitigated, and ultimately concludes that "the level of effects caused by Corps operations will be unlikely to cause a reduction in the population numbers, reproductive success or the distribution of listed fish in the Yuba River to the point of appreciably reducing these populations' likelihood of survival into the future." BiOp at 33. Without more, this does not provide a "rational connection between the facts found and the conclusions reached." Earth Island Inst., 442 F.3d at 1157. In a case considering whether NMFS had properly concluded that its proposed "reasonable and prudent alternatives" ("RPA"s) would avoid jeopardy, the Ninth Circuit explained that mere recognition of RPA's effects accompanied by a statement that

these effects will not jeopardize a species is insufficient. Pac. Coast Fed'n of Fishermen's Ass'ns v. United States Bureau of Reclamation, 426 F.3d 1082, 1092 (9th Cir. 2005). In another case concerning dam operation, where the BiOp conceded that the project would cause "significant" impairments to habitat, the BiOp could not conclude that these impairments would not jeopardize survival or recovery without knowing "in-river survival levels necessary to support recovery" and "at what point survival and recovery will be placed at risk" by habitat degradation. Nat'l Wildlife Fed'n, 524 F.3d at 936; see also Bennett, 520 U.S. at 176 (jeopardy analysis cannot be "on the basis of speculation or surmise."). In order to determine that the stressors will not cause a decline in reproduction, population, distribution, or diversity, the BiOp must discuss (through some method) the magnitude of the stressors' impact, the populations' ability to tolerate this impact, and the reason why any decline will not reduce the overall likelihood of survival or recovery.[19] A court "cannot simply take the agency's word that the listed species will be protected under the planned operations: 'If this were sufficient, the NMFS could simply assert that its decisions were protective and so withstand all scrutiny.'" Id. at 935 n.16 (quoting Pacific Coast Fed'n, 426 F.3d at 1092).

Accordingly, although the BiOp properly concludes that the

[19] Perhaps tellingly, the BiOp in this case does not explain whether its no-jeopardy conclusion is based on the conclusion that the project will not cause a decline in any of these factors or instead on the conclusion that there will be a decline which is too insignificant to jeopardize survival or recovery.

project, as proposed in 2007, will partially reduce the impact of prior stressors, this is itself insufficient. 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 no-jeopardy conclusion is arbitrary and capricious.

3. Cumulative Effects Discussed by the BiOp

As noted above, the jeopardy analysis must include discussion of "cumulative effects," i.e., "effects of future State or private activities, not involving Federal activities, that are reasonably certain to occur within the action area of the Federal action subject to consultation." 50 C.F.R. § 402.02. Especially where, as here, the federal project imposes stressors on the listed species, the jeopardy analysis must consider both whether the species is currently able to tolerate the stressor and whether the species will continue to be able to do so in light of future non-federal actions.

Plaintiffs challenge the BiOp's discussion of one source of cumulative effects, YCWA's proposed Wheatland project. See BiOp at 29. At the time the BiOp was adopted, YCWA had proposed and received funding for this project, which would divert an additional 41,000 acre-feet of water annually through the Brophy diversion in order to supply various agricultural users. Id. Because the effects of the Wheatland project have not yet occurred, such effects could not be captured by the net effects analysis proffered by Federal Defendants in this litigation.

The Wheatland project will alter flow regimes and will aggravate problems at the Brophy fish screen. Beginning with flow regimes, the BiOp predicts that the Wheatland project will increase flows between Daguerre and Englebright during the summer, as additional water is released from Englebright to supply the diversion. Id. at 30. These increased flows "in the primary spawning and rearing reaches" above Daguerre are expected to benefit salmonids. Id. The Wheatland project will also decrease summer flows below Daguerre. Although this decrease should only occur when flows exceed minimum flow requirements, this reduction is nonetheless expected to have an adverse impact. Id.

The BiOp reasoned that as for salmonids, Wheatland's adverse effects on flows below Daguerre would be offset by Wheatland's beneficial effects above. Id. The court disagrees with plaintiffs' argument that this conclusion is unsupported by the record. The BiOp discusses the particular impacts above and below Daguerre before qualitatively comparing the two, and the court cannot determine that this conclusion was arbitrary or capricious. Left out of this discussion, however, are the green sturgeon, which are confined below Daguerre. Accordingly, the BiOp did not support its conclusion that the Corps' operations, when considered in the context of the future Wheatland project, will not jeopardize the green sturgeon.

Separate from the effects on flow regimes, the Wheatland project will aggravate the existing problem of entrainment at the

Brophy diversion by increasing flows diverted there.[20] The BiOp concludes that "the expected 40 percent increase in entrainment at the South Yuba-Brophy diversion is *expected to cause a reduction in survival of juvenile steelhead and spring-run Chinook salmon in the Yuba River.*" BiOp at 30 (emphasis added).[21] The BiOp does not

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[20] Federal Defendants argue that the settlement agreement between plaintiffs and YCWA waives plaintiffs' rights to argue that the BiOp is deficient in light of its analysis of the Brophy Diversion. The court-approved settlement agreement states that "Plaintiffs admit and state for the record that for purposes of this Action and any future litigation that no further relief regarding the Brophy Diversion beyond the terms of this Settlement is or will be required until the status of the Daguerre Point Dam is finally resolved." Dkt. No. 291, ¶ 14 (June 16, 2009). However, the agreement also provides that

> Nothing in this paragraph or agreement, however, shall preclude the Plaintiffs from arguing in this Action that any NMFS biological opinions (and accompanying incidental take statements) issued under the ESA are arbitrary and capricious or contrary to law in part due to the biological opinions' analysis of the Brophy Diversion's potential impacts on ESA-protected species and/or due to the incidental take statement's treatment of the Brophy Diversion's potential impact on ESA-protected species.

Id. Accordingly, plaintiffs have not waived the right to challenge the BiOp's analysis or non-analysis of the Brophy Diversion's effects.

[21] Although Federal Defendants now characterize the BiOp as having concluded that the beneficial effects on flows above Daguerre would offset *both* decreases in flow below Daguerre *and* increased entrainment at Brophy, this reading is plainly contrary to the BiOp's language.

Similarly, Federal Defendants now argue that there will be a 40% increase in diversions at Wheatland, but that the BiOp "does not quantify the increased impacts" of these diversions on entrainment. Fed. Defs.' Resp. to Pls.' Statement of Undisputed Facts #84. This argument is contradicted by the plain language of the BiOp, as quoted above.

explain why the Corps' activities, when combined with this increase in entrainment, will not jeopardize the listed salmonids. Id. at 33, 38 (asserting without further discussion that the combined effects will not appreciably reduce the species' likelihood of survival or recovery).

The BiOp does note that "[t]he Corps has been participating with the Brophy Irrigation District, NMFS, DFG, and the FWS to investigate, design, and implement an economical plan to replace the current rock weir screening device on the South Yuba-Brophy Diversion with a new positive barrier fish screen that will meet all current CDF[22] and NMFS fish screen criteria for anadromous salmonids." BiOp at 36. The BiOp explicitly recognized, however, that it was uncertain whether or when such a screen would be constructed. Id. at 28. The BiOp's jeopardy analysis did not rely on completion of this screen, instead merely concluding that the proposed project would not interfere with such completion. Id. at 36. Although a term and condition of the incidental take statement was that "the Corps shall diligently pursue the ongoing effort to fully screen the South Yuba Brophy irrigation diversion to meet all DFG and NMFS screening criteria," id. at 40, the BiOp does not guarantee or require that this screen be completed before the Wheatland project is implemented. Accordingly, the BiOp leaves open the possibility of a period of increased entrainment, and the BiOp does not analyze the effects of this period. This omission

[22] Although the BiOp refers to CDF, the California Department of Forestry, it appears that it may have meant DFG.

renders the BiOp arbitrary and capricious. Pac. Coast Fed'n of Fishermen's Ass'ns, 426 F.3d at 1091 (failure to discuss effects that will occur prior to implementation of mitigation measures arbitrary and capricious).

4. Stressors Allegedly Not Discussed by The BiOp

Separate from all the above, plaintiffs argue that the BiOp arbitrarily and capriciously failed to discuss hatcheries, the San Francisco Bay Delta, the species' overall depressed conditions, global warming, and poaching. Plaintiffs contend that these omissions demonstrate that NMFS "failed to consider . . . important aspect[s] of the problem," McNair, 537 F.3d at 987, and that NMFS violated the ESA's mandate to use the "best scientific and commercial data available." ESA § 7(a)(2); 16 U.S.C. § 1536(a)(2).

Plaintiffs rely on the "Lindley Study" in support of many of these arguments. This study, titled "Framework for Assessing Viability of Threatened and Endangered Chinook Salmon and Steelhead in the Sacramento-San Joaquin Basin," was published by the California Bay-Delta Authority Science Program and the John Muir Institute of the Environment in February of 2007. Lead author Steven T. Lindley, together with three more of the study's twelve authors, are NMFS scientists. NMFS did not include this study in the administrative record. NMFS disputes whether the court may consider this study in a record review case and whether the study constitutes "best available science" that NMFS was obliged to consider. Because these questions are fact specific, the court addresses them in the context of specific omitted issues.

The apparent threshold issue, to which the parties have paid little attention, is the determination of what constitutes an *important* aspect of the problem. Plainly, some issues are so obviously insignificant that NMFS's silence thereon is not arbitrary and capricious. No reasonable layperson would expect that continental drift, changes in the stock market, or bad vibes from those in the area are significantly impacting fish on the Yuba River, and absent scientific evidence contradicting this lay expectation, NMFS need not explain why these issues are irrelevant. It appears just as plain, however, that important issues are not only those actually imposing significant effects on the species. NMFS must sometimes explain why a potential impact will not be significant. This principle follows from the nature of judicial review of agency action. As aptly explained by the First Circuit, "agency decisions must make sense to reviewing courts. . . . even in technical areas of regulation." Puerto Rico Sun Oil Co. v. United States EPA, 8 F.3d 73, 77 (1st Cir. 1993). Courts must extend reasonable deference to NMFS's determinations regarding the extent to which a circumstance affects listed species. NMFS pays for this deference with the obligation to actually make determinations on the record. It would be inconsistent with the court's duty to assume that, in every BiOp, for every issue not discussed, NMFS considered the issue and found it insignificant. Moreover, when the record is silent as to the magnitude of an impact, the court cannot make the initial evaluation of that magnitude.

The question remains as to how to separate the important from the unimportant. As with many other questions in this case, the parties have provided no pertinent discussion and the court is aware of little authority. The Ninth Circuit has held that an agency need not consider another agency's evaluation of the facts, but these cases did not address whether the underlying facts were important. Sw. Ctr. for Biological Diversity v. United States Forest Serv., 100 F.3d 1443, 1449 (9th Cir. 1996) (Forest Service could ignore Fish and Wildlife Service's stated Mexican Spotted Owl policy), Inland Empire Pub. Lands Council v. Glickman, 88 F.3d 697, 701 (9th Cir. 1996).[23]

Despite the absence of authority, this case does not present a close question. The "problem" here is whether the project will jeopardize listed species. Any effect that is likely to adversely affect the species is plainly an important aspect of this problem. "Likely to adversely affect" is a term used in NMFS's own regulations, for which NMFS has already provided an interpretation. 50 C.F.R. §§ 402.13(a), 402.14(b)(1). An agency action is "not likely to adversely affect" the species

> when effects on listed species are expected to be discountable, or insignificant, or completely beneficial. . . . Insignificant effects relate to the size of the impact and

[23] Moreover, these cases do not apply here. They involved salvage timber sales governed by the Rescissions Act of 1995, Pub. L. No. 104-19, § 2001, 109 Stat. 194, 240-47, which "expedite[s] the award of salvage timber sale contracts" and partially "exempt[s] [such sales] from all applicable federal environmental and natural resource laws." Sw. Ctr. for Biological Diversity, 100 F.3d at 1445-46.

> should never reach the scale where take occurs. Discountable effects are those extremely unlikely to occur. Based on best judgment, a person would not: (1) be able to meaningfully measure, detect, or evaluate insignificant effects; or (2) expect discountable effects to occur.

Section 7 Handbook 3-12 to 3-13; see also Natural Res. Def. Council v. Evans, 364 F. Supp. 2d 1083, 1129 (N.D. Cal. 2003). There appears to be no reason not to adopt this standard here.

Here, plaintiffs contend that the BiOp impermissibly ignored five issues. For four of these, evidence in the administrative record suggests, to a lay observer, that the issue is one that is "likely to adversely affect" listed species, and the Federal Defendants have not identified any evidence in the record to the contrary. For the fifth, global warming, plaintiffs provide the extra-record Lindley Study, authored in significant part by NMFS scientists, indicating that global warming will adversely affect the Yuba River, and other courts have held that failure to consider global warming in other areas rendered BiOps arbitrary and capricious. It may be that these five factors have no meaningful effect on listed species, and NMFS may have thought that this fact was so obvious as to require no discussion. The reality of judicial review, however, obliges NMFS to respond to this evidence with a reasoned explanation.

Having laid this groundwork, the court discusses one other general issue before turning to the specific impacts. Federal Defendants argue that the 'net effects' analysis obviated any need for separate discussion of the various impacts that plaintiffs

allege were omitted. Because the court has held that the BiOp failed to provide and support any net effects analysis, further discussion of this argument is unnecessary.

a. Hatcheries

Plaintiffs argue that the BiOp improperly failed to include effects of hatchery fish in environmental baseline. Plaintiffs' argument centers on the Feather River Hatchery; there is no hatchery operating directly on the Yuba River. The Feather River Hatchery nominally releases a stock of spring run Chinook. The record demonstrates a consensus of opinion that despite this label, the Feather River Hatchery has historically failed to segregate spring and fall run Chinook stocks, such that the purported spring run hatchery Chinook have been hybridized with fall run fish.[24] These same authorities conclude that this hybridization represents a threat to the genetic diversity and integrity of naturally spawning spring run Chinook populations range-wide, as hatchery fish interbreed with, compete with, or displace un-hybridized natural spawners. See also BiOp at 25 (discussing interbreeding of spring run and fall run Chinook as a threat to the species' survival or recovery without discussing hatcheries as a cause of such interbreeding). Federal Defendants do not dispute that where hatchery fish are present, they pose these impacts.

Although there is no hatchery on the Yuba, the BiOp indicates

[24] AR 11335, 11340 (Species of Special Concern at 40, 45), AR 4588 (Spring Run Chinook Status at § VII p. 23), AR 13383 (NMFS, "Population Structure of Threatened and Endangered Chinook Salmon ESUs in California's Central Valley Basin," at 12 (April 2004)).

that some hatchery fish stray into the Yuba River and that these fish likely come from the Feather River Hatchery. BiOp at 18-19. The 1995 DFG study cited above concluded that "[i]n the wild, hybridization between [Feather River] hatchery and wild fish almost certainly has occurred in the . . . Yuba River." AR 11337 (Species of Special Concern at 42). Plaintiffs cite various other studies in the record which indicate that hybridization with hatchery fish is a threat to steelhead and Chinook salmon generally, but the parties have not identified any other authority in the record addressing whether hatcheries are impacting the Yuba River populations.

The BiOp did not discuss the impacts of hatchery strays on listed species in the Yuba River. Federal Defendants argue that discussion of the Feather River Hatchery was unnecessary because the hatchery is outside the "action area," and therefore not part of the "environmental baseline." The implementing regulation defines "action area" as "all areas to be affected directly or indirectly by the Federal action." 50 C.F.R. § 402.02. This definition is used to define the "environmental baseline" as "the past and present impacts of all Federal, State, or private actions and other human activities in the *action area*." Id. (emphasis added). Thus, Federal Defendants argue that because the proposed project will not affect the Feather River, the BiOp need not consider whether actions on the Feather River affect conditions in the Yuba River. This interpretation of the Service's obligation under the ESA is untenable; it would permit the service to ignore

aspects of the context in which the proposed action will occur. Nat'l Wildlife Fed'n, 524 F.3d at 930 (citing Pac. Coast Fed'n, 426 F.3d at 1093). Although the court owes deference to the NMFS's interpretation of its own regulation, this deference has limits. The regulation must be understood to require analysis of "impacts" in the action area, rather than "activities" in the action area.

Federal Defendants next observe that the spring run Chinook ESU at issue in this case is defined to include hatchery fish. Federal Defendants do not explain the significance to this observation. The BiOp itself recognizes genetic diversity as a factor influencing survival and recovery. BiOp at 32. The fact that hatchery fish are included within the ESU does not demonstrate that hatchery fish cannot cause a decline in genetic diversity.

Finally, Federal Defendants argue that discussion of hatcheries is unnecessary because there is insufficient evidence that hatcheries were having an impact on the spring-run Chinook in the Yuba River. The record demonstrates that the potential effect of hatcheries on the baseline was not so slight that it could be disregarded without comment. The BiOp acknowledged that interbreeding between spring and fall run Chinook was a threat to the survival or recovery of spring run. BiOp at 25, 32. The record demonstrates an apparent consensus that where fish from the Feather River Hatchery are present, the hatchery fish aggravate the threat of hybridization. The BiOp further acknowledged that at least some such fish are present in the Yuba River. BiOp at 18-19; see also AR 11337 (Species of Special Concern at 42). Based on

these facts, the Feather River Hatchery's potential impact on the baseline would not appear to be so insignificant or discountable that NMFS could entirely ignore it. While it may be that, as Federal Defendants now contend, these strays are too few in number to play a large role in the environmental baseline, defendants cite no document in the record indicating that NMFS actually reached this conclusion. Failure to consider hatcheries therefore rendered the BiOp's no-jeopardy conclusion arbitrary and capricious.

b. The San Francisco Bay Delta

Plaintiffs argue that conditions in the San Francisco Bay Delta are adversely impacting the listed species, relying on various evidence in the administrative record. See, e.g., AR 13518-19, 13019, 13029, 4635-38, 11337.

Federal Defendants concede that Delta conditions harm fish. Federal Defendants nonetheless argue that discussion of the Delta was not required because "the [Central Valley Project] does not affect conditions on the Yuba." Fed. Defs.' Summ. J. Mem. at 28. The BiOp acknowledges that the three species at issue migrate through the Delta. BiOp at 7, 9-10. It appears that during such migration, fish may be stressed by Delta conditions. Thus, even if the Delta does not affect habitat in the Yuba River, it apparently affects the fish at issue. Insofar as the Delta conditions affect populations within the action area, the BiOp must consider whether those conditions limit the populations' ability to withstand the project's impacts. Nat'l Wildlife Fed'n, 524 F.3d at 929 (jeopardy analysis cannot occur "in a vacuum.").

Accordingly, the BiOp is arbitrary and capricious insofar as it fails to discuss the extent to which Delta conditions affect populations of listed species in the Yuba River. As explained in the following section, on remand, the BiOp may also need to discuss the effects of Delta conditions on the listed species generally.

c. Listed Salmonids' Overall Viability

Plaintiffs argue that the Lindley Study explains that spring run Chinook are "as a whole . . . not viable" and are "in jeopardy of extinction" because their abundance has greatly decreased and because their small spatial distribution leaves the species vulnerable to a catastrophic event. Pls.' Summ. J. Mem. at 14. Plaintiffs assert that by failing to discuss these findings, the BiOp ignores important aspects of the problem and fails to use the best available science.

The BiOp notes the overall depressed condition of spring-run Chinook, concluding that the species was "at moderate to high risk of extinction." BiOp at 10-11. The BiOp specifically mentions the historic overall decline in the species and the species' particular vulnerability arising from low spatial distribution. Plaintiffs have not shown that the Lindley Study's discussion of these issues was "in some way better than" the evidence NMFS actually relied on. Kern County Farm Bureau v. Allen, 450 F.3d 1072, 1080 (9th Cir. 2006). Accordingly, plaintiffs have not shown that the Lindley Study represents the best available science on this issue.

As to the charge that the BiOp acknowledged but failed to consider the species' overall condition, such consideration is

required where a project will reduce the likelihood of survival or recovery. Without knowing the species' overall status, the agency cannot determine whether the reduction is "appreciable." Even where the action will cause harm that is not "appreciable," the agency must evaluate the species' overall status to determine whether the harm will tip the species into jeopardy or deepen existing jeopardy. Nat'l Wildlife Fed'n, 524 F.3d at 930.[25] Where the project will not decrease the local populations' chances of survival or recovery, however, the BiOp may reach a no-jeopardy conclusion without extensive discussion of the species' overall status, because there is no way that the project will jeopardize the species. In this case, however, the BiOp failed to support its conclusion that the project will not cause harm. If, on remand, NMFS concludes that the project will negatively affect local populations, NMFS must further discuss the species' overall status.

d. Global Warming

Plaintiffs argue that the BiOp's failure to discuss global

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[25] Federal Defendants have suggested that because "jeopardize" refers to relative change, "jeopardy" is not a term with meaning under the ESA. Nat'l Wildlife Fed'n explained that:

> an agency may not take action that will tip a species from a state of precarious survival into a state of likely extinction. Likewise, even where baseline conditions already jeopardize a species, an agency may not take action that deepens the jeopardy by causing additional harm.

524 F.3d at 930. The quoted text implies that a species may be "in jeopardy" for purposes of the ESA, although this case also affirms that an action does not jeopardize a species unless it aggravates the species' condition.

warming is another failure to consider an important aspect of the problem or the best available science. Relying primarily on the Lindley Study, plaintiffs argue that:

> climate change is expected to dramatically alter the hydrology of California's rivers and species that inhabit them by causing a shift in the timing of stream flows from spring and summer to earlier periods in the water year, decreased precipitation, increased occurrence of both extreme droughts and extreme floods, and reduced spawning habitat in the Central Valley.

Pls.' Summ. J. Mem. at 15 (citing Lindley Study at 17-18). See also id. at 30.

Federal Defendants argue that the primary impact of climate change on listed species will be on water temperature. Federal Defendants then argue that the BiOp extensively discussed water temperature's effects on species, that the primary determinant of temperature is flow regimes, and that the Yuba Accord provides for flows specifically to address impacts on temperature. From this Federal Defendants conclude that separate discussion of climate change was unnecessary. Without questioning NMFS's assertion that the *primary* effect of climate change will be on water temperature, the court notes that the Lindley Study indicates that climate change will alter flow regimes generally. For example, the Lindley Study predicts that flows will occur earlier in the year, that average rainfall may decline, and that extreme droughts and floods will become more common. The BiOp acknowledges that flow regimes affect listed species in ways other than temperature--for example, species require migration flows at certain times.

This argument presents a difficult question for the court. Other cases concerning listed fish have held that failure to discuss the impacts of climate change rendered BiOps arbitrary and capricious. See Natural Res. Def. Council v. Kempthorne, 506 F. Supp. 2d 322, 367-71 (E.D. Cal. 2007), Pac. Coast Fed'n of Fishermen's Ass'ns v. Gutierrez, No. 1:06-cv-00245, 2008 U.S. Dist. LEXIS 31462 (E.D. Cal. Apr. 16, 2008). The court recognizes that the Yuba River is a different waterway. While plaintiffs' own evidence suggests that climate change's impact on the Yuba River will be less severe, this evidence hardly suggests insignificant impacts. Lindley Study at 18 ("Under the expected warming of around 5°C, substantial habitat would be lost, with significant amounts of habitat remaining primarily in the Feather and Yuba rivers . . . ."), see also id at 17 ("[w]ithin some limits, water storage reservoirs might be operated to mitigate changes to the hydrograph caused by climate change."). The court cannot conclude that global warming's potential impacts are so slight that NMFS could ignore them without discussion. Although the BiOp discussed present impacts on temperature, the BiOp does not address whether global warming will alter the temperature that results from a given flow regime, nor does the BiOp address whether global warming will inhibit the ability to provide the presently-anticipated flow regimes. The Lindley Study calls both into question.

Federal Defendants separately argue that the court should disregard the Lindley Study because it was not included in the administrative record. Although this study was authored in part

by NMFS scientists and available prior to completion of the BiOp, it is not clear whether NMFS actually considered this study in formulating the BiOp. C.f. Order filed December 23, 2008 at 27-28. The court need not resolve this issue, because the Lindley Study is used here to "determine whether the agency has considered all relevant factors and has explained its decision." Sw. Ctr. for Biological Diversity, 100 F.3d at 1450 (quotations omitted). Extra record materials may be considered when they "address issues not already there" in the record. Id. at 1451 (quoting Friends of the Earth v. Hintz, 800 F.2d 822, 829 (9th Cir. 1986)). Insofar as no party has identified any evidence in the administrative record addressing the above questions regarding global warming, the Lindley Study may be considered for this purpose. Accord High Sierra Hikers Ass'n v. Weingardt, No. C-00-01239, 2007 U.S. Dist. LEXIS 84746, *7-8 (N.D. Cal. Oct. 30, 2007).

Accordingly, the court holds that by failing to discuss global warming, NMFS failed to address an important part of the problem.

e. Poaching

Finally, plaintiffs argue that the Daguerre fish ladders' steps present pools in which salmonids may easily be poached. Pls.' Mem. at 9. The 1998 Spring Run Chinook Status report states that poaching is an ongoing problem at Daguerre. AR 4614 (Spring Run Chinook Status at § VII p. 49). In 2001, the Corps determined that "poaching adult salmon at ladders and at the base of the dam is a persistent problem documented by DFG." AR 12794 (Preliminary Passage Study at 13).

Federal Defendants argue that poaching is no longer significant, relying on an extra-record declaration that poaching has not occurred since 2003. Fed. Defs.' Response to Pls.' Statement of Undisputed Facts #70 (citing Decl. of Doug Grothe in Supp. of Fed. Defs.' Opp'n to Pls.' Mot. for Prelim. Inj. ¶ 22 (filed June 10, 2009)). This after-created evidence cannot justify the BiOp's no-jeopardy conclusion. Moreover, nothing indicates what, if anything, changed between 2001 and 2003.

As it stands, the record indicates that poaching is not insignificant (because it results in take) and not discountable (because, absent explanation as to what has changed to prevent a formerly significant problem, a reasonable person would not conclude that it was unlikely to re-occur). Accordingly, poaching was an important aspect of the problem that NMFS failed to discuss.

5. Plaintiffs' Separate Arguments Regarding Recovery

Under the existing regulations, the jeopardy analysis must consider impacts on both survival and recovery. Nat'l Wildlife Fed'n, 524 F.3d at 933 (interpreting 50 C.F.R. § 402.02). Actions impairing survival necessarily also impair recovery. See Interagency Cooperation; Endangered Species Act of 1973, 48 Fed. Reg. 29,990, 29,992 (June 29, 1983). The BiOp's recovery analysis was therefore deficient for the reasons previously discussed.

Plaintiffs raise an additional challenge particular to the recovery analysis. To guide the agency on remand and potentially forestall future litigation in this case, the court discusses this argument here. The BiOp's recovery analysis identifies five

planned recovery measures: (1) the Yuba Accord, (2) a gravel augmentation program, (3) improvements to the South Yuba-Brophy Diversion Screening, (4) Daguerre Fish Passage Improvement Project, and (5) the Upper Yuba River Studies Program. BiOp 34-37. Plaintiffs argue that completion of these measures was uncertain, such that the BiOp could not permissibly rely upon these measures.

Plaintiffs correctly contend that a BiOp may only rely on mitigation efforts that are "under agency control or otherwise reasonably certain to occur." Nat'l Wildlife Fed'n, 524 F.3d at 936 n.17. Plaintiffs err, however, by getting the BiOp's recovery analysis backwards. The BiOp does not rely on completion of these five recovery measures to support the conclusion that the project would not jeopardize recovery. Instead, the BiOp reasons that interference with these measures would reduce the likelihood of recovery. The BiOp's determination that "no element of the proposed Yuba River operations would appreciably diminish the likelihood of these recovery actions being implemented" was offered as a necessary but not sufficient condition for the no-jeopardy conclusion. BiOp at 37, see also id. at 33-34. If, on the remand, NMFS relies on completion of these measures in its renewed jeopardy analysis, this reliance should be made explicit.[26]

[26] In litigating this case, Federal Defendants argue that "the BiOp analyzed several upcoming actions on the Yuba, . . . and determined that they had the potential to significantly enhance habitat conditions on the river. . . . This determination solidified the BiOp's conclusion that continued operation of the two dams would not jeopardize the Yuba River populations of the fish species." Fed Defs.' Reply at 3. While anticipation of these measures might "solidify" a conclusion reached on independent

6. Summary Regarding Jeopardy Analysis

The court has identified numerous defects in the BiOp's jeopardy analysis. The BiOp fails to provide a rational connection between the factual determination that the project will perpetuate unmitigated stressors and the conclusion that these stressors will not jeopardize listed fish. The BiOp further fails to explain how species will be able to tolerate the combination of the project's impacts and the adverse effects anticipated to result from the Wheatland project. The BiOp also failed to consider various important aspects of the problem, most notably hatcheries, global warming and poaching. For these reasons, the BiOp's jeopardy analysis is deficient.[27]

C. Critical Habitat

Separate from the prohibition on actions that would "jeopardize" survival or recovery, section 7 prohibits actions that "result in the destruction or adverse modification of [designated

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grounds, it cannot cure the defects in the survival analysis discussed above. The BiOp contains no discussion of whether these measures will fully eliminate stressors recognized by the BiOp, whether these measures will provide separate benefits sufficient to offset the stressors' impacts, or whether the remaining stressors are too insignificant to jeopardize the species. That is, assuming that the BiOp could have relied on these actions, nothing indicates that NMFS concluded that the actions' benefits outweighed the impacts of the ongoing stressors for purposes of the jeopardy analysis.

[27] The court reiterates that although the BiOp treated Englebright Dam's prevention of future migration as an effect of the project, the jeopardy analysis is deficient regardless of whether NMFS is held to this interpretation, and that as a result, the court does not determine whether the ESA would have permitted Englebright's effects on migration to be treated as part of the baseline.

critical] habitat . . . ." ESA § 7(a)(2); 16 U.S.C. § 1536(a)(2). At the time the BiOp was adopted, no critical habitat had been designated for green sturgeon. BiOp at 6. Accordingly, the critical habitat analysis considers solely impacts on salmonids.

In discussing effects on critical habitat, the BiOp describes virtually every project effect as an effect on habitat. BiOp at 29. The "integration and synthesis of effects" regarding critical habitat, which the court repeats in full, states that

> Many of the above-listed actions and programs (both completed and pending) are actually designed to improve the quality and quantity of the [primary constituent elements] of critical habitat upon which spring-run Chinook salmon and steelhead rely. Those measures that improve flows, water temperatures, or passage conditions, or augment spawning gravel in depleted areas, are expected to increase the conservation value of critical habitat in the Yuba River. It is therefore reasonable to expect that the Corps' proposed operations on the Yuba River should at least maintain, if not slightly improve[,] the value of critical habitat for the conservation of spring-run Chinook salmon and steelhead above the value that was present when critical habitat was designated on the Yuba River in 2005.

BiOp at 38. "[A]ctions and programs" apparently refers to both the future recovery measures and the "recent changes" partially ameliorating the project's effects.

The parties' arguments regarding critical habitat are just as brief as the BiOp's discussion of the issue. Plaintiffs first argue that the critical habitat analysis relied on the five future recovery measures discussed in part III(B)(5) above, but that these

measures were not reasonably certain to occur.[28] The critical habitat analysis, unlike the jeopardy analysis, relies on completion of "many of" these measures. Reliance is appropriate only where the programs are "under agency control or otherwise reasonably certain to occur." Nat'l Wildlife Fed'n, 524 F.3d at 936 n.17. A "reasonabl[e] certain[ty]" requires "specific and binding plans" including "a clear, definite commitment of resources." Id. at 935-36; see also Natural Res. Def. Council v. Kempthorne, 506 F. Supp. 2d 322, 355 (E.D. Cal. 2007), Natural Res. Def. Council v. Rodgers, 381 F. Supp. 2d 1212, 1241 (E.D. Cal. 2005), Ctr. for Biological Diversity v. Rumsfeld, 198 F. Supp. 2d 1139, 1152 (D. Ariz. 2002).

The first of these five recovery measures, the Yuba Accord, was "reasonably certain to occur" despite being outside the Corps' control. The flow regimes called for by this agreement were adopted on an interim basis in 2005. BiOp at 24. In October 2007, prior to the issuance of the BiOp, the final agreement was signed, with anticipated implementation in the next year. Id. Plaintiffs offer no arguments as to why this particular measure was uncertain. The court further notes that this agreement was implemented in early 2008 as planned. Cal. State Water Res. Control Bd. Order WR 2008-0014 (Mar. 18, 2008), as amended by Order WR 2008-0025 (May 20, 2009). While events subsequent to the BiOp's adoption cannot

[28] These measures are (1) the Yuba Accord, (2) a gravel augmentation program, (3) improvements to the South Yuba-Brophy Diversion Screening, (4) Daguerre Fish Passage Improvement Project, and (5) the Upper Yuba River Studies Program. BiOp 34-37.

retroactively validate the BiOp, this provides some evidence that the BiOp's prediction regarding this agreement was well supported.

The fifth mitigation measure, the Upper Yuba River Studies Program, is also outside the Corps' control. Federal Defendants effectively concede that this measure is not certain to occur. This program has "exhausted its initial budget, but is continuing to pursue additional sources of funding." BiOp at 37. Federal Defendants instead argue that the BiOp does not actually rely on this measure in its critical habitat analysis. Although the BiOp could have been clearer in this regard, this appears to be the case. The Upper Yuba River Studies Program seeks "to determine if the reintroduction of wild Chinook salmon and steelhead to the upper Yuba River above Englebright Dam is biologically, environmentally and socio-economically feasible over the long term." Id. Thus, this measure solely concerns habitat above Englebright Dam. Because critical habitat has been designated solely below Englebright, this measure is not implicated in the analysis of whether the project will destroy or adversely modify designated critical habitat. The BiOp properly recognized that interference with this program would have reduced the likelihood of recovery, but the court accepts NMFS's argument that the BiOp did not rely on this program in its critical habitat analysis. The court further observes that the critical habitat analysis did not specifically refer to this measure.

The second, third, and fourth recovery measures serve double duty, as these are also "reasonable and prudent measures" imposed

by the incidental take statement. Although it is unclear whether these measures are binding in the sense that a party may seek injunctive relief compelling their completion, they are enforceable in that failure to comply therewith exposes the Corps and its employees to potential civil and criminal liability for take of listed species. Bennett, 520 U.S. at 170. Plaintiffs do not dispute that the incidental take statement commits the Corps to these measures, instead disputing whether these measures commit the Corps to anything. These "reasonable and prudent measures" and their accompanying "terms and conditions" require the Corps to implement a long-term gravel augmentation program within three years, to "diligently pursue the ongoing effort to fully screen the South Yuba-Brophy irrigation diversion to meet all DFG and NMFS screening criteria," and as to fish passage at Daguerre, to complete a fish passage study by 2012 and to commence implementation of a fish passage program by 2017. Plaintiffs argue that the gravel program has no defined goals, such that it is unclear what benefit it will provide; that the Brophy screening has no deadline, so it represents no enforceable commitment; and that the Daguerre program suffers both defects, because it is unclear what specific benefits the program would provide or when the program would be completed.

These arguments overlap with plaintiffs' broader challenge to the critical habitat analysis. Plaintiffs contend that the BiOp did not support its conclusion that these measures would avoid adverse modification of critical habitat. Section 7 prohibits

"destruction" and "adverse modification" of critical habitat. "Destroy" and "modify," like "jeopardize," are verbs describing a change in condition. In a rehash of their arguments on jeopardy, plaintiffs argue that the various stressors caused by the BiOp constitute adverse modifications to critical habitat and that these impacts are incompletely mitigated. Plaintiffs solely add, in the critical habitat argument, that recovery measures are also too vague to support a conclusion that the project's impacts will be overcome. Except for the final sentence of the critical habitat analysis, the BiOp invites plaintiffs' critique.[29] The BiOp largely equates effects on a species' likelihood of survival or recovery with effects on habitat, describing most of the stressors summarized above as detriments to habitat attributable to the project. BiOp at 29. The BiOp acknowledged that the recent changes in operations had not fully ameliorated the impacts directly caused by the project. For example, the BiOp describes

[29] This sentence is the conclusion that operations "should at least maintain . . . the value of critical habitat . . . *above the value that was present when critical habitat was designated on the Yuba River in 2005.*" BiOp at 38 (emphasis added). Although plaintiffs have not addressed this language, the court notes that National Wildlife Federation suggests that use of the 2005 baseline is impermissible. National Wildlife Federation prohibited NMFS from using a baseline of habitat as it existed at the time the species was listed. 524 F.3d at 934. The Ninth Circuit's reasoning appears to apply equally to a baseline of habitat as it existed at the time habitat was designated. The court explained that use of a point in time predating the action as a baseline for the critical habitat analysis "is incompatible with the statute's plain language and clear purpose of improving endangered species' condition over time." Id. at 934 n.15. Of course, if habitat improved between 2005 and 2007, the BiOp's approach would presumably be more protective of habitat than the "environmental baseline" approach discussed in National Wildlife Federation.

the fact that "Daguerre . . blocks or delays" upstream salmonid passage as an "impact[] to critical habitat caused by the proposed project." Id.

Federal Defendants similarly treat critical habitat as a mere rephrasing of the jeopardy analysis. Rather than defend the analysis apparently adopted by the BiOp and argue that these impacts would be no worse than those existing at the time of the 2005 baseline, Federal Defendants concede that all impacts on habitat must be mitigated. Federal Defendants instead again argue that mitigation need not be mapped to specific impacts so long as the BiOp supports its conclusion that the net effects will be neutral. Fed. Defs.' Summ. J. Mem. at 23.

Taking the parties' litigation positions at face value, the court concludes that the BiOp did not demonstrate that the "impacts" on habitat would be at worst neutral. As noted above, measures implemented prior to the BiOp's adoption had not fully eliminated these impacts. Although the critical habitat analysis, unlike the jeopardy analysis, further relies on future mitigation measures, plaintiffs correctly argue that the precise benefits to be conveyed by these mitigation measures are uncertain and that many of these measures would not take effect for a number of years. The Ninth Circuit has held that a BiOp may not rely on future mitigation to support a no adverse modification conclusion without discussing the interim effects on the species. Nat'l Wildlife Fed'n, 524 F.3d at 935. More generally, the BiOp provides no reasoning supporting the conclusion that the restoration measures

will provide benefits whose magnitude outweighs that project's impacts.

More fundamentally, the court cannot discern the reasoning underlying the critical habitat analysis. If the method of analysis compares habitat conditions resulting from the proposed project with habitat conditions as they existed in 2005, some of plaintiffs' arguments would be inapplicable. The BiOp makes only fleeting mention of this method of analysis, however, and other passages indicate an alternate approach. The court also has doubts as to whether such a method would comport with the statute.

In summary, if the BiOp concluded that the project would not adversely modify critical habitat because the project's net "impacts" on habitat were at worst neutral when measured against conditions immediately preceding the BiOp, this conclusion was arbitrary and capricious in that the BiOp failed to provide a rational connection between the facts and this conclusion. Pac. Coast Fed'n, 426 F.3d at 1092. If the BiOp instead based its critical habitat conclusion on some other analysis, the conclusion is nonetheless arbitrary and capricious because the BiOp does not explain its reasoning such that the agency's "path may reasonably be discerned." FCC v. Fox TV Stations, Inc., ___ U.S. ___, 129 S. Ct. 1800, 1810 (2009) (internal quotation omitted); see also Puerto Rico Sun Oil Co., 8 F.3d at 81 (where agency failed to explain basis for decision, decision arbitrary and capricious regardless of whether there was no basis or whether instead there was a basis that was not explained).

D. Incidental Take Statement

As noted above, when NMFS concludes that a proposed action will comply with section 7(a)(2), if NMFS further concludes that taking of species in connection with the action will not violate section 7(a)(2), NMFS may issue an incidental take statement ("ITS") that specifies the impact of incidental take on species, sets forth "reasonable and prudent measures" to minimize this impact, and sets forth mandatory "terms and conditions" that will ensure effectuation of those measures. ESA § 7(b)(4); 16 U.S.C. § 1536(b)(4).

An ITS is auxiliary to a BiOp, because it depends on the underlying no-jeopardy conclusion. When the BiOp is withdrawn, the ITS is necessarily invalidated. Or. Natural Res. Council v. Allen, 476 F.3d 1031, 1037 (9th Cir. 2007) ("ONRC"). The court nonetheless addresses plaintiffs' challenges to the ITS. See id. (after explaining that revocation of the underlying BiOp rendered the ITS invalid, going on to discuss independent defects in the ITS). Many of these challenges rise and fall with the challenge to the jeopardy analysis; accordingly, the court explains those particular portions of the ITS that must be revisited in light of the remand of the BiOp.

Plaintiffs first argue that the ITS improperly measures take. An ITS must specify the amount of allowable take. 50 C.F.R. § 402.14(i). This limit should be a numerical cap, and an ITS "that utilizes a surrogate instead of a numerical cap on take must explain why it was impracticable to express a numerical measure of

take." ONRC, 476 F.3d at 1037.

In this case, the BiOp explains that a direct numerical measure of take is impossible, in light of

> the variability and uncertainty associated with the response of listed species to the effects of the project, the population size of each species, annual variations in the timing of migration, individual water use within the project area, and uncertainties regarding meteorological conditions, water storage conditions and the annual variability in water management practices by upstream entities.

BiOp at 39. This explanation satisfies ONRC. In place of a numerical limit on take, the BiOp here employs four ecological surrogates: prevention of flow fluctuations which exceed those authorized in the Federal Energy Regulatory Commission license for the Yuba Project, injection of at least 500 tons of appropriately sized gravel in 2007, cleaning of sediment, wood, and debris from the Daguerre fish ladders, and maintenance of a channel "of adequate depth and width to allow unimpaired passage of adult salmonids" at the ladder exits. Id.[30]

Surrogates must "set forth a trigger that, when reached, results in an unacceptable level of incidental take, invalidating the safe harbor provision [of the ESA], and requiring the parties to re-initiate consultation." ONRC, 476 F.3d at 1038 (quoting Ariz. Cattle, 273 F.3d at 1249) (internal quotation marks removed, modification in original). The first two surrogates plainly

[30] The BiOp enumerates these as three surrogates, treating the third and fourth surrogates mentioned above as aspects of a single metric. BiOp at 39.

satisfy this requirement. The surrogates regarding Daguerre, while more definite than those at issue in ONRC and Ariz. Cattle, may be difficult to enforce. As to the fish ladders, the ITS does not specify how often these ladders must be cleaned, and thus, how long ladders must be obstructed before take will be deemed to have occurred. As to the channel, although the court presumes that the ecological surrogate was intended to incorporate the 30 feet by 3 feet dimensions specified elsewhere in the BiOp as sufficient, the ITS does not specify this. BiOp at 33. Without determining whether these ambiguities invalidate the BiOp, the court observes that these issues should be clarified on remand.

Plaintiffs next argue that these surrogates are insufficiently correlated with take caused by the project. In part, plaintiffs argue that the BiOp did not demonstrate the quantity of take associated with these surrogates. The ITS need not demonstrate a specific number of takings likely to be caused by violation of the surrogate, and the surrogates here are correlated with some of the project's major impacts. Ariz. Cattle, 273 F.3d at 1250. Nonetheless, the project imposes other stressors that may cause take not reflected by these surrogates, such as entrainment and Daguerre's effect on downstream migration. The surrogates must reflect the take actually caused by the project, and Federal Defendants have not identified anything in the record demonstrating that no such take will occur. Accordingly, the BiOp fails to explain the link between the surrogates and take.

Separate from arguments regarding surrogates, plaintiffs

challenge the "reasonable and prudent measures" and "terms and conditions" imposed by the ITS. An ITS must "specif[y] those reasonable and prudent measures that the Secretary considers necessary or appropriate to minimize [the impact of incidental take]," ESA § 7(b)(4)(C)(ii), as well as "terms and conditions (including, but not limited to, reporting requirements) that must be complied with . . . to implement" these measures, ESA § 7(b)(4)(C)(iv). In this case, the ITS specifies five reasonable and prudent measures, which are elaborated on as terms and conditions. The ITS obliges the Corps to:

1. use information obtained from the pilot gravel injection project to develop and implement a long-term gravel augmentation program within three years.
2. initiate a study to determine an effective method of replenishing large woody material, and to implement this program so as to bring additional woody material to the lower Yuba River within four years.
3. develop and implement a program "to improve fish passage for adult and juvenile spring-run Chinook salmon, steelhead and green sturgeon at Daguerre Point Dam," completing a feasibility study and the planning, engineering and design phases within five years, and commencing implementation within ten years.
4. maintain the fish ladder clearing and sediment management programs at Daguerre pending completion of

the above.[31]

5. "diligently pursue the ongoing effort to fully screen the South Yuba-Brophy irrigation diversion to meet all DFG and NMFS screening criteria."

Plaintiffs argue that these measures do too little to minimize take. Although the statute requires that these measures "minimize" the impact of take on the listed species, no party has provided authority interpreting "minimize" in this context. Where the measures imposed by an ITS do not ensure that take occurs at a level that does not jeopardize the species, however, the measures are plainly inadequate. In light of the invalidity of the BiOp's no-jeopardy conclusion, the court cannot conclude that the measures here achieve this goal. The court does not decide what else the obligation to "minimize" take requires.

E. Take

Plaintiffs' fourth claim argues that the Corps has caused take without the protection of an ITS, either because the ITS was void when issued or because the Corps has failed to comply with the terms and conditions of the ITS.

As to the first theory, plaintiffs offer no authority to support the proposition that an ITS may be void ab initio. For the

[31] The fourth "reasonable prudent measure" requires the Corps to avoid "avoidable impairment" at Daguerre pending completion of the third measure. Plaintiffs contend that "avoidable impairment" is impermissibly vague. The court would agree, except that the BiOp provides context defining this term in the "terms and conditions," which state that this measure will be achieved if the Corps continues its ladder cleaning and sediment management programs.

reasons articulated by the Federal Defendants, the court rejects this proposition here. An ITS provides a qualified shield against liability for take to the receiving agency and its employees. Ariz. Cattle, 273 F.3d at 1239 ("if the terms and conditions of the Incidental Take Statement are disregarded and a taking does occur, the action agency or the applicant may be subject to potentially severe civil and criminal penalties under Section 9."), Ramsey v. Kantor, 96 F.3d 434, 442 (9th Cir. 1996) (actions "contemplated by an incidental take statement issued under Section 7 of the ESA and . . . conducted in compliance with the requirements of that statement" do not violate section 9.). In general, so long as an action agency provides the service with all relevant information, the action agency may rely on the Service's assessment of whether a proposed action will cause jeopardy. Res. Ltd. v. Robertson, 35 F.3d 1300, 1305 (9th Cir. 1994). Plaintiffs have not alleged that the Corps withheld any information here.

Plaintiffs' only discussion of this issue is to retreat from their complaint and argue that regardless of whether the ITS was initially valid, if it is violated now, future activities by the Corps will cause take. Putting aside plaintiffs' claim 4B, prohibited taking has not yet occurred, however, so it cannot be said that the Corps is currently "alleged to be in violation" of the statute. ESA § 11(g)(1)(A); 16 U.S.C. § 1540(g)(1)(A). Indeed, in light of plaintiffs' success on their challenge to the BiOp, the court will craft an injunction designed to avoid such a violation. Plaintiffs provide no authority supporting the

proposition that every claim challenging the validity of an ITS under the APA engenders a companion citizen suit under the ESA arguing that when the ITS is withdrawn, take will occur.

Plaintiffs' second theory of section 9 liability argues that the Corps has violated the terms and conditions imposed by the ITS. Federal Defendants argue that as a matter of law, the Corps cannot be in violation of the first three terms, because these terms impose deadlines for action that have not yet passed. As to the remaining two terms, Federal Defendants move for summary judgment on the ground that plaintiffs, who will bear the burden of proof on this issue, have not provided evidence of noncompliance.

In opposing Federal Defendants' motion, plaintiffs argue that the evidence indicates that it will be impossible for the Corps to meet the deadline imposed by term and condition 3A, which requires completion of a feasibility study and planning, engineering and design phases of a fish passage improvement project for Daguerre by November 2012. Plaintiffs' argument is based on the Corps' inability to secure funding for these actions in the 2007 to 2010 fiscal years and the Corps' own estimates of the time required to complete each step as presented in the biological assessment the Corps that preceded the BiOp. Corps. Admin. Record 1439, Reply Decl. of Patricia Weisselberg Ex. 1. In light of this evidence, the court rejects the Federal Defendants' invitation to conclude that this provision will be completely unenforceable until the deadline has passed. Plaintiffs have succeeded in raising a disputed question of material fact with regard to whether it will

be impossible (as opposed to merely unlikely) for the Corps to comply with this obligation.

Plaintiffs also argue that the Corps has violated term and condition four, which undisputedly presently binds the Corps, by failing to implement the Daguerre fish ladder clearing and sediment management programs required by the BiOp. Plaintiffs contend that, as part of these programs, the Corps must take water depth measurements across Daguerre's face in June each year to determine whether the 30 foot by 3 foot channel is being maintained. Plaintiffs further contend that the Corps' maintenance logs indicate that no such measurements were taken in June 2008. Weisselberg Reply Decl. Ex. 4. Plaintiffs separately argue that the Corps has violated its weekly maintenance obligations. The Corps disputes these factual contentions, citing a log purporting to show both that depth was measured in June 2008 and providing a statement of the official responsible for monitoring of the fish ladders, but it appears that this presents a dispute for trial.

The court notes, however, that it is unclear whether any remedies are available on these claims other than those available on the section 7 claim. Accordingly, plaintiffs are directed to file a brief explaining why litigation of this claim should proceed or, in the alternative, dismiss this claim.

IV. Remedy

The parties in this case have agreed to bifurcate liability and remedy in litigation of this matter. See Order filed Sept. 2, 2008 (Dkt. No. 165). The parties further agreed that plaintiffs'

motion for a preliminary injunction, filed mere weeks before the summary judgment motions on liability, did not need to be resolved separate from the summary judgment motions. The court regrettably allowed the matter to remain under submission for a period of time that, while not unheard of for summary judgment motions, exceeds that which is appropriate for preliminary injunctions.

At this point, it is unclear whether a preliminary injunction is necessary to avoid harms pending litigation of a permanent remedy. The court is reluctant to distract the parties from litigating final remedy by ordering further briefing on this issue. Nonetheless, the court directs the parties to submit supplemental briefing on whether, in light of the passage of time, the particular injunction requested by plaintiffs is necessary to avoid irreparable injury pending adoption of a final remedy. This briefing should address the impacts of the Supreme Court's recent decision in Monsanto Co. v. Geertson Seed Farms, ___ U.S. ___, 2010 WL 2471057, 2010 U.S. LEXIS 4980 (June 21, 2010).

V. Conclusion

For the reasons stated above:

1. Plaintiffs' motion for partial summary adjudication as to standing (Dkt. No. 247) is DENIED AS MOOT.
2. Plaintiffs' motion for summary judgment as to liability (Dkt. No. 279) is GRANTED IN PART AND DENIED IN PART.
2. Federal Defendants' motion for summary judgment as to liability (Dkt. No. 295) is GRANTED IN PART AND DENIED IN PART.

3. The court GRANTS summary judgment to plaintiffs as to the question of liability on plaintiffs' third claim. NMFS acted arbitrarily and capriciously in reaching the BiOp's no-jeopardy and no adverse modification conclusions, and in issuing the ITS. Federal Defendants' cross motion is denied on this issue.

4. The court GRANTS summary judgment to Federal Defendants as to liability on plaintiffs' claim 4A. Plaintiffs' cross motion is denied on this issue.

5. It appears that a disputed question of material fact remains as to plaintiffs' claim 4B, alleging that the Corps violated the terms and conditions of the ITS. Federal Defendants' motion for summary judgment is therefore DENIED as to this claim. Plaintiffs did not seek summary judgment on this issue.

6. Plaintiffs SHALL file a supplemental brief no later than July 23, 2010. This brief shall address

   a. Whether claim 4B, if successful, would entitle plaintiffs to any remedy beyond that available under claim 3.

   b. Whether the particular terms of the preliminary injunction requested by plaintiffs are presently necessary to avoid irreparable injury, in light of Monsanto Co., ___ U.S. ___, 2010 WL 2471057, 2010 U.S. LEXIS 4980.

7. Federal Defendants SHALL file an opposition to the above

no later than August 6, 2010. The intervenor defendants MAY file concurrent opposition briefs.

8. Plaintiffs MAY file a reply no later than August 13, 2010.

This is not a final order as to all claims and all parties for purposes of Fed. R. Civ. P. 54(b). If a party should file an appeal from this non-appealable order, this court is not divested of jurisdiction. Estate of Conners v. O'Connor, 6 F.3d 656, 658 (9th Cir. 1993); United States v. Garner, 663 F.2d 834, 838 (9th Cir. 1981).

IT IS SO ORDERED.

DATED: July 8, 2010.

LAWRENCE K. KARLTON
SENIOR JUDGE
UNITED STATES DISTRICT COURT