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**IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF ARIZONA**

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Grand Canyon Trust,)

No. CV-07-8164-PHX-DGC

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Plaintiff,)

ORDER

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vs.)

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U.S. Bureau of Reclamation, et al.,)

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Defendants.)

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This case concerns the operation of Glen Canyon Dam on the Colorado River by the United States Bureau of Reclamation (“Reclamation”). Plaintiff Grand Canyon Trust (the “Trust”) claims that Reclamation’s operation of the Dam violates the Endangered Species Act (“ESA”) by jeopardizing and taking the endangered humpback chub and by destroying or adversely modifying its critical habitat. The Trust also claims that Reclamation and the United States Fish and Wildlife Service (“FWS”) have failed to comply with relevant federal statutes.

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The Court has issued two previous orders addressing the merits of claims made by the Trust in this case: *Grand Canyon Trust v. United States Bureau of Reclamation*, No. CV-07-8164-PCT-DGC, 2008 WL 4417227 (D. Ariz. Sept. 26, 2008) (*Trust I*), and *Grand Canyon Trust v. United States Bureau of Reclamation*, 623 F. Supp. 2d 1015 (D. Ariz. 2009) (*Trust II*). This order addresses a third round of briefing on the Trust’s claims. For reasons that follow, the Court will grant in part and deny in part the Trust’s motion for summary judgment on Claim 9, grant summary judgment to Reclamation and FWS on Claims 1, 2, 10,

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1 and 11, and take Claim 3 under advisement. The Court will remand the 2009 Incidental Take
2 Statement (the “2009 ITS”) to FWS for further consideration by September 1, 2010, and will
3 establish a schedule for additional activities in this lawsuit once FWS has revised the 2009
4 ITS.

5 This order will not restate the facts or analysis contained in *Trust I* and *Trust II*.
6 Those decisions describe the regulatory and operational history of Glen Canyon Dam, the
7 historical flows of the Colorado River, the Dam’s effect on those flows, and the decline of
8 the humpback chub and its listing as an endangered species. They describe Reclamation’s
9 1995 Final Environmental Impact Statement (“1995 FEIS”) for operation of the Dam, the
10 various flow regimes considered by the 1995 FEIS, including modified low fluctuating flow
11 (“MLFF”) and seasonally adjusted steady flow (“SASF”), and the Department of the
12 Interior’s formal adoption of MLFF as the flow regime for the Dam as recommended in the
13 1995 FEIS. They describe FWS’s conclusion in a 1994 Biological Opinion (“1994
14 Opinion”) that MLFF would jeopardize the chub and adversely modify its critical habitat in
15 violation of the ESA, and FWS’s resulting assertion that Reclamation must either implement
16 a program of high steady flows in the spring and low steady flows in the summer and fall,
17 or must adopt the SASF flow regime rejected in the 1995 FEIS. *Trust II* describes and
18 evaluates Reclamation’s 2008 Environmental Assessment and FWS’s 2008 Biological
19 Opinion, both of which conclude that operating the Dam under a 2008 Experimental Plan –
20 which includes MLFF – would not jeopardize the chub or adversely modify its critical
21 habitat. This order will assume familiarity with *Trust I* and *Trust II*.

22 **I. Background.**

23 The Trust filed its initial complaint in December of 2007 and asserted five claims:
24 (1) Reclamation is violating the ESA by operating the Dam under MLFF, a flow system that
25 jeopardizes the humpback chub; (2) Reclamation is violating the ESA because MLFF
26 destroys or adversely modifies the chub’s critical habitat; (3) Reclamation is violating the
27 ESA because MLFF “takes” the chub; (4) Reclamation is violating the ESA by failing to
28 consult with FWS on the development of annual operating plans for the Dam; and

1 (5) Reclamation is violating the National Environmental Policy Act (“NEPA”) by failing to
2 prepare environmental assessments or environmental impact statements for each of the
3 Dam’s annual operating plans. Dkt. #1.

4 After these initial claims had been filed, Reclamation issued a 2008 Experimental Plan
5 that modified the Dam’s operation for the years 2008-1012. The 2008 Experimental Plan
6 called for a continuation of MLFF, but implemented a high flow experiment in March of
7 2008 and steady flows for the months of September and October in each year from 2008
8 through 2012. Reclamation issued an Environmental Assessment which concluded that the
9 2008 Experimental Plan would not violate the ESA. Reclamation also consulted with FWS
10 concerning the 2008 Experimental Plan, and FWS issued a 2008 Biological Opinion (the
11 “2008 Opinion”) finding that the plan did not violate the ESA. The Trust responded in
12 March of 2008 by filing a supplemental complaint that asserted three new claims:
13 (6) Reclamation’s 2008 Environmental Assessment fails to comply with NEPA, (7) FWS’s
14 2008 Opinion violates the ESA, and (8) Reclamation’s 2008 Experimental Plan violates the
15 Grand Canyon Protection Act. Dkt. #23.

16 In *Trust I*, issued on September 26, 2008, the Court granted summary judgment for
17 Reclamation on Claims 4 and 5 and deferred ruling on Claims 1, 2, and 3 until Claims 6, 7,
18 and 8 were fully briefed. 2008 WL 4417227. In *Trust II*, issued on May 26, 2009, the Court
19 granted summary judgment for Reclamation on Claims 6 and 8 and for the Trust on Claim 7.
20 623 F. Supp. 2d 1015. Because of its ruling on Claim 7, the Court remanded the 2008
21 Opinion to FWS for reconsideration and deferred ruling on Claims 1, 2, and 3 until the
22 Opinion had been reconsidered. In response to the remand, FWS produced a supplement to
23 its 2008 Opinion on October 29, 2009 (the “2009 Supplement”). Dkt. #180-1 at 2-149.¹ The
24 2009 Supplement included an Incidental Take Statement – the 2009 ITS – which specified
25 the level of chub take that would be permitted as a result of MLFF operations. *Id.* at 86-88.

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28 ¹ Citations throughout this order are to page numbers placed on the top of each page
by the Court’s electronic docket system, not to page numbers at the bottom of each page.

1 Dissatisfied with the 2009 Supplement, the Trust filed a second supplemental
2 complaint in January of 2010 that asserted three more claims: (9) the 2009 Supplement and
3 the 2009 ITS violate the ESA, (10) the 2009 ITS violates NEPA, and (11) FWS’s draft 2009
4 Recovery Goals, used in the 2009 Supplement’s analysis of chub recovery, violate the ESA.
5 Dkt. #205 at 29-33. Summary judgment briefing has now been completed on new Claims
6 9, 10, and 11, with additional briefing on Claims 1, 2, and 3. Oral argument was held on
7 May 7, 2010.

8 **II. Legal Standards.**

9 The ESA and NEPA contain no standards for judicial review of agency actions. As
10 a result, the Court must evaluate the administrative decisions of Reclamation and FWS using
11 the Administrative Procedures Act (“APA”). *See Or. Natural Res. Council v. Allen*, 476
12 F.3d 1031, 1036 (9th Cir. 2007) (ESA claims reviewed under APA); *Ctr. for Biological*
13 *Diversity v. USFWS*, 450 F.3d 930, 934 n.4 (9th Cir. 2006) (same); *Akiak Native Cmty. v.*
14 *USPS*, 213 F.3d 1140, 1146 (9th Cir. 2000) (NEPA claims reviewed under APA).

15 The Court may set aside an agency’s decision under the APA only if it is “arbitrary,
16 capricious, an abuse of discretion, or otherwise not in accordance with law[.]” 5 U.S.C.
17 § 706(2)(A); *Pac. Coast Fed’n of Fishermen’s Ass’n v. Nat’l Marine Fisheries Serv.*, 265
18 F.3d 1028, 1034 (9th Cir. 2001). “Agency action should be overturned only when the agency
19 has ‘relied on factors which Congress has not intended it to consider, entirely failed to
20 consider an important aspect of the problem, offered an explanation for its decision that runs
21 counter to the evidence before the agency, or is so implausible that it could not be ascribed
22 to a difference in view or the product of agency expertise.’” *Id.* (quoting *Motor Vehicle*
23 *Mfrs. Ass’n of the U.S., Inc. v. State Farm Mut. Auto. Ins. Co.*, 463 U.S. 29, 43 (1983)).
24 “This standard of review is highly deferential, presuming the agency action to be valid and
25 affirming the agency action if a reasonable basis exists for its decision.” *Nw. Ecosystem*
26 *Alliance v. USFWS*, 475 F.3d 1136, 1140 (9th Cir. 2007) (internal quotes and citation
27 omitted). “The court is not empowered to substitute its judgment for that of the agency.”
28 *Ariz. Cattle Growers’ Ass’n v. USFWS (Ariz. Cattle I)*, 273 F.3d 1229, 1236 (9th Cir. 2001).

1 “As long as the agency decision was based on a consideration of relevant factors and there
2 is no clear error of judgment, the reviewing court may not overturn the agency’s action as
3 arbitrary and capricious.” *Id.*

4 Review under the APA usually is restricted to the administrative record. *See, e.g.,*
5 *id.* (“[t]he reviewing court may not substitute reasons for agency action that are not in the
6 record”); 5 U.S.C. § 706 (“the court shall review the whole record or those parts of it cited
7 by a party”). The Court may consider materials outside the administrative record “(1) if
8 necessary to determine whether the agency has considered all relevant factors and has
9 explained its decision, (2) when the agency has relied on documents not in the record, . . .
10 (3) when supplementing the record is necessary to explain technical terms or complex subject
11 matter, [or] . . . (4) when plaintiffs make a showing of agency bad faith.” *Ctr. for Biological*
12 *Diversity*, 450 F.3d at 943 (internal quotations and citation omitted). In this case, with the
13 exception of a few supplemental exhibits filed by the Trust in its motion for consideration
14 of supplemental information (Dkt. #239), the Court’s decision is limited to the administrative
15 record.

16 **III. Claim 9 – Does the 2009 Supplement or the 2009 ITS Violate the ESA?**

17 The 2009 Supplement states FWS’s conclusion that operating the Dam under a MLFF
18 regime does not jeopardize the humpback chub or adversely modify its critical habitat. FWS
19 is the expert agency charged with protecting the chub. If the 2009 Supplement is valid, it
20 strongly supports a ruling in favor of Defendants on Claims 1 and 2. If the 2009 ITS is valid,
21 it defeats Claim 3. As a result, the Court will begin its analysis with Claim 9, which
22 challenges the validity of both the 2009 Supplement and the 2009 ITS.

23 A brief review will set the stage for analysis of Claim 9. After completing the 1995
24 FEIS, Reclamation formally adopted MLFF for Dam operations in a 1996 Record of
25 Decision. At the time, FWS disagreed with the decision. FWS’s 1994 Opinion had
26 concluded that MLFF operations would violate the ESA by jeopardizing the humpback chub
27 and destroying or adversely modifying its critical habitat. Dkt. #136-5 at 8. FWS was
28 concerned that the fluctuating river flows authorized by MLFF – flows that rise and fall as

1 the demand for electrical power generated by the Dam rises and falls – would erode beaches
2 and backwaters needed by young chub to survive and recover, and would maintain
3 temperatures in the river that were too cold for chub survival and recovery. FWS stood by
4 this opinion for several years, stating as late as 2006 that MLFF was detrimental to the chub
5 and that a regime of steady flows should be adopted. *See* Dkt. # 91-3 at 66-67.² Despite this
6 continuing opinion by FWS, Reclamation did not adopt steady flows. Although some
7 experimental flows were tried, Reclamation continued to operate the Dam using MLFF.

8 FWS changed its position in the 2008 Opinion. FWS opined that Reclamation’s 2008
9 Experimental Plan, which would continue to use MLFF for ten months of each year, did not
10 jeopardize the humpback chub or adversely modify its critical habitat. Dkt. #136-2 at 46-
11 133. FWS specifically stated that the 2008 Opinion replaced the 1994 Opinion. *Id.* at 47.

12 Viewing FWS’s change of position as unfounded and incorrect, the Trust challenged
13 the 2008 Opinion in this lawsuit. The Court’s decision in *Trust II* found the 2008 Opinion
14 invalid and remanded it for reconsideration by FWS. 623 F. Supp. 2d at 1031-35. On
15 remand, FWS prepared the 2009 Supplement and the 2009 ITS, and again concluded that
16 MLFF does not jeopardize the chub or adversely modify its critical habitat. Reclamation
17 now relies on the 2009 Supplement and the 2009 ITS to argue that the Court should grant
18 summary judgment on Claims 1, 2, and 3. The Trust argues that the 2009 Supplement and
19 the 2009 ITS, like the 2008 Opinion, are invalid and cannot be used by Reclamation or the
20 Court to conclude that current Dam operations do not violate the ESA.

21 In evaluating Claim 9, the Court first will describe the 2009 Supplement and its efforts
22 to address the four deficiencies identified by the Court in *Trust II*. The Court then will
23 address the Trust’s arguments as to why the 2009 Supplement is invalid. Finally, the Court
24 will address the Trust’s claim that the 2009 ITS is invalid.

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26 ²Defendants correctly note that the Court’s opinion in *Trust II* contains a factual error.
27 The opinion states that FWS confirmed the adverse effects of MLFF in 2007, just one year
28 before it issued the 2008 Opinion. 623 F. Supp. 2d at 1032 (citing to Dkt. #91-3 at 74-89).
In fact, the document cited by the Court was issued by two scientists with the United States
Geological Survey (“USGS”), not by FWS. *Id.*

1 **A. The 2008 Opinion’s Deficiencies and the 2009 Supplement.**

2 The Court found the 2008 Opinion invalid for four reasons: (1) it lacked a reasoned
3 basis for its conclusion that MLFF does not destroy or adversely modify chub critical habitat,
4 (2) it did not adequately explain FWS’s change from the 1994 Opinion, (3) it did not discuss
5 the effects of MLFF on chub recovery, and (4) it did not address these issues using the best
6 available science. *Id.* The Court will review the 2009 Supplement’s treatment of each of
7 these deficiencies.

8 **1. Destruction or Adverse Modification of Critical Habitat.**

9 The 2009 Supplement begins by noting that the number of humpback chub below
10 Glen Canyon Dam has increased significantly in the last ten years. Dkt. #180-1 at 8. The
11 chub population hit a low of 2,400 to 4,400 adult fish in 2001, increased to approximately
12 6,000 adult fish by 2006, and increased to 7,650 adult fish by 2009. Dkt. #27-2 at 105;
13 Dkt. #180-1 at 36. Recruitment of young humpback chub into the adult population has at
14 least doubled since the mid-1990s when MLFF was implemented. *Id.* at 37.

15 The ESA, however, focuses on more than chub numbers. Section 7(a)(2) prohibits
16 any agency action that is “likely to . . . result in the destruction or adverse modification” of
17 designated critical habitat for the listed species. 16 U.S.C. § 1536(a)(2). The Court’s
18 decision in *Trust II* found that “[t]he 2008 Opinion fail[ed] adequately to address the effect
19 of MLFF on chub habitat.” 623 F. Supp. 2d at 1034. On remand, FWS addressed this issue
20 in some detail.

21 “Destruction or adverse modification” of critical habitat is defined in federal
22 regulations as follows:

23 Destruction or adverse modification means a direct or indirect alteration that
24 appreciably diminishes the value of critical habitat for both the survival and
25 recovery of a listed species. Such alterations include, but are not limited to,
alterations adversely modifying any of those physical or biological features
that were the basis for determining the habitat to be critical.

26 50 C.F.R. § 402.02.

27 The 2009 Supplement does not rely on this definition, presumably because it was
28 invalidated by the Ninth Circuit in *Gifford Pinchot Task Force v. United States Fish &*

1 *Wildlife Service*, 378 F.3d 1059, 1069-70 (9th Cir. 2004). Dkt. #180-1 at 80. The 2009
2 Supplement instead relies on the language of the ESA and on a Consultation Handbook
3 drafted by FWS and the National Marine Fisheries Service (“the Handbook”). *Id.* at 7-8.
4 The ESA prohibits any agency action that is “likely to . . . result in the destruction or adverse
5 modification” of designated critical habitat for the listed species. 16 U.S.C. § 1536(a)(2).
6 The Handbook provides this guidance for determining when destruction or adverse
7 modification of critical habitat is occurring:

8 Adverse effects on individuals of a species or constituent elements or segments
9 of critical habitat generally do not result in jeopardy or adverse modification
10 determinations unless that loss . . . is likely to result in significant adverse
effects throughout the species’ range, or appreciably diminish the capability
of the critical habitat to satisfy essential requirements of the species.

11 Dkt. #225-2 at 151.

12 FWS and Reclamation note that the Handbook was issued by FWS and the National
13 Marine Fisheries Service after notice and an opportunity for public comment. *See* 60 Fed.
14 Reg. 8729-02 (Feb. 15, 1995). Defendants therefore contend that the Handbook definition
15 is entitled to deference from the Court. The Trust does not dispute this assertion, nor does
16 it argue that use of the Handbook’s definitions in the 2009 Supplement is inappropriate. To
17 the contrary, the Trust itself cites the definition. *See* Dkt. #232 at 11. The Ninth Circuit also
18 has applied the Handbook in ESA cases, including its definition of adverse modification. *See*
19 *Ariz. Cattle Growers Ass’n v. Salazar (Ariz. Cattle II)*, — F.3d —, —, 2010 WL 2220036,
20 *4 (9th Cir. Jun. 4, 2010); *Butte Env’tl. Council v. Army Corps of Eng’rs*, — F.3d —, —,
21 2010 WL 2163186, *9 (9th Cir. Jun. 1, 2010); *Ariz. Cattle I*, 273 F.3d at 1250.³

23 ³ After providing the above-quoted definition of adverse modification, the Handbook
24 defines “appreciably diminish” as “to considerably reduce the capability of designated or
25 proposed critical habitat to satisfy requirements essential to both the survival and recovery
26 of a listed species.” Dkt. #225-2 at 151. This definition is essentially the same as the
27 definition found invalid in *Gifford* because it addressed “both survival and recovery”
28 together, making an adverse effect on survival an essential element of finding an adverse
effect on recovery. 378 F.3d at 1069-70. The Court concludes, however, that the
Handbook’s definition of “appreciably diminish” does not invalidate the 2009 Supplement
because FWS does not rely on the definition and addresses recovery separately from survival.

1 In evaluating whether MLFF destroys or adversely modifies chub critical habitat as
2 defined by the Handbook, the 2009 Supplement considers whether MLFF “will adversely
3 modify any of those physical or biological features that were the basis for determining the
4 habitat to be critical.” Dkt. #180-1 at 22. This focus is mandated by regulation. *See* 50
5 C.F.R. § 402-02. These physical and biological features, known as Primary Constituent
6 Elements (“PCEs”), include the following for the humpback chub:

7 W1: water of sufficient quality (i.e., temperature, dissolved oxygen, lack of
8 contaminants, nutrients, turbidity, etc.)

9 W2: water that is delivered in sufficient quantity to a specific location in
10 accordance with a hydrologic regime that is required for the particular
11 life stage for each species

12 P1: physical habitat which is habitable for use in spawning

13 P2: physical habitat which is habitable as a nursery

14 P3: physical habitat which is habitable for feeding

15 P4: corridors between physical habitat areas

16 B1: food supply

17 B2: an environment without out-of-balance predation

18 B3: an environment without out-of-balance competition

19 Dkt. #180-1 at 7, 25.

20 In addressing these PCEs, the 2009 Supplement examines the two “reaches” of chub
21 critical habitat below the Dam. Reach 6 consists of the lowermost eight miles of the Little
22 Colorado River (“LCR”), the largest tributary of the Colorado River in Marble and Grand
23 Canyons. Dkt. #180-1 at 45. Reach 7 consists of a 173-mile stretch of the mainstem of the
24 Colorado River in Marble and Grand Canyons.

25 With respect to Reach 6, the 2009 Supplement finds that “all of the PCEs are provided
26 for in this reach of humpback chub critical habitat[.]” Dkt. #180-1 at 45. FWS finds that
27 MLFF has little effect on the PCEs in Reach 6. *Id.* at 69.

28

See Dkt. #180-1 at 46-49, 59-63, 69-71, 76-79.

1 FWS acknowledges several detrimental effects of MLFF in Reach 7. It finds that
2 MLFF's cooling of the river is detrimental to W1 (water quality) and that its fluctuating
3 flows are detrimental to W2 (water delivery). *Id.* at 72. FWS finds that P1 (spawning) is
4 partially met in Reach 7 because some spawning occurs in small aggregations of chub in the
5 mainstem, but that the cooling and fluctuating flows of MLFF are detrimental to P2 (nursery)
6 and P3 (feeding). *Id.* at 57, 72-73. FWS identifies "a strong need for additional research"
7 on P2 and P3, and notes that a Nearshore Ecology Study currently underway will shed
8 significant light on these aspects of chub habitat. *Id.* at 73, 83. FWS finds P4 (movement
9 corridors) to be adequate. *Id.* at 57. FWS finds that MLFF may have negative effects on B1
10 (food availability) for young chub, but concludes that food availability for adults in the
11 mainstem is likely greater than before the Dam was built. *Id.* at 57, 59.

12 The 2009 Supplement pays particular attention to B2 (predation) and B3
13 (competition), noting that some scientists have suggested that predation and competition by
14 nonnative fish may be the single most significant threat to the chub. *Id.* at 57-58. Indeed,
15 one older study estimates that 250,000 humpback chub are consumed by channel catfish,
16 rainbow trout, and brown trout each year. *Id.* at 58. The 2009 Supplement recognizes a
17 "tradeoff" confronting Dam operators: while steadier flows that produce warmer water may
18 benefit the chub, such flows may also hurt the chub by benefitting warm-water fish that
19 compete with and prey on the chub. *Id.* at 68.

20 The 2009 Supplement recounts in some detail the experience of the humpback chub
21 in the Yampa River of Colorado. Water temperatures in the Yampa were much warmer than
22 typical during the summer of 2002. The warmer temperatures combined with a longer
23 growing season to produce a substantial increase in the population of smallmouth bass, which
24 in turn caused "a precipitous decline in the humpback chub population." *Id.* at 27. "Prior
25 to 2002, smallmouth bass were very rare in the system, and humpback chub were common,
26 with a small but stable population of several hundred adults. This rapid expansion of
27 smallmouth bass essentially eliminated the humpback chub population in the Yampa in a
28 matter of a few years." *Id.* at 58-59. The elimination occurred despite the fact that "[t]he

1 Yampa River is relatively pristine in all the PCEs with the exception of B2 and B3, predation
2 and competition from nonnative fish species.” *Id.* at 27. The 2009 Supplement notes that
3 similar concerns have arisen from humpback chub conditions in Desolation and Gray
4 Canyons on the Green River. *Id.* at 68.

5 Given this experience, the 2009 Supplement concludes that MLFF’s cooling of the
6 mainstem may in fact help the humpback chub by suppressing warm water predators and
7 competitors such as the smallmouth bass. FWS explains:

8 The Yampa example illustrates what could happen if efforts . . . to warm
9 mainstem temperatures . . . result in the unintended consequence of an invasion
10 or expansion of nonnative fish species. Indeed, given the global climate
11 change predictions [that water levels in Lake Powell will remain low and water
12 in the mainstem will therefore remain warmer], an increased capacity to
13 deliver cold water seems a more pressing need. The relationship between
warmer water temperatures and nonnative fishes was recognized at the time of
the [1994] Opinion, but was apparently not considered as severe a threat as it
is today, especially given the newest information on climate change and its
potential effect on the expansion of nonnative fishes.

14 *Id.* at 59.

15 Having evaluated the effect of MLFF on PCEs in both reaches of chub critical habitat
16 below the Dam, the Handbook definition of adverse modification, the growing number of
17 chub below the Dam, and the possible effect of MLFF in suppressing nonnative predators
18 and competitors, the 2009 Supplement concludes that “implementation of the MLFF with
19 steady releases in September and October [as required by the 2008 Experimental Plan] . . .
20 is not likely to . . . destroy or adversely modify designated critical habitat for the humpback
21 chub.” *Id.* at 80. As FWS explains, “[t]he primary indication that the biological, as well as
22 the other PCEs, are met, is the increasing abundance of humpback chub and recruitment that
23 has characterized the population in the LCR in recent years[.]” *Id.* at 46. FWS concludes
24 that all of the PCEs in Reach 6 are present, *id.* at 45, and that “the best available science
25 indicates that the PCEs in [Reach] 7 are meeting the needs of [chub] recovery because the
26 demographic goal is near to being met and the status of the species continues to improve,”
27 *id.* at 77. In the words of the Handbook, FWS concludes that MLFF is not likely “to result
28 in significant adverse effects throughout the species’ range, or appreciably diminish the

1 capability of the critical habitat to satisfy essential requirements of the species.” Dkt. #225-2
2 at 151.

3 **2. FWS’s Change from the 1994 Opinion.**

4 The Court’s decision in *Trust II* found that the 2008 Opinion failed adequately to
5 explain the reasons for FWS’s departure from its long-held views of the 1994 Opinion.
6 Agencies are entitled to change opinions, but they must provide a reasoned explanation for
7 the change. The 2009 Supplement provides this explanation:

8 The reason for the reversal of our conclusion in [the 1994 Opinion] is because
9 the population of adult humpback chub in [the] Grand Canyon has been
10 increasing in size since 2001, and recruitment of young chub into the adult
11 population has been increasing since the mid to late 1990’s, and this seems
12 due, at least in part, to the implementation of MLFF through the Glen Canyon
13 Dam Adaptive Management Program (GCDAMP), which includes related
14 monitoring, research, management actions, and conservation measures
15 designed to benefit the species. Further, since our [1994] Opinion, recovery
16 goals have been completed for the species, and although currently only in draft
17 form, indicate that the Grand Canyon population of the humpback chub is near
18 to, or has met, the demographic goal for consideration for downlisting to
19 threatened status. Although Reclamation’s [operation of the Dam under
20 MLFF] has some adverse effects to humpback chub and its critical habitat[,]
21 critical habitat appears to be providing for recovery now, and Reclamation’s
22 action includes research needed to evaluate effects to critical habitat to further
23 refine operations to meet recovery needs in future iterations of flow testing and
24 adaptive management. We also now have new information from other
25 populations of humpback chub regarding the relationship between water
26 quality and hydrology, their effects on nonnative fish species, and the severity
27 of the threat of nonnative fish species to the humpback chub.

19 Dkt. #180-1 at 8 (citations omitted). FWS expanded on this summary in the 89 pages of the
20 2009 Supplement, frequently noting information available now that was not available when
21 the 1994 Opinion was issued. *Id.* at 86. In short, there can be no doubt that FWS has now
22 explained the reasons for its change of position. Whether those reasons are sufficient will
23 be considered below.

24 **3. Recovery.**

25 *Trust II* found that the 2008 Opinion failed to address the prospects for chub recovery
26 as required by the ESA. FWS responded by addressing recovery in some detail.

27 The 2009 Supplement relied on the FWS draft Humpback Chub Recovery Goals (the
28 “2009 Recovery Goals”) released for public review in July of 2009. Dkt. ##180-1 at 7, 23;

1 227-1 at 187-304. FWS drafted the 2009 Recovery Goals pursuant to 16 U.S.C. § 1533(f)(1),
2 which requires FWS to prepare recovery plans for the conservation and survival of
3 endangered and threatened species. Although the 2009 Recovery Goals are still in draft
4 form, FWS concluded that they represent the best available science on chub recovery.
5 Dkt. #180-1 at 22, 69.

6 The portions of the 2009 Recovery Goals relied on by FWS are those for the “lower
7 basin recovery unit,” also called the Grand Canyon Population, which includes “[f]ish in the
8 mainstem Colorado River and the LCR” below Glen Canyon Dam. Dkt. #227-1 at 211.
9 FWS chose to combine the mainstem and LCR populations into a single recovery unit
10 because the combined population “is isolated from the five upper basin populations by Glen
11 Canyon Dam” and studies have shown “historic mixing of populations” within this recovery
12 unit. *Id.* at 206-07.

13 The 2009 Recovery Goals include a “demographic criteria” and a “recovery factor
14 criteria.” *Id.* at 237. The demographic criteria identify the number of chub required to
15 remove the chub from the endangered species list or to reduce the level of its protection. *Id.*
16 The recovery factor criteria describe the “management actions and tasks” that must be
17 completed “to reduce specific threats” to the chub. *Id.* at 239. For the lower basin recovery
18 unit, the demographic criteria for downlisting the chub (reducing its status from endangered
19 to threatened) will be satisfied when the following conditions exist:

- 20 1. The Grand Canyon population is maintained as a core over a 5-year
21 period, starting with the first point estimate acceptable to the Service,
such that:
 - 22 a. the trend in adult (age 4+; ≥ 200 mm TL) point estimates does
23 not decline significantly, and
 - 24 b. mean estimated recruitment of age-3 (150-199 mm TL) naturally
25 produced fish equals or exceeds mean annual adult mortality,
and
 - 26 c. each core population point estimate exceeds 2,100 adults
(MVP).

27 *Id.* at 249-50.
28

1 The recovery factor criteria for the Grand Canyon Population require multiple
2 management actions, including investigation of “the role of the mainstem Colorado River in
3 maintaining the Grand Canyon humpback chub population and provid[ing] appropriate
4 habitats in the mainstem as necessary for recovery,” implementation of “flows necessary for
5 all life stages of humpback chub to support a recovered Grand Canyon population, based on
6 demographic criteria,” investigation of the “anticipated effects of and options for providing
7 suitable water temperatures,” and protection of chub populations “from overutilization for
8 commercial, recreational, scientific, or educational purposes.” *Id.* at 245-47.

9 The 2009 Supplement concludes that MLFF operations do not impede chub recovery
10 or adversely modify habitat needed for chub recovery because the lower basin recovery unit
11 is making significant progress toward meeting the 2009 Recovery Goals. The current
12 population of humpback chub is estimated to be 7,650 adults, which is nearing the estimated
13 10,000 to 11,000 adults that existed when marking began in 1989. The current population
14 is more than 50% higher than it was in 2001, with recruitment of chub apparently having
15 been underway since the mid-1990s – about the time MLFF was introduced. Dkt. #180-1
16 at 70. FWS identified steps that must be taken to comply with the recovery factor criteria,
17 including a draft management plan that has been developed for the LCR and other steps
18 planned to protect the chub from nonnative species and catastrophic events. *Id.* at 70-70.

19 FWS explained that its conclusion on chub recovery is bolstered by planned chub
20 conservation and mitigation measures: (1) use of a consultation trigger that ensures the
21 population of chub will not decline significantly; (2) implementation of a comprehensive
22 plan for the management of the chub in the lower Colorado River basin; (3) translocation of
23 chub populations into tributaries of the Colorado River including an area above Chute Falls
24 in the LCR, where several hundred chub have been relocated, and in Shinumo Creek, where
25 several hundred more chub have been placed; (4) control of nonnative fish; (5) completion
26 of the Nearshore Ecology Study which will provide information on the importance of
27 nearshore habitats to the survival of the chub; (6) completion of a monthly flow transition
28 study; (7) the recent creation of a humpback chub refuge at Dexter National Fish Hatchery

1 and Technology Center; and (8) watershed planning. *Id.* at 82-86. FWS explained that it is
2 “confident that Reclamation will implement these measures because of their continued
3 demonstration of effectiveness in implementing past and ongoing conservation measures.”
4 *Id.* at 82.

5 **4. Best Available Science.**

6 The final flaw identified by *Trust II* in the 2008 Supplement was its failure to consider
7 the best available science as required by the ESA, specifically its failure to address much of
8 the science directed at MLFF effects on chub critical habitat. The 2009 Supplement includes
9 a comprehensive discussion of that science, citing more than 200 sources. *Id.* at 92-110. Its
10 discussion of the science is candid, readily acknowledging the adverse effects of MLFF on
11 some aspects of chub habitat. *Id.* at 71-76, 82. As noted above, the 2009 Supplement
12 ultimately relies on the most recent population studies which show significant recovery in
13 the chub population under the MLFF regime. FWS also notes the need for significant
14 additional information, and cites more than a dozen monitoring and research activities
15 currently underway that will provide much additional needed information. *Id.* at 11-17.

16 **B. The Trust’s Arguments Concerning the 2009 Supplement.**

17 The Trust claims that the 2009 Supplement is invalid and must be set aside. It makes
18 several arguments which the Court will address separately.

19 **1. Impact of the 2009 ITS.**

20 The Trust argues that the 2009 ITS permits Reclamation to take 4,150 adult chub and
21 that the impact of losing over half of the current adult chub population is not addressed in the
22 2009 Supplement. The Trust argues that “FWS never contemplated in the 2009
23 [Supplement] how the loss of this many fish would affect the chub’s (1) reproduction,
24 (2) numbers, or (3) distribution.” Dkt. #232 at 9 (citing 50 C.F.R. § 402.02).

25 The Court disagrees with the Trust’s contention that FWS believes 4,150 adult chub
26 will be taken by the operation of MLFF. The 2009 ITS explains the expected take as
27 follows:
28

1 The level of take that could occur from the MLFF is in the form of harm or
2 mortality, resulting primarily from the cooling effect of the MLFF on
3 mainstem and especially nearshore habitats and from the dewatering of
4 nearshore habitats due to daily flow fluctuations; these effects can cause direct
5 mortality from cold shock or stranding, as well as indirect mortality from
6 increased predation rates by nonnative fish predators. . . . [H]umpback chub
7 mortalities resulting from the MLFF will be difficult to detect, due to the small
8 size of individuals likely to be affected and the size and remoteness of the
9 action area. Our lack of understanding of the habitat needs of humpback chub
10 in the mainstem also precludes establishing a quantifiable amount of habitat
11 as a surrogate for take. Given all of these factors, although take of juvenile
12 humpback chub is reasonably certain to occur, in the form of harm and
13 mortality as a result of the MLFF, the anticipated level of take of humpback
14 chub is unquantifiable. *We anticipate, however, that because the proposed
15 action will also have beneficial effects to humpback chub, and Reclamation is
16 implementing a suite of conservation measures to help conserve the species,
17 take of humpback chub from the proposed action is not anticipated to result
18 in a decline in the overall Grand Canyon population.* Reclamation has also
19 implemented a consultation trigger as a conservation measure. We will
20 consider take to have been exceeded if the conditions of the trigger are met.

12 Dkt. #180-1 at 87 (emphasis added).

13 The consultation trigger referred to in this paragraph is explained elsewhere in the
14 2009 Supplement as follows:

15 Pursuant to 50 CFR § 402.16[(b)], reinitiation of formal consultation is
16 required and shall be requested by the Federal agency or by the FWS, where
17 discretionary Federal involvement or control over the action has been retained
18 or is authorized by law and if new information reveals effects of the action that
19 may affect listed species or critical habitat in a manner or to an extent not
20 previously considered. Reclamation and FWS agree to specifically define this
21 reinitiation trigger relative to humpback chub, in part, as being exceeded if the
22 population of adult humpback chub (≥ 200 mm [7.87 in] TL) in Grand Canyon
23 declines significantly, or, if in any single year, based on the age-structured
24 mark recapture model (ASMR; Coggins 2008), the population drops below
25 3,500 adult fish within the 95 percent confidence interval[.]

21 *Id.* at 82.⁴

22 These statements make clear that FWS does not expect MLFF to take 4,150 adult
23 chub. FWS specifically states that it does not anticipate any decline in the adult chub
24 population under MLFF. Elsewhere, the 2009 Supplement states that FWS expects the chub
25 population to continue increasing. *Id.* at 8 (“further increases in recruitment are expected”).

27 ⁴ The Trust’s number of 4,150 chub deaths consists of the difference between the
28 current estimated adult chub population of 7,650 and the consultation trigger of 3,500 adult
chub.

1 Nor does establishment of the consultation trigger as a conservation measure mean
2 that FWS expects 4,150 chub to be taken. To the contrary, the consultation trigger is
3 established specifically in case “new information reveals effects of the action that may affect
4 listed species or critical habitat *in a manner or to an extent not previously considered.*” *Id.*
5 at 82 (emphasis added). Reinitiation of consultation in such circumstances is required by 50
6 C.F.R. § 402.16(b). Thus, far from representing an expected take, the consultation trigger
7 is created in case unexpected results occur. It is a safety valve, a point at which Reclamation
8 must return to FWS if things do not go as FWS and Reclamation expect. Moreover, the
9 trigger is not solely a drop in the population of adult chub to 3,500, but applies if there is any
10 significant decline in chub population. Dkt. #180-1 at 82.

11 FWS clearly does not expect 4,150 chub to be taken. The 2009 Supplement therefore
12 is not invalidated by a failure to evaluate a take of such magnitude.

13 **2. The Adverse Effects of MLFF.**

14 The Trust notes that the 2009 Supplement continues to acknowledge that MLFF has
15 adverse effects in the mainstem, eroding sandbars and backwaters and maintaining cold river
16 temperatures. The Trust argues that these facts are inconsistent with FWS’s conclusion that
17 MLFF does not destroy or adversely modify chub critical habitat.

18 In addressing the adverse modification question, the 2009 Supplement considers the
19 relevant PCEs – “those physical or biological features that were the basis for determining the
20 habitat to be critical.” 50 C.F.R. § 402.02; Dkt. #180-1 at 22. FWS evaluates the chub in the
21 LCR and the mainstem as a single population (an approach the Court finds reasonable in a
22 later section of this order) and finds the PCEs to be uniformly favorable in Reach 6 and
23 mixed in Reach 7. Although MLFF appears to be detrimental to W1, W2, P2, and P3 in
24 Reach 7, FWS notes the strong need for more information on P2 and P3 – information that
25 will be provided by studies currently underway. FWS finds that P1 and B1 are partially
26 satisfied in Reach 7, that P4 is adequate, and that MLFF actually favors the PCEs most
27 critical to chub survival and recovery – B2 and B3. When this mixed picture is combined
28 with the fact that the chub population has been increasing steadily since shortly after MLFF

1 was implemented, FWS concludes that MLFF is not likely “to result in significant adverse
2 effects throughout the species’ range, or appreciably diminish the capability of the critical
3 habitat to satisfy the essential requirements of the species.” Dkt. #225-2 at 151; Dkt. #180-1
4 at 80.

5 The Supreme Court has identified several circumstances where an agency’s decision
6 can be found arbitrary and capricious: where the agency has (1) relied on factors which
7 Congress has not intended it to consider, (2) entirely failed to consider an important aspect
8 of the problem, (3) offered an explanation for its decision that runs counter to the evidence
9 before the agency, or (4) is so implausible that it could not be ascribed to a difference in view
10 or the product of agency expertise. *Motor Vehicle*, 463 U.S. at 43; *Pac. Coast Fed’n*, 265
11 F.3d at 1034. The Trust has not shown that FWS’s critical habitat opinion satisfies any of
12 these circumstances.

13 FWS has not relied on improper or irrelevant factors, nor has it entirely failed to
14 consider an important aspect of the problem. To the contrary, as required by 50 C.F.R.
15 § 402.20, FWS has carefully considered each of the PCEs for both reaches of the chub
16 critical habitat and candidly has acknowledged those areas where MLFF is detrimental.

17 The Trust argues that FWS has offered an explanation that runs counter to the
18 evidence before it, but the Court cannot agree. For reasons explained in a later section of this
19 order, the Court cannot find FWS’s conclusion that MLFF benefits the chub by suppressing
20 warm water predators to be unreasonable or contrary to the evidence, nor does the Court find
21 FWS’s particular emphasis on these factors to be unwarranted. The Court also cannot
22 conclude that FWS is acting unreasonably by placing substantial weight on the clear and
23 convincing evidence that the chub population is increasing. Given these significant facts –
24 the threat posed to humpback chub by warm water predators as seen in the Yampa
25 experience, MLFF’s apparent role in suppressing those predators, and the surging chub
26 population under MLFF – FWS’s conclusion that MLFF does not appreciably diminish the
27 capability of Reaches 6 and 7 to satisfy the essential requirements of the chub cannot be said
28 to be contrary to the evidence. To be sure, differing views of the evidence are possible. But

1 differing views, even when well founded and strongly held, do not provide a sufficient basis
2 for setting aside agency action. Courts must defer to agency expertise, and the Supreme
3 Court’s definition of arbitrary and capricious therefore specifically excludes agency decisions
4 that represent a “difference in view or the product of agency expertise.” *Motor Vehicle*, 463
5 U.S. at 43; *Pac. Coast Fed’n*, 265 F.3d at 1034. The Court accordingly does not find the
6 2009 Supplement’s critical habitat conclusion to be arbitrary or capricious.

7 **3. Change in Opinion.**

8 The Trust argues that the 2009 Supplement fails to provide an adequate explanation
9 for FWS’s change from its 1994 Opinion that MLFF violates the ESA. As the Ninth Circuit
10 recently explained, however, “[t]he Court cannot conclude . . . that [an agency action] is
11 arbitrary and capricious solely because it differs from earlier [agency] decisions. Part of the
12 discretion granted to federal agencies is the freedom to change positions. As the Supreme
13 Court has explained, ‘[a]n agency’s view of what is in the public interest may change, either
14 with or without a change in circumstances. But an agency changing its course must supply
15 a reasoned analysis.’” *River Runners for Wilderness v. Martin*, 593 F.3d 1064, 1075 (9th
16 Cir. 2010) (quoting *Motor Vehicle*, 463 U.S. at 57).⁵

17 FWS has provided a reasoned explanation for its change. The circumstances of the
18 humpback chub have changed dramatically since the 1994 Opinion. The chub population
19 below Glen Canyon Dam has rebounded during the years of MLFF operation. Additional
20 valuable research, currently underway, will shed light on the chub’s critical habitat. New
21 information suggests that MLFF may benefit the chub by suppressing warm water nonnatives
22 that prey on and compete with the chub.

23
24
25 ⁵ Throughout its argument, the Trust repeatedly asserts that the 2009 Supplement has
26 presented “no new science” and “no new information.” *See, e.g.*, Dkt. #232 at 7. The Court
27 does not agree. The 2009 Supplement identifies much information that was not available
28 when the 1994 Opinion was issued, some of which is recounted in this order. But even if
new information is not available, the Supreme Court has made clear that an agency may
change its position “with or without a change in circumstances,” provided it provides “a
reasoned analysis.” *Motor Vehicle*, 463 U.S. at 57.

1 In short, the 2009 Supplement identifies and relies on information that simply was not
2 available in 1994:

3 The amount of scientific information available to assess the effects of MLFF
4 is much greater than that available at the time of the [1994 Opinion]. We now
5 know that changes in hydrology and water quality variables, especially water
6 temperature, can result in a rapid proliferation of nonnative fish species, which
7 can lead to precipitous declines in humpback chub populations (Jackson and
8 Hudson 2005, Finney 2006, Fuller 2008, Jackson et al. 2008, R. Valdez, pers.
9 comm., 2009). We now have objective, measurable recovery criteria (U.S.
10 Fish and Wildlife Service 2009). We now have improved information on
11 humpback chub population dynamics (Coggins and Walters 2009) that
12 indicates that MLFF may support sufficient levels of recruitment to achieve
13 recovery (U.S. Fish and Wildlife Service 2009). We now have an adaptive
14 management program in place that is implementing research needed in
15 achieving recovery, as well as conservation measures to benefit the species
16 (U.S. Bureau of Reclamation and U.S. Geological Survey 2009). . . . All of
17 this information leads us to conclude that Reclamation's [2008 Experimental
18 Plan] represents a reasoned approach, utilizing adaptive management, to test
19 experimental flows cautiously to determine appropriate long-term management
20 of Glen Canyon Dam that supports humpback chub recovery. Implementing
21 a more radical flow treatment could result in unnecessary harm to the species.
22 . . . We believe Reclamation's action will provide valuable information
23 without either compromising recovery or drastically altering the system
24 irresponsibly.

15 Dkt. #180-1 at 86.

16 The Trust responds by arguing that FWS asserted for years that MLFF erodes chub
17 critical habitat, particularly nearshore sandbars and backwaters needed for young chub
18 survival, causes the mainstem to be too cold, and flushes needed nutrients and food from the
19 remaining sheltered backwaters. The Trust is right. FWS held these views for years. In fact,
20 the 2009 Supplement continues to acknowledge these adverse effects in the mainstem. *Id.*
21 at 71-76, 82. But something significant has changed. "The status of the Grand Canyon
22 population of humpback chub, in terms of both recruitment and adult abundance, has
23 improved since the implementation of MLFF." *Id.* at 76. The Court cannot conclude that
24 FWS's reliance on this significant fact, and on the Handbook definition of adverse
25 modification, the 2009 Recovery Goals, the likely effects of MLFF in suppressing warm
26 water predators, the other conservation measures underway for the chub, and the ongoing
27 research into MLFF effects in the mainstem, is unreasonable.

28

1 The Court's review of FWS's decision is deferential. *River Runners*, 593 F.3d at
2 1070. Applying appropriate deference, the Court concludes that the 2009 Supplement
3 provides a rational connection between the facts found and the choices made and reaches a
4 reasonable conclusion. *Id.* FWS has sufficiently justified its change of position from the
5 1994 Opinion.

6 **4. Reliance on the LCR Population.**

7 The Trust contends that the 2009 Supplement is unlawful because it relies on the 2009
8 Recovery Goals, which, in turn, combine the mainstem chub population and the LCR
9 population into a single recovery unit. The Trust argues that the increasing chub population
10 below the Dam spawns almost entirely in the LCR, that MLFF continues to have adverse
11 effects on the mainstem, and that focusing on the LCR population therefore fails to account
12 for MLFF's continuing unfavorable effect on the mainstem and its chub.

13 This is a potent argument. The 2009 Supplement does rely primarily on favorable
14 trends in the LCR population to conclude that MLFF is not violating the ESA. After
15 considerable thought, however, the Court concludes that FWS's conclusion is not arbitrary,
16 capricious, an abuse of discretion, or otherwise not in accordance with law.

17 There are six self-sustaining populations of humpback chub. Five occur hundreds of
18 miles above Glen Canyon Dam in the upper basin of the Colorado River, and one occurs
19 below the Dam. There are nine aggregations of chub within the population below the Dam.
20 The 2009 Recovery Goals explain why FWS has combined these aggregations into one
21 population:

22 Fish in the mainstem Colorado River and the LCR are treated collectively as
23 one Grand Canyon population in this document because recent studies show
24 that the nine humpback chub aggregations in the mainstem Colorado River in
25 Marble and Grand Canyons are genetically related (Douglas and Marsh 1996;
26 Douglas and Douglas 2007) and largely supported by reproduction and
27 recruitment from the LCR[.] . . . The relationship between the reproducing
28 population of humpback chub in the LCR and those in the mainstem is not
entirely understood. Ongoing field investigations and stock-synthesis models
reveal that the mainstem may be important habitat for large subadults and
adults that spawn in the LCR (Coggins et al. 2006b).

Dkt. #227-1 at 211.

1 A May 2007 study cited in the above quotation (Douglas and Douglas) concluded that
2 chub in the mainstem and LCR are genetically related and distinct from the upper basin
3 populations, that the nine aggregations of chub below the Dam likely derive primarily from
4 the LCR, although some breeding occurs in the mainstem, and that chub in the mainstem and
5 LCR should be treated as a single management unit. Dkt. #230-4 at 51. Other studies have
6 suggested that chub at the confluence of the mainstem and the LCR move freely between the
7 mainstem and the LCR (Dkt. #225-4 at 23), that the chub then range some 20 kilometers
8 within the mainstem – 9 kilometers above and 11 kilometers below the confluence
9 (Dkt. #230-7 at 3) – and that some chub move considerably greater distances in the mainstem
10 (Dkt. #230-5 at 5). Thus, even though spawning occurs primarily in the LCR, the mainstem
11 provides important habitat for the chub. The fish move into and travel many kilometers
12 within the mainstem, with recent studies suggesting that “the mainstem may be important
13 habitat for large subadults and adults that spawn in the LCR[.]” Dkt. #227-1 at 211.

14 Given this clear connection between the mainstem and the LCR in the life of the chub,
15 the Court cannot conclude that FWS acted unreasonably in treating the chub in both locations
16 as a single population. Without question, both locations influence the chub’s survival. The
17 LCR provides the primary spawning ground, but chub move from there into the mainstem.
18 Some studies have suggested that chub in the mainstem have more food and are healthier
19 than chub in the LCR. Dkt. #180-1 at 32, 57. Both locations affect the life of the chub.

20 The Trust argues that combining the two populations and then focusing on increases
21 attributable solely to the LCR masks jeopardy and adverse modification occurring in the
22 mainstem. The Court cannot agree, however, that recent gains in chub population are due
23 solely to conditions in the LCR. Although reasons for the recent increase in chub population
24 are not entirely clear, the Trust does not claim that it is due to more favorable conditions in
25 the LCR. The Trust points to no science suggesting that conditions in the LCR have changed
26 since 2001, the low point for the chub population. And if conditions in the LCR have not
27 changed, then one must look elsewhere for an explanation of why the chub population has
28 increased. The most likely explanation appears to be that improving conditions in the

1 mainstem – warmer water from drought conditions that have lowered the level of Lake
2 Powell, mechanical removal of cold water predators such as rainbow trout, and steady flow
3 experiments implemented by Reclamation – have helped spur the population increase. If
4 conditions in the mainstem are contributing to the resurgence of the chub, then treating the
5 mainstem and the LCR as a single population makes even more sense.⁶

6 The reasonableness of FWS’s single-population approach seems evident: the chub
7 populations in the LCR and mainstem appear to be the same genetic family; the chub appear
8 to live their lives in both locations, spawning in the LCR and living at least part of their time
9 as subadults and adults in the mainstem; this single population is increasing in size; recent
10 changes and conservation steps in the mainstem may well be contributing to this resurgence;
11 additional conservation measures in the LCR and mainstem should only help; and additional
12 studies will be done to more fully explain the mainstem’s effect on the chub population.
13 FWS also notes that increased recruitment of the chub began in the mid-1990s, before the
14 river was warmed by drought and before the conservation measures or experimental steady
15 flows were undertaken, suggesting that MLFF itself may be contributing to the increase.
16 Dkt. #180-1 at 8, 37. More studies will shed light on this possibility.

17 The Trust argues that placing such significant reliance on the LCR population is
18 hazardous because a single catastrophic event in the LCR, such as a chemical spill on the
19 Highway 89 bridge over the LCR, could destroy the chub population. This is a legitimate
20 concern, but it is not ignored by FWS and Reclamation. Last year, 300 chub were
21 translocated to Shinumo Creek, a separate tributary of the mainstem. *Id.* at 38. In advance
22 of this translocation, nonnative fish were removed from the creek. *Id.* Remote antennas that
23

24
25 ⁶ MLFF generally does not affect conditions in the LCR. As stated in the 2009
26 Supplement, “MLFF will have minor effects to the flow regime in the LCR, limited to . . .
27 the immediate vicinity of the mouth of the LCR.” Dkt. #180-1 at 70. The Trust agrees,
28 stating in its briefing that the LCR “is not impacted by how Reclamation operates Glen
Canyon Dam.” Dkt. #232 at 22. Thus, conditions in the LCR over the past 15 years have
been largely unaffected by MLFF, and the Trust identifies no other change in the LCR that
could account for the recent significant increases in the chub population.

1 can detect the translocated chub were installed to monitor their movement, and the chub in
2 Shinumo Creek appear to be doing well. *Id.* at 38-39. Similar translocation efforts are
3 planned for Bright Angel and Havasu Creeks, and nonnative fish removal has already
4 occurred in Bright Angel Creek. *Id.* at 83. In addition, 795 juvenile chub were transferred
5 in 2008 and 2009 to Dexter National Fish Hatchery and Technology Center to establish a
6 separate protected population. *Id.* at 38. These steps are in addition to the highly successful
7 translocation of chub above Chute Falls on the LCR. *Id.*

8 The Trust cites *Pacific Coast Federation of Fishermen's Associations v. Gutierrez*,
9 606 F. Supp. 2d 1122, 1169 (E.D. Cal. 2008), for the proposition that federal agencies cannot
10 rely on tributary populations rather than mainstem populations when applying the ESA. In
11 *Gutierrez*, the National Marine Fisheries Service ("NMFS") found that the spring-run
12 chinook salmon population in the Sacramento River had been increasing due to the river's
13 tributaries, but that this overall increase masked significant declines in the mainstem. Indeed,
14 the NMFS predicted that the proposed operations would likely lead to extirpation of spring-
15 run chinook in the Sacramento River. *Id.* at 1169-70. Despite this prediction, NMFS made
16 a "no jeopardy" determination. Not surprisingly, the court found that complete extirpation
17 of the fish in the mainstem was not consistent with a no-jeopardy finding. The court further
18 found the opinion invalid because NMFS that failed to address recovery or consider critical
19 habitat. *Id.*

20 *Gutierrez* is distinguishable from this case. FWS does not predict extirpation of
21 humpback chub in the mainstem Colorado River, FWS addressed recovery and critical
22 habitat in its 2009 Supplement, and FWS gave a reasoned basis for concluding that chub in
23 the LCR and mainstem are a single population.

24 As already noted, the Court's review must be "highly deferential." *Nw. Ecosystem*
25 *Alliance*, 475 F.3d at 1140. The Court cannot set aside FWS's determination "if a reasonable
26 basis exists for its decision." *Id.* The Court finds that FWS has provided a reasonable
27 explanation for combining the LCR and mainstem populations into one recovery unit.
28

1 **5. Use of the 2009 Recovery Goals.**

2 The ESA requires FWS to “use the best scientific and commercial data available.”
3 16 U.S.C. § 1536(a)(2). The Trust argues that the 2009 Supplement’s reliance on the 2009
4 Recovery Goals is inappropriate because the goals have not been submitted for public
5 comment and peer review and therefore do not represent the best science on chub recovery.
6 The Trust cites *Idaho Farm Bureau Federation v. Babbitt*, 58 F.3d 1392, 1402-03 (9th Cir.
7 1995), in support of this argument. In *Idaho Farm Bureau*, FWS made the decision to list
8 a certain species of snail as endangered. FWS relied heavily on a USGS report which was
9 still in draft form and had not been presented for peer review or public comment. The Ninth
10 Circuit held that the “[f]ailure to provide the public with an opportunity to review the USGS
11 report constitute[d] a significant procedural error” and remanded FWS’s determination so
12 that it could “remedy its failure to make the USGS study available for comment.” *Id.* at
13 1405-06.

14 FWS explained in the 2009 Supplement why it relied on the 2009 Recovery Goals:

15 Recovery for the humpback chub is currently defined by the FWS Humpback
16 Chub Recovery Goals (U.S. Fish and Wildlife Service 2002b, 2009). In 2006,
17 a U.S. District Court ruling set aside the recovery goals, essentially because
18 they lacked time and cost estimates for recovery. The court did not fault the
19 recovery goals as deficient in any other respect, thus the FWS and the
20 GCDAMP, and the Upper Colorado River Endangered Fish Recovery Program
21 (UCRRP), the program that addresses conservation of all of the upper
22 Colorado River basin populations of humpback chub, continue to utilize the
23 underlying science in the recovery goals. [The 2009 Supplement] therefore
24 relies on the draft 2009 revisions to the recovery goals to define recovery . . .
25 as those goals represent the best available scientific information. The
26 Recovery Goals provide measurable recovery criteria which were not available
27 at the time of the [1994 Opinion].

28 Dkt. #180-1 at 22.

 FWS argues that its determination of what constitutes the best available science is
entitled to deference. FWS notes that the 2009 Recovery Goals include the most current
studies from leading experts in humpback chub population status, that the goals are based on
the science underlying the 2002 goals, and that the 2002 goals were subject to peer review.

 The Court cannot conclude that the 2009 Recovery Goals do not represent the best
available science simply because they have not undergone peer review and public comment.

1 Although that process clearly is designed to ensure the accuracy and reliability of scientific
2 information relied on by agencies, the absence of the process does not *per se* show that the
3 science used is not the best available. The Trust notes that the 2009 Recovery Goals have
4 been criticized by scientists, but those criticisms have been based at least in part on the fact
5 that the goals have not been peer reviewed or subject to public comment. Dkt. #227 at 44.
6 The Trust cites other scientists who have criticized the methods used to develop a minimum
7 viable population of 2,100 fish in the draft goals, but cites no science that provides an
8 alternative measure for recovery. *Id.* at 44-45. Some of the studies cited expressly decline
9 to provide a measure for chub recovery. *See* Dkt. #227-3 at 11.⁷ Thus, although the Trust
10 attacks the 2009 Recovery Goals by noting that they have not been peer reviewed and that
11 they have been criticized, the Trust does not identify recovery goals that it considers to be
12 better science.

13 When an agency is acting within the area of its expertise, at the frontiers of science,
14 “a reviewing court must generally be at its most deferential.” *Baltimore Gas & Elec. Co.*
15 *v. Natural Res. Defense Council, Inc.*, 462 U.S. 87, 103 (1983). This includes the agency’s
16 decision about what constitutes the best available science in the area of the agency’s
17 expertise. *San Luis & Delta-Mendota Water Auth. v. Salazar*, — F. Supp. 2d —, —, 2010
18 WL 582089, *4 (E.D. Cal. Feb. 12, 2010) (“What constitutes the ‘best’ available science
19 implicates core agency judgment and expertise to which Congress requires the courts to
20 defer[.]”). Moreover, the ESA requires that agencies “utilize the ‘best scientific . . . data
21 available,’ not the best scientific data possible.” *Bldg, Indus. Ass’n of Superior Cal. v.*
22 *Norton*, 247 F.3d 1241, 1247 (D.C. Cir. 2001) (quoting 16 U.S.C. § 1533(b)(1)(A))
23 (emphasis and ellipses in original).

24 The Court cannot conclude that FWS acted arbitrarily or capriciously when it relied
25 on the 2009 Recovery Goals as the best science currently available. True, those goals have

27 ⁷ One source cited by the Trust suggests that 7,000 fish would be a more appropriate
28 measure than the 2,100 identified in the goals. Of course, the best current estimate of chub
population exceeds this amount by 650 fish. Dkt. #180-1 at 36.

1 not been submitted for peer review or public comment in their current form, and they have
2 been subjected to some criticism by scholars, but the Trust has provided no basis upon which
3 the Court can conclude that better science was overlooked by FWS. The Trust has cited no
4 alternative measure of recovery that could be used by FWS in completing its statutorily-
5 mandated task of evaluating recovery. The 2009 Recovery Goals are utilized not only by
6 FWS, but also by the GCDAMP and UCRRP in evaluating chub recovery. The goals are
7 based on science that was peer reviewed in 2002. And although it undoubtedly is true that
8 science will produce more reliable data for evaluating chub recovery in the future – in part
9 as a result of studies being undertaken by Reclamation and others through the GCDAMP
10 process – the promise of better science to come does not undercut FWS’s determination of
11 what constitutes the best science now. “A decision about jeopardy must be made based on
12 the best science available at the time of the decision; the agency cannot wait for or promise
13 future studies.” *Ariz. Cattle II*, — F. Supp. 2d. at —, 2010 WL 582089 at *4; *see also Ctr.*
14 *for Biological Diversity v. Rumsfeld*, 198 F. Supp. 2d 1139, 1156 (D. Ariz. 2002) (“Looking
15 at the best scientific and commercial [data] available is a standard that requires far less than
16 conclusive proof. This standard recognizes that better scientific evidence will most likely
17 always be available in the future.”) (citation omitted)).

18 This is an area where, as the Supreme Court suggested, a reviewing court must be at
19 its most deferential. In the absence of any clear evidence to the contrary, the Court defers
20 to FWS’s determination that the 2009 Recovery Goals constitute the best science available
21 for evaluating chub recovery.

22 **6. Call for Further Research.**

23 The Trust argues that the 2009 Supplement is invalid because it calls for further
24 research on the effects of MLFF in the mainstem and therefore fails to follow ESA’s “best
25 available science” requirement. For reasons explained above, however, the Court has
26 concluded that FWS’s consideration of the mainstem and the LCR as a single unit, and its
27 use of the 2009 Recovery Goals as the best available science, are not arbitrary or capricious.
28 Given these conclusions, the 2009 Supplement is not invalidated by FWS’s acknowledgment

1 that further study is needed on MLFF effects in the mainstem. FWS did not defer a decision
2 on ESA compliance while awaiting further studies. It concluded, on the basis of the best
3 information available now, that the ESA is not violated. The Court has deferred to its
4 decision of what constitutes the best science.

5 The Trust argues that delaying for further studies is a tactic Reclamation has used in
6 the past to avoid changes in Dam operations. But these past actions of Reclamation are not
7 before the Court in this case. Moreover, the action challenged in this claim is FWS's, not
8 Reclamation's. And at least some of the studies that have occurred since MLFF was
9 implemented have produced highly significant data showing that the chub population below
10 the Dam is rebounding. The Court cannot conclude that FWS's decision is some kind of a
11 tactical delay effort.

12 **7. Discussion of Warm Water Nonnatives.**

13 The Trust argues that warm water predators of the chub are irrelevant to the 2009
14 Supplement's analysis because MLFF cools the water in the river rather than warming it.
15 The Court does not agree. Two of the PCEs that are critical for the chub's habitat are an
16 environment without out-of-balance predation (B2) and an environment without out-of-
17 balance competition (B3). Dkt. #180-1 at 7, 26. FWS has concluded that MLFF helps
18 ensure such an environment by suppressing warm water nonnatives that prey on and compete
19 with the chub. Such a conclusion clearly is relevant to the ESA issues addressed in the 2009
20 Supplement. *See* 50 C.F.R. § 420.02 (agency must consider PCEs).

21 The Trust next contends that FWS's concerns about the threat from warm water fish
22 are scientifically unfounded and render the 2009 Supplement invalid. The Court does not
23 agree. FWS's concern about the threat posed by nonnative predators and competitors is not
24 founded on speculation, but on the recent experience of the humpback chub in the Yampa
25 River. As described above, the Yampa's humpback chub population was decimated by the
26 influx of smallmouth bass during warm water conditions in 2002. Dkt. #180-1 at 58-59. The
27 Trust quarrels with the conclusions FWS draws from this event, arguing that the Yampa
28 experience is distinguishable and not likely to recur below Glen Canyon Dam. But this is

1 precisely the kind of area where the Court must “be at its most deferential” to agency
2 decisions. *Baltimore Gas & Elec.*, 462 U.S. at 103. FWS is the expert in this area. It has
3 been charged by Congress with protecting the humpback chub and with developing the
4 expertise necessary to accomplish that task. “In recognition of the agency’s technical
5 expertise the court usually defers to the agency’s analysis, particularly within its area of
6 competence.” *Ariz. Cattle II*, — F.3d at —, 2010 WL 2220036 at *2.

7 Moreover, FWS’s concern about warm water threats to the chub is not based on the
8 Yampa experience alone. In 2000, Reclamation conducted a low summer flow experiment
9 at Glen Canyon Dam. The experiment appeared to benefit all downstream species, native
10 and nonnative. Dkt. #180-1 at 68 (citing two studies). There is “evidence that nonnative fish
11 including fathead minnow and largemouth bass spawned in the mainstem above Diamond
12 Creek during the low summer steady flow, and there was no record of largemouth bass
13 reproducing above Diamond Creek prior to this.” *Id.* (citing 2002 study). The fathead
14 minnow and largemouth bass are known or suspected predators of the humpback chub. *Id.*
15 at 42. In addition, concerns similar to those from the Yampa have arisen with respect to the
16 humpback chub populations in the Desolation and Gray Canyons of the Green River.
17 Dkt. #180-1 at 68 (citing five studies). FWS has found that “[a] similar scenario also appears
18 to be occurring” in those chub populations. *Id.* Furthermore, a recent Annual Report on
19 Native Fish Monitoring by the Grand Canyon Monitoring Research Center noted that warmer
20 temperatures in the mainstem below the Dam “may greatly increase the relative abundance
21 of warm-water non-natives,” including striped bass, channel catfish, and common carp,
22 “thereby increasing the potential for negative interactions with native fishes.” Dkt. #225-4
23 at 18. Channel catfish and common carp are known or suspected predators of the chub.
24 Dkt. #180-1 at 42.

25 The Trust argues that FWS should be more concerned about cold water nonnatives
26 such as rainbow trout that have thrived in conditions created by MLFF. But FWS correctly
27 notes that these cold water predators have been shown to be controllable by mechanical
28 removal. *Id.* at 37, 44; Dkt. #136-7 at 60-61. The Court cannot conclude that FWS has acted

1 arbitrarily or capriciously in concluding that the threat from cold water predators already
2 subject to mechanical control in the mainstem below the Dam is less serious than the threat
3 of warm water predators that have not been subject to mechanical control in that area.

4 The Trust notes that the mechanical removal of rainbow trout planned for May and
5 June of 2010 was postponed by Reclamation in response to concerns expressed by the Zuni
6 Tribe of the Zuni Indian Reservation. *See* Dkt. #222. The Zuni Tribe regards the confluence
7 of the LCR and mainstem as sacred, and objects to the mass killing of trout in such a
8 location. Dkt. #222-2 at 1-4. In response to this concern, Reclamation postponed the 2010
9 fish removal pending further consultations with FWS and the Zuni Tribe. Dkt. #222.⁸ This
10 experience aptly illustrates the complex set of interests Reclamation must balance in
11 operating the Dam. Those interests include not only the endangered species below the Dam,
12 but also tribes in the region, the seven Colorado River basin states, large municipalities that
13 depend on water and power from Glen Canyon Dam, agricultural interests, Grand Canyon
14 National Park, and national energy needs at a time when clean energy production is
15 becoming increasingly important. In any event, the Court cannot conclude from the
16 postponement of the 2010 trout removal that FWS's 2009 Supplement is invalid. The Zuni's
17 concerns about fish killing present just as much of an obstacle to the mechanical removal of
18 warm water predators (the Trust's preferred course of action, *see* Dkt. #239) as it does for
19 the removal cold water predators. The Trust cannot reasonably rely on this obstacle as a
20 basis for opposing FWS and Reclamation's actions while at the same time arguing that any
21 increase in warm water predators could readily be handled by mechanical removal. *See* Dkt.
22 #239. Stated differently, the concerns expressed by the Zuni Tribe present just as much
23 difficulty for the Trust's requested remedy – steady flows that might result in an increase in
24 warm water predators – as it does for the agency's actions, and therefore cannot be relied on
25 to invalidate those actions.

26
27 ⁸ Reclamation had sought to resolve this concern during previous trout removals by
28 donating the removed trout to another local tribe for fertilizer. Dkt. #222-2 at 3. This
solution was not sufficient for the Zuni Tribe. *Id.*

1 The Trust also argues that FWS’s conclusions regarding warm water predators run
2 counter to the evidence because warmer water is beneficial to the chub. Specifically, the
3 Trust notes that increases in the chub’s population have been attributed in part to warming
4 of the mainstem due to drought conditions. True, but the warming of the mainstem
5 experienced thus far does not prove that warm water predators will not thrive if mainstem
6 temperatures are increased further through steady flows. As FWS has noted, Dam operators
7 confront a “tradeoff” between warming the water enough to benefit the chub and not
8 warming it so much as to injure the chub through a proliferation of warm water predators and
9 competitors. Dkt. #180-1 at 68. Because nobody can identify the precise point at which
10 warming of the river may transition from helping the chub to hurting the chub through a
11 proliferation of predators, FWS has chosen to accept Reclamation’s cautious approach –
12 continuing conditions that appear to be benefitting the chub, with experiments and
13 conservation measures designed to provide further benefits to the chub, without adopting a
14 radical change that could cause nonnative predators to flourish. As the 2009 Supplement
15 explains: “All of this information leads us to conclude that Reclamation’s proposed action
16 represents a reasoned approach, utilizing adaptive management, to test experimental flows
17 *cautiously* to determine appropriate long-term management of Glen Canyon Dam that
18 supports humpback chub recovery. . . . We believe Reclamation’s action will provide
19 valuable information without either compromising recovery or drastically altering the system
20 irresponsibly.” *Id.* at 86 (emphasis added).

21 The Trust argues that FWS’s concerns about warm water predators is belied by
22 conditions in the LCR and the fact that warm water predators have not thrived there. The
23 Trust suggests that warmer temperatures in the mainstem therefore will not necessarily cause
24 nonnatives to thrive. A study in the administrative record explains why conditions for
25 nonnatives in the LCR may be unique and not necessarily predictive of what will occur with
26 nonnatives in the mainstem if temperatures rise:

27 Native fishes still numerically dominate the lower LCR fish community
28 despite decades of encroachment by nonnative fishes. Presumably, LCR
native fishes possess adaptations that make them more resilient to flash floods
than nonnative fishes. Thus, LCR floods might not only be instrumental in

1 displacing nonnative fishes downriver into its perennial, lower corridor, but
2 also in flushing them out of the LCR and into the Colorado River. Other
3 physicochemical water properties, such as warm water temperatures, high
salinity, conductivity, and dissolved carbon dioxide, likely curtail the
colonization of some nonnative fishes in the lower LCR.

4 Dkt. #240-1 at 174 (citations omitted). The Trust presents no evidence that similar
5 conditions exist in the mainstem and would suppress warm water nonnatives if mainstem
6 temperatures were raised through steady flows. The historical experience in the LCR
7 therefore does not show FWS's concerns about predators in the mainstem to be unfounded.

8 In a supplemental filing, the Trust submits recent studies suggesting that mechanical
9 control of warm water nonnatives has been effective in the Yampa River. Dkt. #239.
10 Although these studies appear to support the Trust's argument that warm nonnatives could
11 be removed effectively, the Court cannot find FWS's conclusions arbitrary and capricious
12 because a competing view is possible or even supportable. *Motor Vehicle*, 463 U.S. at 43;
13 *Pac. Coast Fed'n*, 265 F.3d at 1034.

14 **8. Reliance on Mitigation Measures.**

15 An agency may rely on mitigation measures to support conclusions in a biological
16 opinion. Those mitigation measures, however, must include a "clear, definite commitment
17 of resources[.]" *Nat'l Wildlife Fed'n v. NMFS*, 524 F.3d 917, 936 (9th Cir. 2008). The
18 measures must also be "reasonably specific, certain to occur, and capable of
19 implementation[.]" *Ctr. for Biological Diversity*, 198 F. Supp. 2d at 1152. They further must
20 be "subject to deadlines or otherwise-enforceable obligations" and "must address the threats
21 to the species in a way that satisfies the jeopardy and adverse modification standards." *Id.*

22 The Trust argues that FWS's no-jeopardy and no-adverse-modification conclusions
23 rely on several mitigation measures which fail to meet these standards. The Trust contends
24 that the adaptive management program discussed in the 2009 Supplement lacks the specific
25 and binding plans required under Ninth Circuit law and does not eliminate known threats to
26 the chub. The Trust also argues that the conservation measures mentioned in the 2009
27 Supplement are not binding or certain to occur.

1 The Court does not read the 2009 Supplement as relying primarily on mitigation
2 measures. FWS states that such measures “increase [its] confidence” in the no jeopardy and
3 no adverse modification conclusions. Dkt. #180-1 at 82. Those conclusions are based
4 primarily on the increasing chub population below the Dam, comparison of those trends to
5 the 2009 Recovery Goals, and mitigation measures that already have occurred (mechanical
6 removal of cold water predators from the mainstem near the LCR, translocation of chub
7 above Chute Falls on the LCR and to Shinumo Creek, and creation of the chub refuge at
8 Dexter National Fish Hatchery and Technology Center). Planned mitigation measures,
9 although noteworthy, are not the primary reason that FWS found no jeopardy or adverse
10 modification. As a result, this case is distinguishable from cases in which the consulting
11 agencies “relied significantly on future [mitigation measures],” *National Wildlife*
12 *Federation*, 524 F.3d at 935, or relied “entirely on the successful and prompt implementation
13 of [mitigation measures],” *Center for Biological Diversity*, 198 F. Supp. 2d at 1152.

14 Moreover, the 2009 Supplement notes that all of the conservation measures it
15 considers “are currently being implemented by Reclamation to some degree.” Dkt. #180-1
16 at 82. “Reclamation’s continuing implementation of these measures is in marked contrast
17 to conditions at the time of the [1994 Opinion]; none of these elements were funded and
18 implemented at that time, although some had been identified as potential conservation
19 measures.” *Id.* at 17-18. These measures include the translocation of chub to Shinumo,
20 Bright Angel, and Havasu Creeks, mechanical removal of trout, studying and modifying the
21 variations in flow between months, the Nearshore Ecology Study started in 2008, creation
22 of a chub refuge at the Dexter National Fish Hatchery and Technology Center, establishment
23 of the consultation trigger, and the completion of plans for management of the humpback
24 chub and the LCR. *Trust II*, 623 F. Supp. 2d at 1023-24. The Court concludes that FWS’s
25 partial reliance on these ongoing conservation measures is not unreasonable.

26 9. Conclusion.

27 “As long as the agency decision was based on a consideration of relevant factors and
28 there is no clear error of judgment, the reviewing court may not overturn the agency’s action

1 as arbitrary and capricious.” *Ariz. Cattle I*, 273 F.3d at 1236. For reasons explained above,
2 the Court concludes that FWS has considered the relevant factors and has not made a clear
3 error of judgment. As a result, the Federal Defendants are entitled to summary judgment on
4 the 2009 Supplement portion of Claim 9.

5 **C. The 2009 ITS is Invalid.**

6 The Trust contends that the 2009 ITS is legally insufficient under the ESA for three
7 primary reasons: (1) FWS claims that the amount of take cannot be quantified, but this claim
8 runs counter to the evidence before FWS and is contrary to its other findings; (2) FWS’s
9 consultation trigger is not “linked to the take of the protected species” in the mainstem; and
10 (3) the ITS does not include measures that minimize the authorized take.

11 **1. Quantifying Take.**

12 The 2009 ITS concludes that MLFF will result in some take of the chub, but that the
13 take cannot be quantified given the small size of the chub likely to be affected by MLFF and
14 their remote location. Dkt. #180-1 at 87. The 2009 ITS further concludes that, given “[o]ur
15 lack of understanding of the habitat needs of humpback chub in the mainstem,” there is no
16 quantifiable amount of habitat that can act as a surrogate for taking of the chub. *Id.* FWS
17 therefore concludes that “the anticipated level of take of humpback chub is unquantifiable.”
18 *Id.* The Trust argues that this assertion is incorrect because FWS relies extensively on chub
19 population data. If chub population data can be collected, then take can be quantified.

20 The Court does not agree. As explained in the 2009 ITS, the chub expected to be
21 taken by MLFF are “small size” subadults who cannot readily be counted. *Id.* at 82; *see also*
22 *id.* at 66 (“Fluctuations thus likely result in some increased mortality to humpback chub eggs
23 and juvenile fish due to cold temperatures[.]”), 76 (“daily fluctuations of the MLFF may
24 result in stranding of juvenile humpback chub”). FWS does not expect a decline in the adult
25 chub. *Id.* at 82. The adult population data routinely relied on by FWS do not measure the
26 smaller fish likely to be taken by MLFF.

27 “Congress indicated its preference for a numerical value” when an ITS is issued, but
28 it also recognized that there are certain instances where a numerical value cannot be obtained.

1 *Ariz. Cattle I*, 273 F.3d at 1250. For example, “it may not be possible to determine the
2 number of eggs of an endangered or threatened fish which will be sucked into a power plant
3 when water is used as a cooling mechanism.” *Or. Natural Res. Council*, 476 F.3d at 1037
4 (quoting H.R.Rep. No. 97-567, at 27 (1982), reprinted in 1982 U.S.C.C.A.N. 2807, 2827).
5 Similarly, FWS has concluded that it is not possible to determine the number of young chub
6 that will be lost due to the effects of MLFF in the Grand Canyon. The Court does not find
7 the 2009 ITS invalid because it fails to place a number on the permitted level of take. FWS
8 sufficiently explains why a numerical measure for the taking of young chub is not possible.
9 Dkt. #180-1 at 87.

10 **2. Causal Link.**

11 The Trust contends that the 2009 ITS is also illegal because the chosen metric for
12 determining when incidental take has been exceeded – FWS’s consultation trigger – is not
13 “linked to the take of the protected species” in the mainstem. As discussed above, agencies
14 should attempt to use a numerical value of take. *Ariz. Cattle I*, 273 F.3d at 1250. “A
15 surrogate is permissible if no number may be practically obtained,” but the surrogate “must
16 be able to perform the functions of a numerical limitation,” must “contain measurable
17 guidelines to determine when incidental take would be exceeded,” and must be “linked to the
18 take of the protected species.” *Or. Natural Res. Council*, 476 F.3d at 1038.

19 The consultation trigger does not satisfy these requirements. As noted above, the
20 2009 ITS concludes that MLFF will not result in a significant drop in the adult chub
21 population. Dkt. #180-1 at 87. Take instead will occur among young chub in the mainstem.
22 *Id.* FWS does not explain how a trigger based on the adult chub population that is not
23 expected to be affected by the take of young chub constitutes an accurate measure for take
24 of young chub. Nor does FWS explain why the level of the trigger itself – a significant
25 decline in the number of adult chub in any single year or a drop in the population of adult fish
26 below 3,500 – represents the point at which the taking of young chub should be deemed
27 excessive. FWS merely notes that young chub will be taken by MLFF, the level of their take
28 cannot be quantified, and, in a single sentence, that FWS therefore will use the consultation

1 trigger as the point at which the take statement will be deemed exceeded. *Id.* As the Ninth
2 Circuit has held, a surrogate for take must perform the function of a numerical limitation by
3 identifying the point at which it will be clear that the permitted level of take has been
4 exceeded. *Or. Natural Res. Council*, 476 F.3d at 1038. FWS has failed to show why the
5 adult-based consultation trigger, established by FWS and Reclamation pursuant to 50 C.F.R.
6 § 402.16(b), either accurately measures the take of young chub or correctly identifies the
7 level at which the take of young chub becomes excessive.⁹

8 **3. Measures to Minimize Take.**

9 The Trust argues that the 2009 ITS violates the ESA because it does not include
10 “reasonable and prudent measures” (“RPMs”) that “minimize” the authorized take.
11 Dkt. #227 at 41 (quoting 16 U.S.C. § 1536(b)(4)(ii)). It argues that FWS included RPMs in
12 the 2009 ITS, *see* Dkt. #180-1 at 88, but that those RPMs do not minimize take caused by
13 Dam operations because they require only monitoring and an annual report. FWS argues in
14 response that it need not include RPMs because, under 16 U.S.C. § 1536(b)(4)(ii), it need
15 only include such measures as it considers “necessary or appropriate to minimize such
16 impact[.]”

17 The statute provides that if FWS concludes that the agency action at issue will not
18 violate the ESA and will result only in incidental take that does not violate the ESA, FWS
19 “shall provide [Reclamation] . . . with a written statement that . . . specifies those [RPMs] that
20 [FWS] considers necessary or appropriate to minimize such impact[.]” *Id.* The statute
21 further provides that the statement must “set[] forth the terms and conditions (including, but
22 not limited to, reporting requirements) that must be complied with by [Reclamation] to
23 implement the [RPMs].” *Id.* § 1536(b)(4)(iv).

24
25 ⁹ 50 C.F.R. § 402.16(b) requires Reclamation to reinitiate formal consultation with
26 FWS “[i]f new information reveals effects of the action that may affect listed species or
27 critical habitat in a manner or to an extent not previously considered[.]” That the 2009
28 Supplement established the consultation trigger under this provision is clear from its
quotation of this language, even though the supplement cites to 50 C.F.R. § 402.16(c).
The obligation to reinitiate formal consultation when the level of take
specified in the ITS has been exceeded, by contrast, is found in 50 C.F.R. § 402.16(a).

1 The 2009 ITS does not address this requirement directly. It does require Reclamation
2 to “[m]onitor the effects of the proposed action on humpback chub and its habitat to
3 document the abundance of adult humpback chub in relation to the consultation trigger and
4 report the findings to FWS” annually. Dkt. #180-1 at 88. But it does not explain why such
5 reporting (which is required in any event by the statute, *see* 16 U.S.C. § 1536(4)(iv))
6 constitutes the only RPM necessary to minimize the take of young chub through MLFF. If
7 FWS has concluded that no other steps are necessary or appropriate to minimize the impact
8 of MLFF on young chub, it should explain why.

9 The Trust also argues that the consultation trigger is based on the age-structured mark
10 recapture model (“ASMR”) for measuring adult chub population (Dkt. #180-1 at 82), and yet
11 Reclamation and FWS do not intend to use this model annually due to budget constraints.
12 The 2009 Supplement explains that ASMR will “not be utilized annually, but only employed
13 to test the humpback chub consultation trigger if other data, such as annual mark-recapture
14 based closed population estimates of humpback chub abundance in the [LCR] . . . indicate
15 that the population is declining to the abundance level defined in the trigger.” Dkt. #180-1
16 at 17. The annual mark-recapture method of counting chub has been used by the Grand
17 Canyon Monitoring and Research Center (“GCMRC”) and FWS since at least 2000 to
18 measure the population of humpback chub, including field trips to conduct the sampling in
19 the spring and fall of each year. Dkt. #240-1 at 298. A July 2009 report submitted by FWS
20 scientists to GCMRC characterizes this sampling program as “rigorous.” *Id.* Although the
21 sampling is based on a closed population estimate – meaning that it estimates population only
22 at the time of the sampling – it has been relied on for some years to provide accurate
23 estimates of chub population. The 2009 Supplement states that “[t]his monitoring provides
24 an annual assessment of the humpback chub population in the LCR by collecting the mark-
25 recapture data that support[] an annual closed population estimate for the species in the
26 LCR.” Dkt. #180-1 at 12. The Trust does not criticize the method or explain why it is not
27 an accurate means of tracking chub population. The Court finds no basis to conclude that
28 FWS’s reliance on this long-used measurement tool is arbitrary and capricious.

1 **4. Conclusion and Further Proceedings.**

2 The 2009 ITS does not include the required causal link between the incidental take
3 and the take surrogate. It also fails sufficiently to address RPMs as required by the ESA. As
4 a result, the Trust is entitled to summary judgment on this portion of Claim 9. The Court
5 will remand the 2009 ITS to FWS for reconsideration in light of this decision. The Court
6 will require FWS to provide a revised ITS by September 1, 2010.

7 **V. Claim 10 – Does FWS’s 2009 ITS Violate NEPA?**

8 NEPA requires federal agencies to prepare an environmental impact statement (“EIS”)
9 to evaluate the potential environmental impact of any proposed “major Federal action[]
10 significantly affecting the quality of the human environment[.]” 42 U.S.C. § 4332(C). A
11 “major federal action” includes “new and continuing activities, including projects and
12 programs entirely or partly financed, assisted, conducted, regulated, or approved by federal
13 agencies.” 40 C.F.R. § 1508.18(a). When a federal agency takes a major federal action, it
14 must prepare an EIS “where there are substantial questions about whether a project may
15 cause significant degradation of the human environment.” *Native Ecosystems Council v. U.S.*
16 *Forest Service*, 428 F.3d 1233, 1239 (9th Cir. 2005).

17 FWS did not prepare an EIS before issuing the 2009 ITS. The Trust contends that this
18 violated NEPA. Significantly, the Trust brings Claim 10 against FWS, not Reclamation. It
19 is not the operation of the Dam, but FWS’s issuance of the 2009 ITS, that the Trust claims
20 to be a “major federal action.” FWS argues that this claim fails because Reclamation, not
21 FWS, will be taking action under the 2009 ITS. The Court agrees.

22 Courts repeatedly have declined to require consulting agencies to comply with NEPA
23 when a separate federal agency takes the action. *See Consolidated Salmonid Cases*, 688
24 F.Supp.2d 1013, 1025 (E.D. Cal. 2010) (“[I]t is the operation of the projects by Reclamation,
25 not the issuance of the BiOp that triggers NEPA.”); *San Luis & Delta-Mendota Water Auth.*
26 *v. Salazar (Delta Smelt)*, 686 F.Supp.2d 1026, 1044 (E.D. Cal. 2009) (Reclamation rather
27 than FWS is the “appropriate lead agency under NEPA.”); *Micosukee Tribe of Indians of*
28 *Fla. v. U.S.*, 430 F.Supp.2d 1328, 1335 (S.D. Fla. 2006) (“[A]ny physical impacts on the

1 environment result from actions taken by the action agency (the Corps) in response to the
2 ITS,” and, for this reason, “the Corps” and not FWS “was required to . . . undertake its own
3 NEPA review.”); *City of Santa Clarita v. U.S. Dep’t of Interior*, No. CV02-00697 DT
4 (FMOx), 2006 WL 4743970, *19 (C.D. Cal. Jan. 30, 2006) (FWS “is not the ‘action agency’
5 with regulatory jurisdiction to approve this project,” but rather “BLM is the federal agency
6 that approved the Project and that approval is a ‘major federal action’ for NEPA purposes.”).

7 The Trust cites *Ramsey v. Kantor*, 96 F.3d 434, 437 (9th Cir. 1996), in support of its
8 argument. In *Ramsey*, the NMFS issued an ITS that allowed taking of endangered salmon
9 in the Columbia River. The ITS did not concern the actions of another federal agency, but
10 was issued so the states of Oregon and Washington could promulgate regulations governing
11 fishing in the Columbia River. Because Oregon and Washington were not federal agencies
12 required to comply with NEPA, and yet could not promulgate fishing regulations without the
13 ITS, the Ninth Circuit found that the ITS was “the functional equivalent to a permit” and that
14 the NMFS action of issuing the permit constituted a major federal action triggering NEPA
15 compliance. *Ramsey’s* holding has been construed narrowly. See, e.g., *Sw. Ctr. for*
16 *Biological Diversity v. Klasse*, No. CIV S-97-1969 GEB JF, 1999 WL 34689321, *11 (E. D.
17 Cal. Apr. 1, 1999) (*Ramsey’s* holding “evinces that it did not intend to require the FWS to
18 file NEPA documents every time it issues an incidental take statement to a federal agency”).
19 As courts have noted, there was “no action agency in [*Ramsey*] that was responsible for
20 NEPA compliance.” *Miccosukee*, 430 F. Supp. 2d at 1335. NMFS was the only federal
21 agency involved. When another federal agency will take the action authorized by the ITS,
22 courts interpreting *Ramsey* have held that the action agency, not FWS or NMFS, must
23 comply with NEPA. See *Consolidated Salmonid Cases*, 688 F. Supp. 2d at 1022; *Delta*
24 *Smelt*, 686 F. Supp. 2d at 1044; *Miccosukee*, 430 F. Supp. 2d at 1335; *City of Santa Clarita*,
25 2006 WL 4743970 at *19.

26 The Trust argues that the relevant inquiry under *Ramsey* is not whether an ITS is
27 issued on behalf of a non-federal actor, but whether one of the two actors actually complied
28 with NEPA. It argues that *Ramsey* was distinguished in the cases cited above because

1 another agency had already complied with NEPA. But if this is a basis for distinguishing
2 *Ramsey*, it is distinguishable here. Reclamation has complied with NEPA. Reclamation
3 performed an Environmental Assessment for the 2008 Experimental Plan, and the Court has
4 rejected the Trust’s assertion that the environmental assessment failed to comply with NEPA.
5 *Trust II*, 623 F. Supp. 2d at 1025-32. Other courts sensibly have recognized that two federal
6 agencies need not conduct NEPA analyses for the same action. *See Miccosukee*, 430 F.
7 Supp. 2d at 1336 (“[t]o expect or require FWS to submit its own EIS, in spite of the fact that
8 it was not the action agency and that the Corps had already issued one is nonsensical”).

9 The Court concludes that FWS was not required to conduct a NEPA analysis when
10 it issued the 2009 ITS. FWS is entitled to summary judgment on Claim 10.

11 **VI. Claim 11 - Do the 2009 Recovery Goals Violate the ESA?**

12 Under the ESA, FWS must prepare recovery plans, also called recovery goals, “for
13 the conservation and survival of endangered species and threatened species.” 16 U.S.C.
14 § 1533(f)(1). Recovery plans, according to FWS, are “the appropriate vehicle to provide
15 guidance on actions necessary to delist a species.” Policy for Evaluation of Conservation
16 Efforts When Making Listing Decisions, 68 Fed. Reg. 15,100-02 (Mar. 28, 2003) at 15,101
17 (“[W]e note that a recovery plan is the appropriate vehicle to provide guidance on actions
18 necessary to delist a species.”); *see also Fund for Animals v. Babbitt*, 903 F. Supp. 96 (D.
19 D.C. 1995). In other words, the primary purpose of a recovery plan is to ensure that FWS
20 is making progress toward recovery of the endangered species and to provide a guideline for
21 determining when sufficient progress has been made to delist the species.

22 Every recovery plan must, “to the maximum extent practicable,” include (1) site-
23 specific management actions that will achieve the plan’s goal for survival and conservation
24 of the species, (2) objective measurable criteria which, when met, could allow the
25 endangered species to be removed from the endangered species list, and (3) time and cost
26 estimates for carrying out the measures needed to achieve the plan’s goals. 16 U.S.C.
27 § 1533(f)(1)(B). The ESA also requires FWS to provide public notice and an opportunity
28 for public review and comment on such plan. *Id.* § 1533(f)(4). The Trust claims that the

1 2009 Recovery Goals violate the ESA and the APA because FWS failed to submit them for
2 public comment and peer review and because they do not include detailed time and cost
3 estimates.

4 **A. APA Jurisdiction.**

5 The Trust contends that this Court has jurisdiction to determine the validity of the
6 2009 Recovery Goals pursuant to the APA, which provides jurisdiction to review any “final
7 agency action.” 5 U.S.C. § 704. “As a general matter, two conditions must be satisfied for
8 agency action to be final: First, the action must mark the consummation of the agency’s
9 decisionmaking process – it must not be of a merely tentative or interlocutory nature. And
10 second, the action must be one by which rights or obligations have been determined, or from
11 which legal consequences will flow.” *Bennett v. Spear*, 520 U.S. 154, 177-78 (1997)
12 (internal quotations and citations omitted); see *Hells Canyon Pres. Council v. U.S. Forest*
13 *Services*, 593 F.3d 923, 930 (9th Cir. 2010); *Defenders of Wildlife v. Tuggle*, 607 F. Supp.
14 2d 1095, 1099 (D. Ariz. 2009). ““The core question is whether the agency has completed its
15 decisionmaking process, and whether the result of that process is one that will directly affect
16 the parties.”” *Tuggle*, 607 F. Supp. 2d at 1099 (quoting *Ore. Nat. Desert Ass’n v. U.S. Forest*
17 *Serv.*, 465 F.3d 977, 982 (9th Cir. 2006)). Both conditions must be met for the agency’s
18 action to be considered final, and the party seeking review of the action bears the burden of
19 proving that jurisdiction is proper. *Id.*

20 The 2009 Recovery Goals have not been finally approved by FWS, nor have they
21 been subjected to public comment or peer review. As a result, FWS contends that they are
22 merely a draft and do not constitute final agency action subject to review by the APA. The
23 Trust argues that the 2009 Recovery Goals constitute final agency action because FWS used
24 them to support the 2009 Supplement and, in so doing, implemented them in a concrete way
25 that rendered them final. Dkt. #227 at 48. The Court concludes that the Trust has failed to
26 satisfy its burden of showing that both prongs of *Bennett* are satisfied.

1 **1. Consummation of Decisionmaking.**

2 To satisfy the first prong of *Bennett*, “the action must mark the consummation of the
3 agency’s decisionmaking process[.]” 520 U.S. at 177-78. Although the Trust makes several
4 arguments as to how the 2009 Recovery Goals satisfy *Bennett*’s second prong, it fails to
5 address how the first prong is satisfied. *See* Dkt. #227 at 48; Dkt. #232 at 28.

6 The Court concludes that the first prong is not satisfied. FWS expressly states that the
7 2009 Recovery Goals are not complete. They remain in draft form. Indeed, the goals have
8 only recently been issued for public comment and peer review. Dkt. ##180-1 at 7, 22; 227-1
9 at 187-304. FWS cites the goals in the 2009 Supplement not as a final set of goals to govern
10 chub delisting, but as the best available science for evaluating chub recovery as required in
11 a biological opinion. Dkt. #180-1 at 22, 69. The Court cannot conclude that this analytical
12 use of the goals and their science is tantamount to their final promulgation by FWS.

13 **2. Legal Consequences.**

14 The Trust has also failed to show that the second prong of *Bennett* is satisfied. No
15 rights or obligations have been determined, and no legal consequences yet flow, from the
16 2009 Recovery Goals. *Bennett*, 520 U.S. at 177-78. Although the science of the goals was
17 relied on by FWS to evaluate chub recovery in the 2009 Supplement, it is the 2009
18 Supplement, not the analytical tools it utilizes, that constitutes the final agency action.

19 The primary case relied upon by the Trust, *Nevada v. Herrington*, 777 F.2d 529, 535
20 (9th Cir. 1985), was decided before *Bennett*. 520 U.S. at 154; *see Nevada v. Herrington*, 777
21 F.2d 529, 535 (9th Cir. 1985). Moreover, *Herrington* did not determine whether agency
22 action was final for purposes of APA review, but whether a challenge to a draft guideline
23 was ripe for adjudication.

24 The Trust also relies on an order by Judge Martone in a related case. Judge Martone
25 stated that the Trust could not challenge the 2002 Recovery Goals until they were “relied
26 upon to support some other action.” *See* Dkt. #227-1 at 530. The Trust argues that the 2009
27 Recovery Goals have now been relied upon to support the 2009 Supplement, and therefore
28 constitute a final agency action. Judge Martone’s order, however, held that the 2002

1 Recovery Goals were *not* a final agency action. *Id.* Any statement he made about when that
2 situation might change was dictum. The Court must apply the standard set forth in *Bennett*,
3 not dictum from a related case.

4 The Trust also relies heavily on this court’s decision in *Defenders of Wildlife v.*
5 *Tuggle*, 607 F. Supp. 2d at 1112-15. In *Tuggle*, the defendant agency argued that its annual
6 operating instructions were not final agency actions and therefore were not reviewable under
7 the APA. Judge Bury found that they were final agency actions because they had legal force,
8 would require immediate compliance by the plaintiffs, and “fix[ed] the legal relationship”
9 between the agency and the plaintiffs. He clearly noted that an action is not final when it
10 “carrie[s] no direct consequences and serve[s] more like a tentative recommendation than a
11 final and binding determination.” *Id.* at 1111.

12 As noted above, the 2009 Recovery Goals remain in draft form and do not, by
13 themselves, have legal force, require compliance, fix legal relationships, or carry direct
14 consequences. Had FWS used them for the purpose for which recovery goals are created –
15 to delist the species – this would be a different issue. But the Court cannot conclude that
16 FWS’s using them as an analytical tool renders them a final agency action with direct legal
17 force and consequences. The Court concludes that the 2009 Recovery Goals are not a final
18 agency action subject to judicial review under the APA.

19 **B. ESA Citizen Suit Provision.**

20 The Trust also argues that this Court has jurisdiction under the citizen suit provision
21 of the ESA. That provision allows a person to sue when “there is alleged a failure of the
22 Secretary to perform any act or duty under section 1533 of this title which is not
23 discretionary.” 16 U.S.C. § 1540(g)(1)(C). The Trust argues that FWS failed to submit the
24 2009 Recovery Goals for public and peer review as required by the ESA, and include
25 detailed time and cost estimates in the recovery plan as required by the ESA. The Court
26 disagrees that these are mandatory duties FWS must perform when the 2009 Recovery Goals
27 are still in draft form.

1 The Trust is correct that the 2009 Recovery Goals must be presented to the public
2 before final approval, but the goals remain in draft form and only recently have been issued
3 for public review. *See* Dkt. #227-1 at 189 (“Public Review Draft” dated July 2009). FWS
4 is in the process of complying with its mandatory duty under the ESA. 16 U.S.C.
5 § 1533(f)(4).

6 Although the ESA also requires that a final recovery plan, to the maximum extent
7 practicable, include cost and time estimates, 16 U.S.C. § 1533(f)(1)(B), the ESA does not
8 state that draft goals must include such estimates. FWS and the Trust disagree on whether
9 the 2009 Recovery Goals contain adequate time and cost estimates, but the Court concludes
10 that it need not resolve this issue given that the goals are currently in draft form. FWS’s
11 mandatory duty will arise only when the goals are final.

12 The Trust has not shown that FWS has failed to act on a mandatory duty under the
13 ESA. The Court therefore concludes that it does not have jurisdiction under the citizen suit
14 provision of the ESA. Because the Court lacks jurisdiction to review the draft 2009
15 Recovery Goals, it will enter summary judgment for Defendants on Claim 11.

16 **VII. Claim 1 – Does the Operation of the Dam Jeopardize the Chub?**

17 Section 7(a)(2) of the ESA requires each federal agency to “insure that any action
18 authorized, funded, or carried out by such agency . . . is not likely to jeopardize the continued
19 existence of any endangered species or threatened species[.]” 16 U.S.C. § 1536(a)(2).
20 Claim 1 alleges that Reclamation’s operation of the Dam under MLFF jeopardizes the
21 humpback chub in violation of this provision. To jeopardize “means to engage in an action
22 that reasonably would be expected, directly or indirectly, to reduce appreciably the likelihood
23 of both the survival and recovery of a listed species in the wild by reducing the reproduction,
24 numbers, or distribution of that species.” 50 C.F.R. § 402.02.¹⁰

25
26 ¹⁰ For reasons noted above, this regulation may well be invalid to the extent it requires
27 a jeopardy-creating action to reduce the likelihood of “both the survival and recovery” of an
28 endangered species. Such a definition suggests that an action which reduces the likelihood

1 Reclamation’s primary defense to Claim 1 is the 2008 Opinion and 2009 Supplement.
2 Reclamation asserts that it reasonably relied on the FWS opinion and therefore cannot be
3 found to have violated the ESA. Applicable federal regulations make clear, however, that
4 Reclamation has an independent duty to determine the lawfulness of its actions: “Following
5 the issuance of a biological opinion, the Federal agency shall determine whether and in what
6 manner to proceed with the action in light of its section 7 obligations and the . . . biological
7 opinion.” 50 C.F.R. § 402.15(a). The Ninth Circuit has explained that “[c]onsulting with
8 FWS alone does not satisfy an agency’s duty under the Endangered Species Act. An agency
9 cannot ‘abrogate its responsibility to ensure that its actions will not jeopardize a listed
10 species; its decision to rely on a FWS biological opinion must not have been arbitrary or
11 capricious.’” *Res. Ltd., Inc. v. Robertson*, 35 F.3d 1300, 1304 (9th Cir.1994) (quoting
12 *Pyramid Lake Paiute Tribe of Indians v. U.S. Dep’t of the Navy*, 898 F.2d 1410, 1414 (9th
13 Cir. 1990)).

14 In addition to the Environmental Assessment mentioned above and addressed in detail
15 in *Trust II*, Reclamation produced a substantial Biological Assessment of the 2008
16 Experimental Plan. *See* Dkt. #27-2 at 91-236. This Biological Assessment was issued in
17 December of 2007 as part of Reclamation’s consultation with FWS. The Biological
18 Assessment noted that the humpback chub population below the Dam reached a low of 2,400
19 to 4,400 adult fish in 2001. The population subsequently increased by 20 to 25%, reaching
20 approximately 6,000 by 2006. *Id.* Current population estimates place the chub adult
21 population at 7,650 adult fish. Dkt. #180-1 at 36. Modeling indicates that the increase in
22 population began as early as 1996 – about the time MLFF operations began – but no later
23 than 1999. The increase thus started several years before Reclamation’s elimination of
24 rainbow trout, warmer water temperatures due to drought, the 2000 steady flow experiment,

25
26 of only one – survival or recovery – does not constitute jeopardy, a misreading of the ESA.
27 *See Gifford Pinchot*, 378 F.3d at 1069. The Court is not relying on this portion of the
28 definition.

1 or the high flow tests in 2004 and 2008. Dkt. #27-2 at 161-62. In other words, it appears that
2 conditions in the river under MLFF caused the chub population to increase before other
3 beneficial events occurred. Dkt. #180-1 at 36-37.

4 In addition to these positive population trends, Reclamation has established a second
5 spawning population of chub above Chute Falls on the Little Colorado River, has
6 translocated chub to Shinumo Creek, has eliminated trout from Bright Angel Creek in
7 preparation for placing chub there, and plans to translocate chub to Havasu Creek.
8 Reclamation has also established a failsafe population of chub at the Dexter National Fish
9 Hatchery and Technology Center, has engaged in several rounds of mechanically removing
10 rainbow and brown trout from key chub stretches of the mainstem, and is in the process of
11 completing the Nearshore Ecology Study that will shed significant light on chub conditions
12 in the mainstem. Warming of the river due to drought conditions in Lake Powell is also
13 likely to have beneficial effects.

14 The Trust's primary basis for asserting that Dam operations jeopardize the chub is
15 FWS's 1994 Opinion and subsequent FWS statements consistent with that opinion. FWS has
16 changed its opinion, and now concludes that MLFF does not jeopardize the chub within the
17 meaning of the ESA. As explained above, the Court finds that FWS adequately has
18 explained its change of opinion. The Court also concludes, for reasons stated above, that it
19 must defer to FWS's current no-jeopardy opinion.

20 The purpose of the ESA is "to prevent animal and plant species endangerment and
21 extinction caused by man's influence on ecosystems, and to return the species to the point
22 where they are viable components of their ecosystems." *Ariz. Cattle II*, — F.3d at —, 2010
23 WL 2220036 at *5 (quotations omitted). The best current science suggests that this purpose
24 is being realized for the humpback chub. The Court will grant Defendants' motion for
25 summary judgment on Claim 1.

1 **VIII. Claim 2 – Does the Operation of the Dam Destroy Critical Chub Habitat?**

2 Section 7(a)(2) of the ESA requires each federal agency to ensure that its action is not
3 likely to “result in the destruction or adverse modification of the habitat of [any endangered]
4 species[.]” 16 U.S.C. § 1536(a)(2). Claim 2 alleges that Reclamation is violating this
5 provision by destroying and adversely modifying the chub’s critical habitat.

6 FWS and Reclamation have concluded that implementation of the 2008 Experimental
7 Plan, including its MLFF component, will not destroy or adversely modify chub critical
8 habitat. This was the primary issue on which the Court required FWS to revise its biological
9 opinion. On remand, FWS reached the same conclusion it had in the 2008 Opinion. Having
10 evaluated the effect of MLFF on PCEs in both reaches of chub critical habitat below the
11 Dam, the Handbook definition of adverse modification, the growing number of chub below
12 the Dam, and the possible effect of MLFF in suppressing nonnative predators and
13 competitors of the chub, FWS concluded that “implementation of the MLFF with steady
14 releases in September and October [as required by the 2008 Experimental Plan] . . . is not
15 likely to destroy or adversely modify designated critical habitat for the humpback chub.”
16 Dkt. #180-1 at 80. Reclamation relies on this conclusion as validating its own decision
17 regarding Dam operations. For reasons discussed at length above, the Court finds that this
18 conclusion is not arbitrary and capricious and therefore will enter judgement for Defendants
19 on Claim 2.

20 Although the Court was strongly inclined to rule in favor of the Trust on Claim 2, *see*
21 *Trust II*, 623 F. Supp at 1041, the Court now finds that FWS has provided a reasoned basis
22 for its conclusion that MLFF does not destroy or adversely modify chub critical habitat. The
23 standard of review “is highly deferential, presuming the agency action to be valid and
24 affirming the agency action if a reasonable basis exists for its decision.” *Nw. Ecosystem*
25 *Alliance*, 475 F.3d at 1140. The Court accordingly will enter summary judgment in favor
26 of the Federal Defendants on Claim 2.

1 **IX. Claim 3 – Does the Operation of the Dam “Take” the Chub?**

2 Section 9 of the ESA makes it unlawful for any person to “take” any endangered
3 species. 16 U.S.C. § 1538(a)(1)(B). Reclamation’s primary defense against Claim 3 is the
4 2009 ITS. As discussed above, the 2009 ITS must be reconsidered by FWS. As a result, the
5 Court will refrain from ruling on this claim until the 2009 ITS is reconsidered.

6 **IT IS ORDERED:**

7 1. The 2009 ITS is remanded to FWS for reconsideration consistent with this
8 order. FWS shall have until September 1, 2010, to revise the 2009 ITS. A copy of the new
9 ITS shall be provided to counsel for the Trust on or before the close of business on
10 September 3, 2010.

11 2. After receiving the revised ITS, the Trust shall file a memorandum, not to
12 exceed 15 pages, addressing its position on (a) the validity of the revised ITS, (b) the merits
13 of Claim 3 in light of the revised ITS, and (c) any remedies the Court should impose if it
14 grants summary judgment in favor of the Trust on Claim 3. The memorandum shall be filed
15 by September 24, 2010. Defendants shall file a responsive memoranda, not to exceed 15
16 pages, by October 15, 2010. The Trust shall file a reply memorandum, not to exceed 7
17 pages, by October 29, 2010.

18 3. The Trust’s motion for summary judgment (Dkt. #226) is **granted in part and**
19 **denied in part** with respect to Claim 9 and **denied** with respect to Claims 1, 2, 10, and 11.

20 4. The Federal Defendants’ motion for summary judgment (Dkt. #224) is **granted**
21 with respect to Claims 1, 2, 10, and 11, and **granted in part and denied in part** with respect
22 to Claim 9.

23 5. The parties’ respective motions with respect to Claim 3 are taken under
24 advisement.

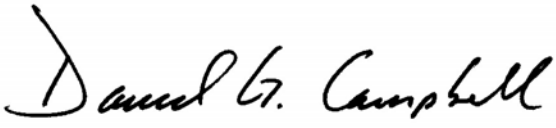
25 6. The Trust’s motion for the Court to consider supplemental information
26 (Dkt. #239) is **granted**. Defendants’ cross motion for the Court to consider supplemental
27 information (Dkt. #240) is **granted**.

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7. The motion for leave to file a brief amicus curiae by the Irrigation & Electrical Districts' Association of Arizona (Dkt. #235) is **granted**.

DATED this 29th day of June, 2010.



David G. Campbell
United States District Judge