

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28

UNITED STATES DISTRICT COURT
EASTERN DISTRICT OF CALIFORNIA

Pacific Coast Federation of
Fishermen's Associations,
Institute for Fisheries
Resources, et al.,

Plaintiffs,

v.

Carlos M. Gutierrez, in his
official capacity as Secretary
of Commerce, et al.,

Defendants,

San Luis & Delta-Mendota Water
Authority, et al.,

Defendant-Intervenors.

1:06-cv-00245-OWW-GSA

MEMORANDUM DECISION AND ORDER
GRANTING IN PART AND DENYING
IN PART PLAINTIFFS' MOTIONS
FOR SUMMARY JUDGMENT (Doc.
145) AND GRANTING IN PART AND
DENYING IN PART FEDERAL
DEFENDANTS' CROSS-MOTIONS FOR
SUMMARY JUDGMENT (Doc. 160)

/ / /
/ / /
/ / /

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28

I. Introduction. 7

 A. The Water Projects. 7

 B. The Lawsuit: Parties and Contentions. 10

 1. The Parties. 10

 a. Plaintiffs. 10

 b. Federal Defendants. 11

 c. Defendant-Intervenors. 12

 2. Federal Defendants and Dis' Concessions.
 12

II. Procedural Background. 14

 A. Case History. 14

 B. Summary of Plaintiffs' Claims in the First Amended
 Complaint. 15

III. Factual Background. 18

 A. Overview of the 2004 OCAP. 18

 B. Description of Proposed Action in the BiOp. 21

 C. Mitigation Measures. 22

 D. Species Life History and Population Dynamics. 22

 1. Chinook Salmon. 22

 a. General Life History of
 Chinook Salmon. 22

 b. Winter-run Chinook. 25

 (1) Habitat. 25

 (2) Population Trend.
 27

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28

	(3) <u>Status of Winter-</u>	
	<u>Run.</u>	28
	c. <u>Spring-run Chinook.</u>	30
	(1) <u>Habitat.</u>	30
	(2) <u>Population.</u>	31
	(3) <u>Status.</u>	34
	2. <u>CV Steelhead.</u>	36
	a. <u>General Life History.</u>	36
	b. <u>Habitat.</u>	39
	c. <u>Population.</u>	39
	d. <u>Status.</u>	41
IV.	<u>Legal Standards Of Review.</u>	42
	A. <u>Summary Judgment Generally.</u>	42
	B. <u>Summary Judgment Under The Administrative</u>	
	<u>Procedure Act.</u>	42
V.	<u>Summary of Parties' Cross-Motions for Summary Judgment.</u>	
	45
	A. <u>Plaintiffs' Motion for Summary Judgment.</u>	45
	B. <u>Federal Defendants' Motion for Summary Judgment.</u>	
	46
VI.	<u>Law And Analysis.</u>	48
	A. <u>Standing.</u>	48
	1. <u>PCFFA.</u>	50
	2. <u>Bay Institute.</u>	51
	3. <u>Baykeeper.</u>	52

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28

4.	<u>California Trout.</u>	54
5.	<u>FOR.</u>	56
6.	<u>NRDC.</u>	58
7.	<u>The Council.</u>	59
8.	<u>The Tribe.</u>	60
9.	<u>The Trust.</u>	61
B.	<u>Plaintiffs' Request for Judicial Notice.</u>	63
C.	<u>The Endangered Species Act.</u>	65
D.	<u>NMFS Claims.</u>	67
1.	<u>Whether NMFS Failed to Establish Any Reasonable Connection Between the Impacts It Identified and the BiOp's "No Jeopardy" and "No Adverse Modification" Conclusions.</u>	67
a.	<u>Whether NMFS's Factual Findings Directly Contradict the No Jeopardy and No Adverse Modification Conclusions in the BiOp.</u>	70
(1)	<u>Winter-run Chinook.</u>	71
(2)	<u>Spring-run Chinook.</u>	95
(3)	<u>CV Steelhead.</u>	102
b.	<u>Whether NMFS Failed to Conduct Any Analysis of Project Impacts in the Context of the Species' Life Cycles and</u>	

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28

Population Dynamics. . . . 105

c. Whether NMFS's Focus on Incremental Project Impacts Arbitrarily Ignored Significant Adverse Effects Associated With Baseline Conditions and is Unsupported by the BiOp's Findings. . . 108

d. Whether NMFS Failed to Conduct a Comprehensive Analysis of Impacts Associated With the Entire Federal Action During Formal Consultation. . . . 114

2. Global Climate Change and the Effects on the Hydrology of Northern California Rivers. 124

3. Sufficiency of Adaptive Management Plan and Mitigation Measures. 127

a. Temperature Control. 129

b. Shasta Carryover Storage. 131

c. SWRCB Order 90-5. 132

d. Red Bluff Diversion Dam. . . 132

e. The Environmental Water Account. 133

f. South Delta Improvement Program. 134

E. Bureau Claims. 135

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28

1. The Bureau's § 7(a)(2) Obligations.
 135
 a. Consideration of Evidence and
 Consultation Under § 7. . . . 137
 b. The Mitigation Standards.
 138
 c. Internal Contradictions. . . . 139
 d. Global Climate Change. . . . 140
 e. Temperature Control Point.
 141
 f. Failure to Consider 100% of
 Water Deliveries. 142
 g. Information Identified After
 The ESA Consultation Process
 was Completed. 143
2. Violation of ESA § 7(d) 144
3. No Jeopardy BiOp. 145
VII. Conclusion. 148

1 I. Introduction.

2 Before the Court are the parties' cross-motions for summary
3 judgment arising from an October 22, 2004, Biological Opinion
4 ("BiOp") issued by the United States National Marine Fisheries
5 Service ("NMFS" also referred to as "NOAA Fisheries," used
6 interchangeably), in response to the United States Bureau of
7 Reclamation's ("Bureau") initiation of formal and early
8 consultation with NMFS. This is one of a series of cases that
9 address through this and other Biological Opinions, the potential
10 adverse impacts of ongoing Central Valley Project ("CVP") and
11 California State Water Project ("SWP") operations on fish, here,
12 salmonid species, caused by the Long-Term Central Valley Project
13 and State Water Project Operations Criteria and Plan ("2004
14 OCAP") completed June 30, 2004.

15
16 A. The Water Projects.

17 The CVP is an "extensive system of dams, tunnels, canals and
18 reservoirs that stores and regulates water for California's
19 Central Valley and southward." *Westlands Water District v.*
20 *Department of Interior*, 376 F.3d 853, 861 (9th Cir. 2004). The
21 CVP supplies 200 water districts, providing water for about 30
22 million people, irrigating California's most productive
23 agricultural region and generating electricity at nine power
24 plants." The Projects move water through their Delta pumping
25 facilities to provide flood protection, power generation, and
26 water service to otherwise barren areas of Central California for
27 agricultural, municipal, and environmental uses. The CVP was
28 taken over by the United States in 1935, has since been a Federal

1 enterprise, and is the largest Federal water management project
2 in the United States. *Cent. Delta Water Agency v. United States*,
3 306 F.3d 939, 943 (9th Cir. 2002). The Federal government has
4 administered the CVP since 1935. *Westlands Water Dist. v. United*
5 *States*, 337 F.3d 1092, 1095 (9th Cir. 2003). The Bureau
6 administers the CVP. *Orff v. United States*, 545 U.S. 596, 598
7 (2005).

8 The SWP is the "largest State-built water project in the
9 country, (and) is managed by the California Department of Water
10 Resources ("DWR"). *Natural Res. Def. Council v. Norton*, No. 05-
11 01207-OWW 2006 WL 39094, *1 (E.D. Cal. Jan. 5, 2006). "The CVP
12 and SWP share certain facilities and coordinate operations with
13 one another pursuant to a Coordinated Operating Agreement
14 ("COA"). The COA which originated in 1986, has evolved over time
15 to reflect, among other things, changing facilities, delivery
16 requirements and regulatory restrictions." *Id.* at *2.

17 For over thirty years, the projects have been operated
18 pursuant to a series of cooperation agreements. In addition, the
19 projects are subject to ever-evolving statutory, regulatory,
20 contractual, and judicially-imposed requirements. The 2004 OCAP
21 is a baseline description of the Projects' operating facilities
22 and operating environment.

23 The Bureau and DWR requested the initiation of formal ESA
24 § 7 consultation for Project operations and proposed operations
25 on March 15, 2004 and March 12, 2004, respectively. Among
26 proposed changes in operations are the expansion of the Projects'
27 capacity and increased pumping out of the Delta. The BiOp was
28 intended to address the potential adverse impacts of ongoing (for

1 the next twenty-five years) CVP and SWP operations on the
2 salmonid species.¹

3 The original BiOp concludes that the effects of proposed
4 Project operations under the 2004 OCAP are not likely to
5 jeopardize the continued existence of the Sacramento River
6 winter-run Chinook ("winter-run Chinook"), and are not likely to
7 adversely modify the critical habitat for the winter-run Chinook
8 listed as endangered January 4, 1994. The BiOp further concludes
9 that proposed operations under the 2004 OCAP are not likely to
10 jeopardize the continued existence of the Central Valley spring-
11 run Chinook ("spring-run Chinook"), listed as threatened on
12 September 16, 1999, or Central Valley steelhead ("CV steelhead")
13 listed as threatened on March 19, 1998.

14 Following the issuance of the BiOp, NOAA Fisheries listed as
15 threatened, a population segment of the North American Green
16 Sturgeon located in the Delta Region. 71 Fed.Reg. 17,757 (April
17 7, 2006). NOAA designated critical habitat in the Delta region
18 affected by the CVP for two Evolutionarily Significant Units
19 ("ESUs") of Chinook salmon and five ESUs of steelhead. NOAA,
20 Final Rule Re: Designation of Critical Habitat for Seven ESUs of
21 Pacific Salmon and Steelhead in California. 70 Fed.Reg. 52,488
22

23 ¹ Two additional fish species, the threatened Southern
24 Oregon/Northern California Coast coho salmon and the threatened
25 Central California Coast steelhead, are also at issue in this
26 case. Although Plaintiffs believe that the NMFS's analysis of
27 Project impacts on these two fish is inadequate, Plaintiffs'
28 arguments are limited in this summary judgment proceeding to the
winter-run Chinook, spring-run Chinook, and the CV steelhead
species. Only the BiOp's affect on winter-run and spring-run
Chinook and CV steelhead are discussed.

1 (September 2, 2005). As a result, the Bureau, on April 26, 2006,
2 requested reinitiation of ESA § 7 consultation on the 2004 NMFS
3 BiOp.

4 Project operations affect a variety of salmonid species
5 including the endangered Sacramento River winter-run Chinook
6 salmon ("winter-run Chinook"), the threatened Central Valley
7 spring-run Chinook salmon ("spring-run Chinook"), threatened
8 Central Valley steelhead ("CV steelhead"), threatened Southern
9 Oregon/Northern California Coast Coho salmon; and threatened
10 Central California Coast steelhead.

11 After reinitiation of consultation, Federal Defendants
12 sought to dismiss, remand or stay this case. That motion was
13 denied on all grounds. A Fed. R. Civ. Proc. 12(b)(1) motion to
14 dismiss Plaintiffs' Seventh Claim under the National
15 Environmental Protection Act ("NEPA") for lack of jurisdiction
16 was granted June 15, 2007. Plaintiffs' challenge the Bureau's
17 "early consultation" with NMFS under 16 U.S.C. § 1536(a)(3) and
18 the adoption of the 2004 BiOp.

19

20 B. The Lawsuit: Parties and Contentions.

21 1. The Parties.

22 a. Plaintiffs.

23 Plaintiffs, the Pacific Coast Federation of Fishermen's
24 Association/Institute for Fishery Resources; the Bay Institute;
25 Baykeeper and its Deltakeeper Chapter; California Trout; Friends
26 of the River; Natural Resources Defense Council; Northern
27 California Council of the Federation of Fly Fishers; Sacramento
28 Preservation Trust; and the Winnemem Wintu Tribe, a coalition of

1 environmental and fishing organizations (collectively
2 "Plaintiffs"), challenge the 2004 BiOp's no jeopardy and no
3 adverse modification findings as arbitrary, capricious, and
4 contrary to law under the Administrative Procedure Act, 5 U.S.C.
5 § 702, *et seq.* ("APA"). Plaintiffs allege, among other things:
6 (1) that the conclusions of the BiOp are unsupported and
7 contradicted by the Administrative Record ("AR"); (2) that the
8 BiOp relies on uncertain mitigation measures as a basis for the
9 no jeopardy opinions, (3) that the BiOp fails to consider the
10 best available science; (4) the Bureau is failing to ensure that
11 its actions are not likely to jeopardize the continued existence
12 of the listed species or to adversely modify their critical
13 habitat; (5) that the Bureau is taking actions that may adversely
14 affect the listed species and their critical habitat without a
15 valid biological opinion, and (6) that the Bureau is making
16 irretrievable and irreversible commitments of resources that
17 foreclose the formulation or implementation of any reasonable and
18 prudent alternatives.

19

20 b. Federal Defendants.

21 Federal Defendants, Carlos M. Gutierrez, in his official
22 capacity as Secretary of Commerce; William T. Hogarth, in his
23 official capacity as Assistant Administrator for Fisheries,
24 National Marine Fisheries Service, National Ocean & Atmospheric
25 Administration; Dirk Kempthorne, in his official capacity as
26 Secretary of the Interior; and William E. Rinne, in his official
27 capacity as Acting Commissioner, United States Bureau of
28 Reclamation (collectively "Federal Defendants"), filed opposition

1 briefs and their own cross-motion for summary judgment.

2

3 c. Defendant-Intervenors.

4 The Defendant-Intervenors are San Luis & Delta-Mendota Water
5 Authority; Westlands Water District, California Farm Bureau
6 Federation, Glen-Colusa Irrigation District, State Water
7 Contractors, and California Department of Water Resources
8 (collectively "DI"); they filed joint oppositions to Plaintiffs'
9 summary judgment motions.

10

11 2. Federal Defendants and DIs' Concessions.

12

13 Federal Defendants and DI do not contest and admit the
14 validity of some of the claims raised against the 2004 NMFS BiOp
15 in light of the reinitiation of consultation: (1) the BiOp fails
16 to consider and analyze global climate changes and its impacts;
17 (2) the BiOp fails to consider and analyze adverse impacts to CV
18 steelhead and fails to define and consider critical habitat for
19 CV steelhead and its survival and recovery; (3) NMFS also
20 acknowledges the need for further explanation of its "no
21 jeopardy" analysis, particularly to address recovery implications
22 for the three salmonid species; (4) NMFS acknowledges the need
23 for further explanation of its critical habitat analysis for
24 winter-run Chinook salmon, particularly to address the impacts to
25 the primary constituent elements and whether an adverse
26 modification of critical habitat occurred," and in relation to
27 the "no jeopardy" conclusion.

27

28 The DIs' combined brief on behalf of San Luis & Delta

28

1 Mendota Water Authority, Westlands Water District, State Water
2 Contractors, and California Farm Bureau Federation, based on
3 reinitiation of consultation and the smelt decision, suggest
4 accepting the collective admissions of the BiOp's shortcomings
5 (uncontested issues) and proceeding directly to an interim remedy
6 phase. The DI accept as uncontested issues raised by Plaintiff's
7 motion for summary judgment: (1) insufficient explanation of no
8 jeopardy to threatened steelhead species; and (2) failure to
9 analyze effects of global climate change on the species. The DIs
10 accept that the BiOp is subject to the same defects involving
11 those claims identified as inadequate by the Delta smelt BiOp.
12 This includes FWS's and NMFS's failure to explain on the record
13 how their no jeopardy conclusions were reached.

14 As to all other NMFS claims DI contend NMFS acted
15 consistently with ESA, the smelt Biop order, and as to all claims
16 against the Bureau:

- 17 1. Analyzing the effect of Project operations on
18 threatened spring-run Chinook and its critical habitat;
- 19 2. Analyzing the effect of Project operations on
20 endangered winter-run Chinook and its critical habitat;
- 21 3. Operating the Project is not a per se or patent
22 violation of the ESA;
- 23 4. Sufficiently considering baseline conditions;
- 24 5. Applying adaptive management mitigation measures for
25 salmonid species;
- 26 6. Meeting its ESA § 7(d) obligations in consulting and
27 relying on the BiOp.

28 Federal Defendants and DI seek remand of the BiOp without

1 vacatur or modification.

2 In the companion case, *NRDC v. Kempthorne*, 506 F.Supp.2d 322
3 (E.D. Cal. 2007) the Court determined the legal invalidity of the
4 2005 Delta smelt BiOp addressing the 2004 OCAP for its failure to
5 discuss and evaluate the impacts of global climate change in
6 relation to the BiOp's no jeopardy conclusion. Federal
7 Defendants and DI deny that the segment of the *NRDC v. Kempthorne*
8 ruling, which found unlawful and inadequate adaptive management
9 mitigation measures adopted in the smelt case, has any
10 applicability to the salmon species based on the substantive
11 difference in the adaptive management measures for salmonids,
12 including temperature control and compliance and Shasta Dam
13 carryover storage (cold water resource protection).

14 Federal Defendants and DI contend the Bureau has met its ESA
15 obligations in consulting and relying on the BiOp and has not
16 violated ESA § 7(d) as to the BiOp, when it reinitiated
17 consultation.

18

19 II. Procedural Background.

20 A. Case History.

21 The complaint was filed August 9, 2005, and amended
22 September 11, 2006. A motion to dismiss the seventh cause of
23 action for violation of NEPA was granted June 15, 2007.² A June

24

25 ² Plaintiffs' seventh claim for relief alleged violation of
26 NEPA and the APA by failing to prepare an environmental impact
27 statement for the 2004 OCAP. This claim for relief was dismissed
28 and is not at issue in this summary judgment proceeding. By
stipulation and order (Doc. 169), Plaintiffs have until thirty
days after the date this Decision is filed to file any amendment

1 15, 2007, order limited the use of post-record documents to
2 scientific purposes and to show bad faith, if any, on the part of
3 the Bureau.

4
5 B. Summary of Plaintiffs' Claims in the First Amended
6 Complaint.

7 The FAC advances seven claims for relief. Claims one
8 through three are directed at NMFS and the BiOp, while claims
9 four through six are directed at the Bureau's actions since NMFS
10 issued the BiOp.

11 The first claim for relief, violation of the APA and ESA,
12 alleges the no jeopardy conclusions in the BiOp are unsupported
13 and contradicted by the administrative record, and are therefore
14 arbitrary and capricious, an abuse of discretion, and contrary to
15 law under APA § 706(2). According to Plaintiffs, the BiOp fails
16 to establish the necessary link between the facts found and
17 conclusions reached, and it also contains factual findings that
18 contradict its "no jeopardy" conclusions.

19 The second claim for relief, violation of the APA and ESA,
20 asserts the BiOp improperly relies on a promise of adaptive
21 management without identifying concrete actions to ensure
22 protection of the winter-run Chinook, the spring-run Chinook, and
23 the CV steelhead species, and fails to protect the critical
24 habitat of the winter-run Chinook. According to Plaintiffs, the
25 BiOp's reliance on the uncertain "adaptive management" regime

26
27
28 to the First Amended Complaint ("FAC") addressing any further
NEPA claim.

1 violates ESA § 7(a)(2) and is arbitrary, capricious, an abuse of
2 discretion, and not in accordance with the law, contrary to APA §
3 706(2).

4 The third claim for relief, violation of the APA and ESA,
5 alleges NMFS failed to consider the best available science to
6 reach the no jeopardy conclusions in the BiOp. Among other
7 deficiencies, NMFS disregarded the best available science
8 documenting that the 2004 OCAP will jeopardize the continued
9 existence of the spring-run Chinook and CV steelhead, and that it
10 will adversely modify and destroy the winter-run Chinook's
11 critical habitat. NMFS also allegedly failed to consider the
12 best available scientific data concerning the effects of global
13 climate change which violated ESA § 7(a)(2), and was arbitrary,
14 capricious, an abuse of discretion, and not in accordance with
15 the law, contrary to APA § 706(2).

16 The fourth claim is for the Bureau's violation of the ESA
17 and APA by failing to ensure that its actions are not likely to
18 jeopardize the continued existence of several species or to
19 adversely modify their critical habitat. Implementation of the
20 2004 OCAP has short-term and long-term adverse impacts on the
21 winter-run Chinook, spring-run Chinook, and CV steelhead that
22 jeopardize their continued existence. According to Plaintiffs,
23 the Bureau has an independent duty to ensure that its actions
24 avoid jeopardy to listed species, and the Bureau has failed to
25 comply with this duty by implementing the 2004 OCAP.

26 The implementation of the 2004 OCAP will adversely impact
27 several features of the winter-run Chinook's critical habitat
28 including water quality and quantity, water temperature, water

1 velocity, and fish safe passage conditions. The Bureau's failure
2 to ensure that its actions will not jeopardize the continued
3 existence of the winter-run Chinook, spring-run Chinook, and CV
4 steelhead, or adversely modify their critical habitat, is
5 arbitrary, capricious, an abuse of discretion, and not in
6 accordance with the law, contrary to APA § 706(2).

7 The fifth claim charges the Bureau has violated the ESA and
8 APA by taking actions that "may affect" listed species and their
9 critical habitat without a valid biological opinion. According
10 to Plaintiffs, the Bureau's implementation of the 2004 OCAP in
11 the absence of a "valid" biological opinion violates ESA §
12 7(a)(2), and is arbitrary, capricious, an abuse of discretion,
13 and not in accordance with the law, contrary to APA § 706(2).

14 The sixth claim asserts the Bureau has violated the ESA and
15 APA by making irretrievable and irreversible commitments of
16 resources that foreclose reasonable and prudent alternatives in
17 violation of ESA § 7(d). According to Plaintiffs, the Bureau has
18 taken and is taking actions that foreclose implementation of
19 reasonable and prudent alternatives to avoid jeopardy to the
20 species by moving forward with plans to construct physical
21 alterations as part of the South Delta Improvement Project and by
22 signing and implementing new long-term water service contracts
23 committing delivery of substantially increased quantities of CVP
24 water. The Bureau's actions are claimed to be arbitrary,
25 capricious, an abuse of discretion, and not in accordance with
26 law, contrary to APA § 706(2).

27 Plaintiffs' FAC seeks the following relief:

28 (1) A declaration that the BiOp is arbitrary and

1 capricious, an abuse of discretion, and not in
2 accordance with the law, all in violation of APA §
706(2);

- 3 (2) An order holding unlawful and setting the BiOp aside;
- 4 (3) An Order requiring reinitiation of consultation with
5 respect to the impacts of the 2004 OCAP, including
changes to project operations;
- 6 (4) A finding and declaration that Reclamation, in
7 implementing the 2004 OCAP, has failed and is failing
8 to ensure that its actions will not jeopardize the
9 continued existence of the winter-run Chinook, the
spring-run Chinook, and CV steelhead, or to adversely
modify their critical habitats.
- 10 (5) A finding and declaration that Reclamation, in
11 implementing the 2004 OCAP, is irretrievably and
12 irreversibly committing resources that foreclose the
13 formulation or implementation of reasonable and prudent
alternatives.

13 III. Factual Background.

14 A. Overview of the 2004 OCAP.

15 The OCAP's introductory "Purpose of Document" section
16 states:

17 This document has been prepared to serve as a baseline
18 description of the facilities and operating environment
19 of the Central Valley Project (CVP) and State Water
Project (SWP). The Central Valley Project - Operations
20 and Criteria Plan (CVP-OCAP) identifies the many
21 factors influencing the physical and institutional
22 conditions and decision-making process under which the
project currently operates. Regulatory and legal
instruments are explained, alternative operating models
and strategies described.

23 The immediate objective is to provide operations
24 information for the Endangered Species Act, Section 7,
consultation. The long range objective is to integrate
25 CVP-OCAP into the proposed Central Valley document. It
is envisioned that CVP-OCAP will be used as a reference
26 by technical specialists and policymakers in and
outside the Bureau of Reclamation (Reclamation) in
27 understanding how the CVP is operated. The CVP-OCAP
includes numeric and nonnumeric criteria and operating
28 strategies. Emphasis is given to explaining the
analyses used to develop typical operating plans for

1 simulated hydrologic conditions.

2 All divisions of CVP are covered by this document,
3 including the Trinity River Division, Shasta and
4 Sacramento Divisions, American River Division and
5 Friant Division.

6 USBR AR 4466.

7 The introductory chapter provides an overview of all of the
8 physical components of the CVP and SWP, as well as all of the
9 relevant legal authorities affecting CVP operations. USBR AR
10 4467-80.

11 Chapter 2, explains, among other things, that water needs
12 assessments have been performed for each CVP water contractor, to
13 confirm each contractor's past beneficial use in order to
14 anticipate future demands. USBR AR 4481. Chapter 2 also reviews
15 the 1986 COA and how it is implemented on a daily basis by the
16 Bureau and DWR. USBR AR 4483-90. A detailed overview of the
17 "changes in [the] operations coordination environment since
18 1986," includes:

- 19 • Changes due to temperature control operations on the
20 Sacramento River;
- 21 • Increases in the minimum flow release requirements on
22 the Trinity River;
- 23 • Implementation of CVPIA 3406(b) (2) and Refuge Water
24 Supply contracts;
- 25 • Commitments made by the CVP and SWP pursuant to the
26 Bay-Delta Accord and the subsequent implementation of
27 State Water Resources Control Board ("SWRCB") Decision-
28 1641;
- The Monterey Agreement;

- 1 • The Operation of the North Bay Aqueduct (which was not
- 2 included in the 1986 COA).
- 3 • The SWP's commitment to make up for 195,000 acre-feet
- 4 of pumping lost to the CVP due to SWRCB Decision 1485;
- 5 • Implementation of the Environmental Water Account; and
- 6 • Constraints imposed by various Endangered Species Act
- 7 listings, including that of the Sacramento River
- 8 Winter-Run Chinook Salmon, the Sacramento River
- 9 Spring-Run Chinook Salmon, the Steelhead Trout, and the
- 10 Delta Smelt (which resulted in the issuance of
- 11 biological opinions in 1993, 1994, and 1995 concerning
- 12 CVP/SWP operations and the South Delta Temporary
- 13 Barriers Biological Opinion in 2001)

14 USBR AR 4485-88.

15 The OCAP reviews the regulatory standards imposed by SWRCB
16 D-1641, which include water quality standards based on the
17 geographic position of the 2-parts-per-thousand isohale
18 (otherwise known as "X2"); a Delta export restriction standard
19 known as the export/inflow (E/I) ratio; minimum Delta outflow
20 requirements; and Sacramento River and San Joaquin River flow
21 standards. USBR AR 4486-87. In addition to imposing
22 requirements, D-1641 granted the Bureau and DWR permission to use
23 each project's capabilities in a coordinated manner. USBR AR
24 4490-91. Numerous additional regulatory and operational changes
25 have taken place in Project operations in recent years. As the
26 OCAP's "Purpose of Document" section explains, the immediate
27 objective of the OCAP is to lay out all such regulatory and other
28 operational information so that an ESA § 7 consultation can

1 proceed to evaluate how project operations will effect the
2 salmonid species under various projected future conditions.

3
4 B. Description of Proposed Action in the BiOp.

5 The purpose of the proposed action is to continue to operate
6 the CVP and SWP in a coordinated manner to divert, store, and
7 convey Project water. NMFS AR 5743. In addition to current day
8 operations, several future facilities and actions are included in
9 the consultation.³ *Id.* These include (1) increased flows in the
10 Trinity River, (2) an intertie between the California Aqueduct
11 and the Delta-Mendota Canal, (3) the Freeport Regional Water
12 Project, (4) water transfers, and (5) renewal of long term CVP
13 water service contracts and future deliveries. *Id.* The proposed
14 actions will come online at various times in the future, except
15 for increased flows in the Trinity River, which are presently
16 being implemented in accordance with the Trinity River Record of
17 Decision. *Id.* The proposed action is: (a) continued operation
18 of the CVP and SWP without these actions, and (b) implementing
19 these operations as they come online.⁴ *Id.*

20
21 ³ Early consultation in the BiOp addressed (1) increased
22 pumping at the SWP Banks Pumping Plant, (2) permanent barriers
23 operated in the South Delta, (3) a long-term EWA, and (4) various
operational changes identified as CVP/SWP project integration.
NMFS AR 5743.

24
25 ⁴ Only the water operations associated with the proposed
26 activities were addressed in the consultation leading up to the
issuance of the BiOp. NMFS AR 5743. Project activities do not
27 include construction of any facilities to implement the actions.
Id. All site-specific or localized activities of the actions
28 such as construction or screening, and any other site-specific
events, will be addressed in future separate action-specific ESA

1 C. Mitigation Measures.

2 The BiOp includes mitigation measures principally related
3 to: (1) movement of the 56°F Sacramento River Temperature
4 Compliance Point from Bend Bridge upstream to Balls Ferry; (2)
5 maintaining the carryover storage for Shasta Reservoir at 1.9
6 million acre-feet ("MAF") as a target; (3) the operation of Red
7 Bluff Diversion Dam ("RBDD") to provide unimpeded fish passage
8 upstream and downstream at RBDD.

9 Plaintiffs complain about mitigation measures that are to be
10 implemented in the future including, but not limited to, (1)
11 Environmental Water Account assets; (2) increased exports
12 resulting from the South Delta Improvement Program; (3)
13 utilization of the Environmental Water Account to augment water
14 flows.

15
16 D. Species Life History and Population Dynamics.

17 1. Chinook Salmon.

18 a. General Life History of Chinook Salmon.

19 Chinook salmon exhibit two generalized fresh water life
20 histories known as "stream-type" and "ocean-type." NMFS AR 5787.
21 Stream-type Chinook salmon enter fresh water months before
22 spawning and reside in fresh water for a year or more following
23 emergence. *Id.* Ocean-type Chinook salmon spawn soon after
24 entering fresh water and migrate to the ocean as fry or parr
25 within their first year. *Id.* Spring-run Chinook exhibit a
26 stream-type life form where adults enter fresh water in the

27 _____
28 § 7 consultations. *Id.*

1 spring and spawn in the fall. *Id.* Spring-run Chinook juveniles
2 typically spend a year or more in fresh water before emigrating
3 towards the sea. *Id.* Winter-run Chinook exhibit characteristics
4 of both stream-type and ocean-type life histories. *Id.* Adult
5 winter-run Chinook enter freshwater in winter or early spring and
6 delay spawning until spring or early summer (stream-type). *Id.*
7 Juvenile winter-run Chinook migrate to the sea after only four to
8 seven months of river life (ocean-type). *Id.* Adequate instream
9 flows and cool water temperatures are more critical for the
10 survival of Chinook salmon exhibiting a stream-type life history
11 due to over-summering by adults and/or juveniles. *Id.*

12 Chinook salmon mature between two and six plus years of age.
13 NMFS AR 5787. Freshwater entry and spawning timing generally are
14 thought to be related to local water temperature and flow
15 regimes. *Id.* Chinook salmon runs are designated on the basis of
16 adult migration timing. *Id.* Both spring-run and winter-run
17 Chinook tend to enter freshwater as immature fish, migrate far
18 upriver, and delay spawning for weeks or months. *Id.*

19 During their upstream migration, adult Chinook salmon
20 require stream flows sufficient to provide olfactory and other
21 orientation cues to locate their natal streams. NMFS AR 5787.
22 Adequate stream flows are necessary to allow adult passage to
23 upstream holding habitat. *Id.* The preferred temperature is 38° F
24 to 56° F. Adult winter-run Chinook enter San Francisco Bay from
25 November through June and migrate past RBDD from mid-December
26 through early August. *Id.* The majority of the winter-run
27 Chinook pass RBDD from January through May, and passage peaks in
28 mid-March. *Id.* The timing of migration may vary due to river

1 flows, dam operations, and water year type. Adult spring-run
2 Chinook enter the Delta from the Pacific Ocean beginning in
3 January and enter natal streams from March to July. *Id.* Spring-
4 run Chinook utilize mid to high elevation streams that provide
5 appropriate temperatures and sufficient flow, cover, and pool
6 depth to allow over-summering while conserving energy and
7 allowing their gonadal tissue to mature. *Id.* at 5787-88.

8 Spawning Chinook salmon require clean, loose gravel in
9 swift, relatively shallow riffles or along the margins of deeper
10 runs, and suitable water temperatures, depths, and velocities.
11 NMFS AR 5788. Spawning typically occurs in gravel beds that are
12 located at the tails of holding pools. *Id.* The upper preferred
13 water temperature for spawning Chinook salmon is 55°F to 57°F.
14 *Id.* Winter-run Chinook spawning occurs primarily from mid-April
15 to mid-August, with peak activity occurring in May and June in
16 the Sacramento River between Keswick dam and RBDD. *Id.* The
17 majority of spawning winter-run Chinook are three years old
18 (between 56% and 87%). *Id.* Spring-run Chinook spawning occurs
19 between September and October depending on water temperatures.
20 *Id.*

21 The optimal water temperature for egg incubation is 44°F to
22 54°F. NMFS AR 5788. Incubating eggs are vulnerable to adverse
23 effects from floods, siltation, desiccation, disease, predation,
24 poor gravel percolation, and poor water quality. *Id.* The length
25 of time required for eggs to develop and hatch is variable and
26 depends on water temperature. *Id.* The lower and upper
27 temperatures resulting in 50% pre-hatch mortality were 37°F and
28 61°F, respectively, when the incubation temperature was constant.

1 *Id.* Winter-run Chinook fry begin to emerge from the gravel in
2 late June to early July and continue through October, generally
3 at night. *Id.* at 5789. Spring-run Chinook fry emerge from the
4 gravel from November to March and spend about three to fifteen
5 months in freshwater habitats before emigrating to the ocean.
6 *Id.*

7 When juvenile Chinook salmon reach a length of 50 to 75
8 millimeters, they move into deeper water with higher current
9 velocities. NMFS AR 5789. Emigration of juvenile winter-run
10 Chinook past RBDD may begin as early as mid-July, typically peaks
11 in September, and can continue through March in dry years. *Id.*
12 From 1995 to 1999, all winter-run Chinook outmigrating as fry
13 passed RBDD by October, and all outmigrating pre-smolts and
14 smolts passed RBDD by March. *Id.* Spring-run Chinook emigration
15 is highly variable. *Id.* Some may begin outmigrating soon after
16 emergence, while others over-summer and emigrate as yearlings
17 with the onset of intense fall storms. *Id.* The emigration
18 period for spring-run Chinook extends from November to early May,
19 with up to sixty-nine percent young-of-the-year outmigrants
20 passing through the lower Sacramento River and Sacramento-San
21 Joaquin Delta during this period. *Id.*

22
23 b. Winter-run Chinook.

24 (1) Habitat.

25 The distribution of winter-run Chinook spawning and rearing
26 historically was limited to the upper Sacramento River and
27 tributaries, where spring-fed streams allowed for spawning, egg
28 incubation, and rearing in cold water. NMFS AR 5790.

1 Construction of Shasta Dam in 1943 and Keswick Dam in 1950
2 blocked access to these historical waters, except Battle Creek,
3 which is blocked by a weir at the Coleman National Fish Hatchery
4 and other small hydroelectric facilities. *Id.* at 5790-91.
5 Approximately 299 miles of tributary spawning habitat in the
6 upper Sacramento River is now blocked. *Id.* at 5791. Most
7 components of the winter-run Chinook's life history have been
8 compromised by the habitat blockage in the upper Sacramento
9 River. *Id.*

10 The winter-run's critical habitat is delineated as the
11 Sacramento River from Keswick Dam to Chipps Island at the
12 westward margin of the Sacramento-San Joaquin Delta, including
13 Kimball Island, Winter Island, and Brown's Island; all waters
14 from Chipps Island westward to Carquinez Bridge, including Honker
15 Bay, Grizzly Bay, Suisun Bay, and the Carquinez Strait; all
16 waters of San Pablo Bay westward of Carquinez Bridge and all
17 waters of the San Francisco Bay north of the San Francisco-
18 Oakland Bay Bridge. NMFS AR 5785.

19 NMFS concluded proposed Project operations will affect 19
20 miles of this critical habitat. NMFS 5846. The primary measure
21 adjustment of the Temperature Compliance Point upward from Bend
22 Bridge for temperatures of 56°F upstream to Balls Ferry on the
23 Sacramento River will "not" jeopardize winter-run salmon or
24 adversely modify its critical habitat. NMFS 6068.

25 The majority of winter-run have spawned upstream of Balls
26 Ferry for the last decade. NMFS 5845. During ten years prior to
27 issuance of the BiOp, aerial surveys show that 96.4% of the redds
28 created by spawning winter-run were located above Balls Ferry.

1 *Id.* The same survey showed that in three years prior to the
2 BiOp, 99% of the redds were located upstream of Balls Ferry. *Id.*

3
4 (2) Population Trend.

5 Following construction of Shasta Dam, the number of winter-
6 run Chinook initially declined but recovered during the 1960s.

7 NMFS AR 5791. The initial recovery was followed by a steady
8 decline from 1969 through the late 1980s, after construction of
9 RBDD. *Id.* Since 1967, the estimated adult winter-run Chinook
10 population ranged from 117,808 in 1969, to a low of 186 in 1994.

11 *Id.* The winter-run Chinook population declined from an average
12 of 86,000 adults from 1967 through 1969 to only 1,900 from 1987
13 through 1989, and continued to remain low with an annual average
14 of 2,500 fish for the period from 1998 through 2000. *Id.*

15 Between the time Shasta Dam was built and the listing of winter-
16 run Chinook as endangered. Major impacts to the population
17 occurred from warm water releases from Shasta Dam, juvenile and
18 adult passage restraints at RBDD, water exports in the southern
19 Sacramento-San Joaquin Delta, acid mine drainage, and entrainment
20 at a large number of unscreened or poorly screened water
21 diversions. *Id.*

22 Population estimates for winter-run Chinook increased in the
23 years 2001 through 2003 and in the preceding seven years. NMFS
24 AR 5791. The 2003 run was the highest since the winter-run
25 Chinook was listed. *Id.* The following table describes winter-
26 run Chinook population estimates from RBDD counts and
27 corresponding cohort replacement rates for the years 1986 through
28 2003. *Id.*

Year	Population Estimate (Red Bluff DD)	Five Year Moving Average of Population Estimate	Cohort Replacement Rate	Five Year Moving Average of Cohort Replacement Rate
1986	2596	-	-	-
1987	2186	-	-	-
1988	2886	-	-	-
1989	697	-	.27	-
1990	431	1759	.2	-
1991	211	1282	.1	-
1992	1241	1093	2.0	-
1993	387	593	.6	.63
1994	186	491	.3	.64
1995	1287	662	1.1	.82
1996	1337	888	2.8	1.36
1997	880	815	8.5	2.66
1998	3005	1339	1.6	2.86
1999	3288	1959	1.2	3.04
2000	1352	1972	1.1	3.04
2001	5523	2809	.8	2.64
2002	7337	4101	9.3	2.8
2003	9757	5451	11.0	4.68

DI point to increases in winter-run Chinook at RBDD and in the Five Year Moving Average of Population to contend the species is in ascendency and the no jeopardy analysis fully justified. NMFS AR 5791-93, 5933.

(3) Status of Winter-Run.

Numerous factors contributed to the earlier decline of winter-run Chinook through degradation of spawning, rearing, and

1 migration habitats. NMFS AR 5792. The primary impacts include
2 blockage of historical habitat by Shasta and Keswick Dams, warm
3 water releases from Shasta Dam, juvenile and adult passage
4 constraints at RBDD, water exports in the southern Sacramento-San
5 Joaquin Delta, heavy metal contamination from Iron Mountain Mine,
6 high ocean harvest rates, and entrainment in large numbers of
7 unscreened or poorly screened water diversions. *Id.* Secondary
8 factors include smaller water manipulation facilities and dams;
9 loss of rearing habitat in the lower Sacramento River and
10 Sacramento-San Joaquin Delta from levee construction; marshland
11 reclamation; and interaction with and predation by introduced
12 species. *Id.*

13 Since the January 4, 1994, listing of the winter-run Chinook
14 as endangered, several habitat problems that led to the species'
15 decline have been addressed and improved through restoration and
16 conservation actions. NMFS AR 5792. These actions include: (1)
17 ESA § 7 consultation reasonable and prudent alternatives for
18 temperature, flow, and modified operation of the CVP and SWP; (2)
19 State Water Resources Control Board decisions requiring
20 compliance with Sacramento River water temperature objectives,
21 which resulted in the installation of the Shasta Temperature
22 Control Device in 1998; (3) a 1992 amendment to the authority of
23 the CVP through the CVP, the CVPIA, which gave fish and wildlife
24 equal priority with other CVP objectives; and dedicates a finite
25 annual supply of 800,000 AF of CVP yield for fish and related
26 environmental protections; (4) fiscal support of habitat
27 improvement projects from the CALFED Bay-Delta Program
28 ("CALFED"); (5) establishment of the CALFED Environmental Water

1 Account; (6) EPA actions to control acid mine runoff from Iron
2 Mountain Mine; and (7) ocean harvest restrictions implemented in
3 1995. *Id.*

4 The temperature compliance location for winter-run remained
5 at Bend Bridge in only one year out of ten years prior to the
6 2004 BiOp. NMFS AR 5843. The susceptibility of winter-run
7 Chinook to extinction remains linked to the elimination of access
8 to most of their historical spawning grounds and the reduction of
9 their population structure to a small population size. NMFS AR
10 5792. "Recent trends in winter-run Chinook salmon abundance and
11 cohort replacement are positive and may indicate some recovery
12 since the [1994] listing." *Id.* NOAA Fisheries has proposed
13 upgrading the species from endangered to threatened. NMFS AR
14 5792, USBR AR 1819. The population, however, remains below the
15 recovery goals established for the winter-run Chinook. *Id.* The
16 recovery criteria for winter-run Chinook includes a mean annual
17 spawning abundance over any thirteen consecutive years to be
18 10,000 females. *Id.* This has not been met.

19
20 c. Spring-run Chinook.

21 (1) Habitat.

22 The spring-run was listed as threatened on September 16,
23 1999. NMFS AR 5785. The Central Valley ESU includes the
24 Sacramento River Basin and its tributaries. NMFS AR 5785, 5934.
25 The majority of the spring-run population is, as of the 2004
26 BiOp, located in Deer Mill, and Butte Creeks, with population
27 expansions into Clear Creek. NMFS AR 5935. No spring-run
28 critical habitat had been designated as of the 2004 BiOp. No

1 explanation is provided why spring-run critical habitat
2 designation was not made until September 2, 2005.

3 Historically, spring-run Chinook were predominant throughout
4 the Central Valley occupying the upper and middle reaches of the
5 San Joaquin, American, Yuba, Feather, Sacramento, McCloud, and
6 Pit Rivers, with smaller populations in most tributaries with
7 sufficient habitat for over-summering adults. NMFS AR 5793. The
8 Central Valley drainage as a whole is estimated to have supported
9 spring-run Chinook runs as large as 600,000 fish between the late
10 1880s and 1940s. Before construction of Friant Dam, nearly
11 50,000 adults were counted in the San Joaquin River. *Id.*
12 Following completion of the Friant Dam, the native population
13 from the San Joaquin River and its tributaries was extirpated.
14 *Id.* Spring-run Chinook no longer exist in the American River due
15 to the operation of the Folsom Dam. *Id.* Naturally-spawning
16 populations of spring-run Chinook are currently restricted to
17 accessible reaches of the upper Sacramento River, Antelope Creek,
18 Battle Creek, Beegum Creek, Big Chico Creek, Butte Creek, Clear
19 Creek, Deer Creek, Feather River, Mill Creek, and Yuba River.
20 *Id.* This species is mainly comprised of three self-sustaining
21 wild populations, located at Mill, Deer, and Butte Creeks. NMFS
22 AR 5785.

23
24 (2) Population.

25 Since 1969, the spring-run Chinook ESU (excluding Feather
26
27
28

1 River fish)⁵ has displayed broad fluctuations in abundance
 2 ranging from 25,890 in 1982 to 1,403 in 1993. NMFS AR 5793.
 3 Though the abundance of fish may increase from one year to the
 4 next, the overall average population trend of the spring-run has
 5 a negative slope during this time period. *Id.* The average
 6 abundance for the spring-run is set forth in the following table.
 7 *Id.* NMFS AR 5793.

Time Period	Average Abundance for Multiple Years or Total Run Size for Single Years
1969 - 1979	12,499
1980 - 1990	12,981
1991 - 2001	6,542
2002	13,218
2003	8,775

15 Evaluating the spring-run ESU as a whole, however, masks
 16 significant changes that are occurring among metapopulations.
 17 NMFS AR 5794. While the Sacramento River population has
 18 undergone a significant decline to a nominal to nonexistent
 19 population, the tributary populations have demonstrated a

21 ⁵ Because Chinook salmon are not temporally separated in the
 22 Feather River Hatchery, spring-run Chinook and fall-run Chinook
 23 are spawned together. This compromises the genetic integrity of
 24 the spring-run Chinook. NMFS AR 5793. The genetic integrity of
 25 this population is at question because there is significant
 26 temporal and spatial overlap (superimposition) between spawning
 27 spring-run Chinook and fall-run hatchery salmon, causing spring-
 28 run to become genetically similar to fall-run. NMFS AR 5935.
Id. The number of naturally spawning spring-run Chinook in the
 Feather River has been estimated only periodically since the
 1960s, with estimates ranging from 2,908 in 1964 to 2 in 1978.
Id.

1 substantial increase. *Id.* Average abundance of Sacramento River
2 mainstream spring-run Chinook has recently declined from a high
3 of 12,107 for the period 1980 through 1990, to a low of 609 for
4 the period 1991 through 2001, while the average abundance for
5 tributary populations increased from a low of 1,227 to a high of
6 5,925 over the same time period. *Id.*

7 Although tributaries such as Mill and Deer Creeks have shown
8 positive escapement trends since 1991, recent escapements to
9 Butte Creek, including 20,259 in 1998, 9,605 in 2001, and 8,785
10 in 2002, are responsible for the overall increase in tributary
11 abundance. NMFS AR 5794. The Butte Creek estimates, which
12 account for the majority of the spring-run Chinook ESU do not
13 include prespawning mortality. *Id.* As the Butte Creek
14 population has increased over the last several years, mortality
15 of adult spawners has increased from 21% in 2002 to 60% in 2003
16 due to over-crowding and disease associated with higher water
17 temperatures. *Id.* This trend may indicate that the population
18 in Butte Creek may have reached its carrying capacity or are near
19 historical population levels. *Id.*

20 The extent of spring-run Chinook spawning in the mainstream
21 of the upper Sacramento River is unclear. NMFS AR 5794. Few
22 spring-run Chinook salmon redds (less than 15 per year) were
23 observed from 1989 through 1993, and none in 1994, during aerial
24 redd counts. *Id.* Recently, the number of redds in September has
25 varied from 29 to 1005 during 2001 through 2003 depending on the
26 number of survey flights. *Id.* In 2002, based on RBDD ladder
27 counts, 485 spring-run Chinook adults may have spawned in the
28 mainstream Sacramento River or entered upstream tributaries such

1 as Clear or Battle Creeks. NMFS AR 5934. In 2003, no adult
2 spring-run Chinook were estimated to spawn in the mainstream
3 river. *Id.* Due to geographic overlap of ESUs and resultant
4 hybridization since the construction of Shasta Dam, Chinook
5 salmon that spawn in the mainstream Sacramento River during
6 September are more likely to be identified as early fall-run
7 Chinook rather than spring-run Chinook. *Id.*

8 NMFS opined proposed OCAP operations will not impact the
9 majority of the juvenile spring-run population because they are
10 in tributaries outside the Project area. NMFS AR 5934.

11
12 (3) Status.

13 The initial factors that led to the decline of spring-run
14 Chinook were related to the loss of upstream habitat behind
15 impassable dams. NMFS AR 5794. Since this initial loss of
16 habitat, other factors have contributed to the instability of the
17 spring-run Chinook population and affected its ability to
18 recover. *Id.* These factors include a combination of physical,
19 biological, and management factors such as climatic variation,
20 water management activities, hybridization with fall-run Chinook,
21 predation, and harvest. *Id.* Spring-run Chinook adults are much
22 more susceptible to the effects of high water temperatures
23 because they must hold over for months in small tributaries
24 before spawning. *Id.*

25 The RBDD affects spring-run migration. Operational changes
26 are not expected in the future. NMFS 5851. RBDD delays some
27 7.2% of the spring-run. NMFS 5921. Only 1% of this population
28 is considered vulnerable to predation. NMFS 5852. Migration is

1 impacted by direct salvage at the pumps; future operations will
2 allegedly only slightly increase spring-run salvage. NMFS 5882-
3 83. Migration can be affected by operation of the pumps,
4 indirectly causing straying into the Central Delta. NMFS 5883.
5 The indirect effect of the pumps is estimated to cause 33%
6 mortality of spring-run juveniles under future operations. NMFS
7 claims some indirect mortality would occur without the Project.
8 NMFS 5931.

9 At present, the Sacramento River mainstream supports 8% of
10 the Central Valley spring-run ESU. NMFS 5846. Project
11 operations will increase losses on the Sacramento River by 4%
12 increasing the maximum total mainstream loss to 25%. NMFS 5935.
13 In normal, dry and critically dry years, mortality increases as
14 follows:

	Mortality Increases		
	Water Year Type		
	Normal	Dry	Critically Dry
	20%	22%	82%

15
16
17
18
19
20 NMFS 5921.

21 Several actions have been taken to improve habitat
22 conditions for spring-run Chinook including improved management
23 of Central Valley water through the use of the CALFED
24 Environmental Water Account ("EWA") and CVPIA (b) (2) water;
25 implementing new and improved screen and ladder designs at major
26 water diversions along the mainstream Sacramento River and
27 tributaries; and changes in ocean and inland fishing regulations
28 to minimize harvest. NMFS AR 5795. Although protective measures

1 have likely contributed to recent increases in spring-run
2 abundance, the ESU is still below levels observed from the 1960s
3 through 1990. *Id.* Threats persist from hatchery production
4 (including competition for food, run hybridization, and
5 homogenization), climatic variation, high temperatures,
6 predation, and water diversions. *Id.* Because the spring-run
7 population is confined to relatively few remaining streams and
8 continues to display broad fluctuations in abundance, the
9 population is at a moderate risk of extinction. NMFS AR 5795.
10 This contradictory finding is not explained.

11
12 2. CV Steelhead.

13 a. General Life History.

14 CV steelhead were listed as threatened March 19, 1998. 50
15 C.F.R. § 223.102 (2006); 63 F.R. 13347. CV Steelhead can be
16 divided into two life history types based on the state of their
17 sexual maturity at the time of river entry and the duration of
18 their spawning migration, stream-maturing and ocean-maturing.
19 NMFS AR 5799. Stream-maturing steelhead enter freshwater in a
20 sexually immature condition and require several months to mature
21 and spawn. *Id.* Ocean-maturing steelhead enter freshwater with
22 well-developed gonads and spawn shortly after river entry. *Id.*
23 The two life history forms are commonly referred to by their
24 season of freshwater entry. *Id.* Stream-maturing steelhead are
25 known as summer steelhead, and ocean-maturing steelhead are known
26 as winter steelhead. *Id.* Currently, only winter steelhead are
27 found in Central Valley rivers, although summer steelhead were
28 present in the Sacramento River system prior to the commencement

1 of large-scale dam construction in the 1940s. *Id.* Presently,
2 summer steelhead are only found in North Coast drainages, mostly
3 in tributaries of the Eel, Klamath, and Trinity River systems.
4 *Id.*

5 Steelhead are iteroparus, which means they are capable of
6 spawning more than once before death. NMFS AR 5799. It is rare
7 for steelhead, however, to spawn more than twice before dying;
8 most that do are females. *Id.* Although a great majority of
9 steelhead spawn once, research indicates that repeat spawners are
10 relatively numerous (approximately 17.2%) in California streams.
11 *Id.*

12 Steelhead spawn in cool, clear streams featuring suitable
13 gravel size, depth, and current velocity, and may also spawn in
14 intermittent streams. NMFS AR 5799. Most steelhead spawning
15 takes place from late December through April, with peaks from
16 January through March. *Id.* Winter steelhead generally leave the
17 ocean from August through April and spawn between December and
18 May. *Id.* Timing of upstream migration is correlated with higher
19 flow events, such as freshets or sand bar breaches, and
20 associated lower water temperatures. *Id.* The preferred water
21 temperature for adult steelhead migration is 46°F to 52°F. *Id.*
22 Thermal stress may occur at temperatures beginning at 66°F, and
23 mortality is demonstrated at 70°F. *Id.* The preferred water
24 temperature for steelhead spawning is 39°F to 52°F. *Id.* The
25 preferred water temperature for steelhead egg incubation is 48°F
26 to 52°F. *Id.* The minimum stream depth necessary for successful
27 upstream migration is 13 cm. The preferred water velocity for
28 upstream migration is in the range of 40 to 90 cm/s, with a

1 maximum velocity, beyond which upstream migration is not likely
2 to occur, of 240 cm/s. *Id.*

3 The length of the incubation period for steelhead eggs is
4 dependent on water temperature, dissolved oxygen concentration,
5 and substrate composition. NMFS AR 5800. In late spring and
6 following sac absorption, fry emerge from the gravel and actively
7 begin feeding in shallow water along stream banks. *Id.*

8 Steelhead rearing during the summer takes place primarily in
9 higher velocity area pools, although some are also abundant in
10 glides and riffles. *Id.* Winter rearing occurs more uniformly at
11 lower densities across a wide range of fast and slow habitat
12 types. *Id.* Some older juveniles move downstream to rear in
13 large tributaries and mainstream rivers. *Id.*

14 Steelhead generally spend two years in freshwater before
15 emigrating downstream. NMFS AR 5800. Rearing juveniles prefer
16 water temperatures of 45°F to 58°F, and have an upper lethal
17 limit of 75°F. *Id.* Juveniles can survive up to 81°F with
18 saturated dissolved oxygen conditions and a plentiful food
19 supply. *Id.* It is recommended that dissolved oxygen
20 concentrations remain at or near saturation levels with temporary
21 reductions of no lower than 5.0 mg/l for successful juvenile
22 rearing. *Id.*

23 Juvenile steelhead emigrate episodically from natal streams
24 during fall, winter, and high spring flows. NMFS AR 5800.
25 Emigrating CV steelhead use the lower reaches of the Sacramento
26 River and the Delta for rearing and as a migration corridor to
27 the ocean. *Id.* Juvenile steelhead in the Sacramento Basin
28 migrate downstream during most months of the year, but the peak

1 period of emigration occurred in the spring, with a much smaller
2 peak in the fall. *Id.*

3

4 b. Habitat.

5 NMFS had not defined habitat or critical habitat for the CV
6 steelhead as of October 22, 2004. Critical habitat was
7 designated for CV steelhead in September 2, 2005.

8

9 c. Population.

10 Historically, steelhead were well-distributed throughout the
11 Sacramento and San Joaquin Rivers. NMFS AR 5800. They were
12 found from the upper Sacramento and Pit River systems, which are
13 now inaccessible due to Shasta and Keswick Dams, south to the
14 Kings and possibly the Kern River systems, also now inaccessible
15 due to extensive alteration from water diversion projects. *Id.*
16 The present distribution of steelhead has been greatly reduced.
17 *Id.* The California Advisory Committee on Salmon and Steelhead
18 reported a reduction of steelhead habitat from 6,000 miles to 300
19 miles. *Id.* at 5800-01. Historically, steelhead probably ascended
20 Clear Creek past the French Gulch area, but access was blocked by
21 Whiskeytown Dam in 1964. *Id.* at 5801.

22 The historic CV steelhead run size is difficult to estimate
23 given the scarcity of data, but it may have approached one to two
24 million adults annually. NMFS AR 5801. By the early 1960s, the
25 steelhead run size had declined to approximately 40,000 adults.
26 *Id.* Over the past thirty years, the naturally-spawned steelhead
27 populations in the upper Sacramento River have declined
28 substantially. *Id.* The estimated average adult steelhead

1 population through the 1960s was 20,540 in the Sacramento River
2 upstream of Feather River. *Id.* Steelhead counts at RBDD
3 declined from an average of 11,187 for the period spanning 1967
4 through 1977, to an average of approximately 2,000 through the
5 early 1990s, with an estimated annual run size for the entire
6 Sacramento-San Joaquin system, based on RBDD counts, to be no
7 more than 10,000 adults. *Id.* Steelhead escapement surveys at
8 RBDD ended in 1993 due to changes in dam operations. *Id.*

9 Around 2003 a comparison was made between tagged and
10 untagged steelhead smolt catch ratios at Chipps Island trawl from
11 1998 through 2001, which produced an estimate that about 100,000
12 to 300,000 steelhead juveniles are produced naturally each year
13 in the Central Valley. NMFS AR 5801. The Biological Review Team
14 reached the following conclusion based on the Chipps Island data:

15 If we make the fairly generous assumptions (in the
16 sense of generating large estimates of spawners) that
17 average fecundity is 5,000 eggs per female, 1 percent
18 of eggs survive to reach Chipps Island, and 181,000
19 smolts are produced (the 1998-2000), about 3,628 female
steelhead spawn naturally in the entire Central Valley.
This can be compared with McEwan's (2001) estimate of 1
million to 2 million spawners before 1850, and 40,000
spawners in the 1960s.

20 *Id.* In the San Joaquin River basin, data from the California
21 Department of Fish and Game trawl surveys indicate a decline in
22 steelhead numbers in the early 1990s, with a total of twelve
23 steelhead smolts collected at Mossdale in 2003. *Id.*

24 Existing wild steelhead stocks in the Central Valley are
25 mostly confined to the upper Sacramento River and its
26 tributaries, including Antelope, Deer, and Mill Creeks and the
27 Yuba River. NMFS AR 5801. Populations may exist in Big Chico
28 and Butte Creeks, and a few wild steelhead are produced in the

1 American and Feather Rivers. *Id.* Recent snorkel surveys (1999
2 through 2002) indicate steelhead are present in Clear Creek. *Id.*
3 Because of the large resident *O. mykiss* population in Clear
4 Creek, steelhead spawner abundance has not been estimated. *Id.*
5 at 5801-02.

6 Until recently, steelhead were thought to be extirpated from
7 the San Joaquin River system. NMFS AR 5802. Recent monitoring
8 has detected small self-sustaining populations of steelhead in
9 the Stanislaus, Mokelumne, Calaveras, and other streams
10 previously thought to be void of steelhead. *Id.* It is possible
11 that naturally spawning populations exist in many other streams
12 but are undetected due to lack of monitoring programs. *Id.*

13

14 d. Status.

15 Both the Biological Review Team and the Artificial
16 Propagation Workshop concluded that the CV steelhead ESU is
17 presently in danger of extinction. NMFS AR 5802. In the
18 proposed status review, however, NOAA Fisheries concluded that
19 the ESU in-total is not in danger of extinction, but is likely to
20 become endangered within the foreseeable future, citing unknown
21 benefits of restoration efforts and a yet to be funded monitoring
22 program. *Id.* Steelhead already have been extirpated from most
23 of their historical range in this region. *Id.* Habitat concerns
24 for the CV steelhead ESU focus on the widespread degradation,
25 destruction, blockage of freshwater habitat, and water allocation
26 problems. *Id.* Widespread hatchery steelhead production within
27 the ESU also raises concerns about the potential ecological
28 interactions between introduced stocks and native stocks. *Id.*

1 Because the CV steelhead population has been fragmented into
2 smaller isolated tributaries without any large source population
3 and the remaining habitat continues to be degraded by water
4 diversions, the population is at high risk of extinction. *Id.*
5 This evidence is materially inconsistent with the no jeopardy
6 finding.

7
8 IV. Legal Standards Of Review.

9 A. Summary Judgment Generally.

10 Summary judgment is appropriate where there are no genuine
11 issues of material fact and the moving party is entitled to
12 judgment as a matter of law. Fed. R. Civ. P. 56(c). A genuine
13 issue of fact exists when the non-moving party produces evidence
14 on which a reasonable trier of fact could find in its favor
15 viewing the record as a whole in light of the evidentiary burden
16 the law places on that party. See *Triton Energy Corp. v. Square*
17 *D Co.*, 68 F.3d 1216, 1221 (9th Cir. 1995). Facts are "material"
18 if they "might affect the outcome of the suit under the governing
19 law." *California v. Campbell*, 138 F.3d 772, 782 (quoting
20 *Anderson v. Liberty Lobby, Inc.*, 477 U.S. 242, 248 (1986)). A
21 court's role on summary judgment is not to weigh the evidence or
22 resolve disputed issues of fact; rather, it is to determine
23 whether there are any genuine issues of material fact for trial.
24 *Abdul-Jabbar v. General Motors Corp.*, 85 F.3d 407, 410 (9th Cir.
25 1996).

26
27 B. Summary Judgment Under The Administrative Procedure
28 Act.

1 Courts reviewing agency decisions are limited to the
2 administrative record. *Florida Power & Light Co. v. Lorion*, 470
3 U.S. 729, 743-44 (1985). "Judicial review of an agency decision
4 typically focuses on the administrative record in existence at
5 the time of the decision and does not encompass any part of the
6 record that is made initially in the reviewing court." *Southwest*
7 *Ctr. for Biological Diversity v. United States Forest Serv.*, 100
8 F.3d 1443, 1450 (9th Cir. 1996). Since judicial review under the
9 APA is generally limited to the administrative record, summary
10 judgment is an appropriate procedure. See, e.g., *Friends of*
11 *Endangered Species v. Jantzen*, 589 F. Supp. 113, 118 (N.D. Cal.
12 1984), *aff'd*, 760 F.2d 976 (9th Cir. 1985).

13 This is a challenge to the lawfulness of a biological
14 opinion brought under the ESA and the APA. Agency decisions made
15 under the ESA are governed by the APA, which requires that the
16 agency action be upheld unless it is found to be "arbitrary,
17 capricious, an abuse of discretion, or otherwise not in
18 accordance with law," or "without observance of procedure
19 required by law." 5 U.S.C. § 706(2)(A), (D); *Pacific Coast Fed'n*
20 *of Fishermen's Ass'ns v. NMFS*, 265 F.3d 1028, 1034 (9th Cir.
21 2001). "This deferential standard is designed to ensure that the
22 agency considered all of the relevant factors and that its
23 decision contained no clear error of judgment." *PCFFA*, 265 F.3d
24 at 1034. (quoting *Arizona v. Thomas*, 824 F.2d 745, 748 (9th Cir.
25 1987)). Agency action should only be overturned if the agency
26 has "relied on factors which Congress has not intended it to
27 consider, entirely failed to consider an important aspect of the
28 problem, offered an explanation for its decision that runs

1 counter to the evidence before the agency, or is so implausible
2 that it could not be ascribed to a difference in view or the
3 product of agency expertise." *National Ass'n of Home Builders v.*
4 *Defenders of Wildlife*, 127 S.Ct. 2518, 2529 (2007) (quoting *Motor*
5 *Vehicle Mfrs. Ass'n v. State Farm Mutual Auto. Ins. Co.*, 463 U.S.
6 29, 43 (1983)). Essentially, a court must ask "whether the
7 agency considered the relevant factors and articulated a rational
8 connection between the facts found and the choice made." *PCFFA*,
9 265 F.3d at 1034 (quoting *Natural Res. Def. Council v. United*
10 *States Dep't of the Interior*, 113 F.3d 1121, 1124 (9th Cir.
11 1997)). "A biological opinion is arbitrary and capricious and
12 will be set aside when it has failed to articulate a satisfactory
13 explanation for its conclusions or when it has entirely failed to
14 consider an important aspect of the problem." *Greenpeace v.*
15 *NMFS*, 80 F. Supp. 2d 1137, 1147 (W.D. Wash. 2000).
16 Alternatively, a biological opinion may also be invalid if it
17 fails to use the best available scientific information as
18 required by 16 U.S.C. § 1536(a)(2). *Id.* at 1150.

19 As a general rule, a court must defer to the agency on
20 matters within its expertise. See *National Wildlife Federation*
21 *v. National Marine Fisheries Service*, 422 F.3d 782, 798 (9th
22 Cir. 2005). "Deference to the informed discretion of the
23 responsible federal agencies is especially important, where, as
24 here, the agency's decision involves a high level of technical
25 expertise." *Id.* However, "[t]he deference accorded an agency's
26 scientific or technical expertise is not unlimited." *Id.*
27 "Deference is not owed when the agency has completely failed to
28 address some factor consideration of which was essential to

1 [making an] informed decision." *Id.* (internal citations and
2 quotations omitted). Nevertheless, a court should "uphold a
3 decision of less than ideal clarity if the agency's path may
4 reasonably be discerned." *Home Builders*, 127 S. Ct. at 2530.

5 A biological opinion is a final agency action for judicial
6 review purposes under the APA. See *PCFFA*, 265 F.3d at 1033-34
7 (holding that a no jeopardy biological opinion is an agency's
8 final decision).

9

10 V. Summary of Parties' Cross-Motions for Summary Judgment.

11 A. Plaintiffs' Motion for Summary Judgment.

12 Plaintiffs assert four major grounds in their motion for
13 summary judgment:

14 First, the BiOp is arbitrary and capricious under the ESA
15 because NMFS failed to establish any reasonable connection
16 between the identified (adverse) impacts to the species and its
17 "no jeopardy" to species and "no adverse modification" of
18 critical habitat conclusions. Within this argument, Plaintiffs
19 maintain NMFS's factual findings in the BiOp directly contradict
20 its "no jeopardy" and "no adverse modification" conclusions
21 because NMFS failed to: (1) conduct an analysis of Project
22 impacts in context of the listed species life cycles and
23 population dynamics; (2) focus on incremental project impacts
24 while arbitrarily ignoring significant adverse effects associated
25 with baseline conditions, which is unsupported by the BiOp's
26 findings; and (3) conduct a comprehensive analysis of impacts
27 associated with the entire federal action during formal
28 consultation.

1 Second, NMFS failed to use the best available science, which
2 demonstrated that global climate change would significantly
3 change the hydrology of Northern California's river systems over
4 foreseeable future OCAP operations.

5 Third, NMFS impermissibly relied on an unenforceable and
6 uncertain adaptive management process, which assumes that
7 unspecified adaptive management measures will reduce Project
8 impacts to the listed salmon and steelhead species despite the
9 BiOp's determination that such measures have shown little benefit
10 for the species.

11 Fourth, the Bureau's reliance on the purportedly flawed BiOp
12 violates its independent and ongoing duty under the ESA to ensure
13 that its actions do not harm listed species or their critical
14 habitat. Plaintiffs advance two sub-arguments: First, the Bureau
15 has failed and is failing to ensure that its actions do not harm
16 listed species or their critical habitats. More specifically,
17 the Bureau is acting arbitrarily and capriciously in relying on
18 the NMFS BiOp, which was fatally flawed upon issuance.
19 Additionally, the Bureau's reliance on the BiOp is arbitrary and
20 capricious in light of new information that emerged after its
21 issuance, which demonstrated that the BiOp's conclusions were
22 seriously flawed from the outset. Second, the Bureau is making
23 irreversible and irretrievable commitments of resources in
24 violation of ESA § 7(d) without lawfully completing consultation
25 under ESA § 7(a)(2).

26
27 B. Federal Defendants' Motion for Summary Judgment.

28 Federal Defendants' cross-motion for summary judgment has

1 two parts: The first addresses claims against NMFS; the second
2 addresses claims against the Bureau.

3 As to NMFS, and consistent with recent judicial decisions in
4 *National Wildlife Fed'n v. National Marine Fisheries Serv.*, 481
5 F.3d 1224 (9th Cir. 2007), and *NRDC v. Kempthorne*, 506 F.2d 322
6 (E.D. Cal. 2007), Federal Defendants acknowledge the need for
7 further explanation of its "no jeopardy" analysis, particularly
8 to address recovery implications for the winter-run Chinook,
9 spring-run Chinook, and CV steelhead. Second, NMFS admits the
10 need for further explanation of its critical habitat analysis for
11 winter-run Chinook, particularly to address the impacts of
12 primary constituent elements and whether an adverse modification
13 of the winter-run Chinook's critical habitat occurred.

14 There is no critical habitat designated for spring-run and
15 CV steelhead and no adverse modification of habitat analysis for
16 these species because such designations occurred post-record.
17 NMFS acknowledges that the analysis of salmonid life cycles and
18 baseline conditions in the BiOp needs further explanation,
19 particularly with respect to any effect of CVP operations on
20 critical habitat and the "no jeopardy" conclusion. NMFS
21 acknowledges that an explanation of its conclusions on global
22 climate change should be included in the forthcoming biological
23 opinion. Despite these admissions, NMFS maintains that the
24 listed species are not jeopardized, and their critical habitats
25 have not been adversely modified and that summary adjudication
26 should be granted in its favor on the remaining issues presented
27 by the NMFS BiOp. NMFS also insists operation of the CVP or SWP
28 is not a "per se" or "patent" violation of the ESA.

1 Federal Defendants maintain Plaintiffs's claims against the
2 Bureau should be denied in their entirety and summary
3 adjudication granted for the Bureau for three reasons. First,
4 the Bureau properly and substantively considered all evidence
5 cited by Plaintiffs during the ESA § 7(a)(2) consultation
6 process. Second, the Bureau properly considered information that
7 emerged after the ESA § 7 consultation process concluded. Third,
8 the Bureau has made no irreversible or irretrievable commitment
9 of resources in contravention of ESA § 7(d) and has implemented
10 additional protective measures.

11 DIs' opposition to Plaintiffs' summary judgment motion as to
12 the NMFS BiOp opposed is on all grounds, except the absence of
13 Global Climate Change analysis and the failure to define critical
14 habitat for CV steelhead and Project effects on such habitat.
15 DIs oppose Plaintiffs' motion for summary judgment as to the
16 Bureau on all grounds.

17

18 VI. Law And Analysis.

19 A. Standing.

20 The parties' briefs do not discuss standing. Plaintiffs'
21 counsel requested at the motions hearing that the court expressly
22 find all Plaintiffs have standing to bring this lawsuit, which
23 Federal Defendants and DI have not challenged. It is incumbent
24 upon the court to determine on its own if Plaintiffs have
25 standing. See *United States v. Hays*, 515 U.S. 737, 742 (1995)
26 (stating "[t]he question of standing is not subject to waiver . .
27 . [w]e are required to address the issue even if . . . the
28 parties fail to raise the issue before us. The federal courts

1 are under an independent obligation to examine their own
2 jurisdiction").

3 Standing is a threshold inquiry. "The rules of standing,
4 whether as aspects of the Art. III case-or-controversy
5 requirement or as reflections of prudential considerations
6 defining and limiting the role of the courts, are threshold
7 determinants of the propriety of judicial intervention." *Warth*
8 *v. Seldin*, 422 U.S. 490, 517-518 (1975). The question of
9 standing typically involves two inquiries "both constitutional
10 limitations on federal-court jurisdiction and prudential
11 limitations on its exercise." *Id.* at 498. The Article III case
12 or controversy doctrine sets limits on the federal court to
13 adjudicate only actual cases and controversies. U.S. Const. art.
14 III, § 2, cl. 1.

15 "To satisfy the 'case' or 'controversy' requirement of
16 Article III, which is the 'irreducible constitutional minimum' of
17 standing, a plaintiff must, generally speaking, demonstrate that
18 [1] he has suffered 'injury in fact,' [2] that the injury is
19 'fairly traceable' to the actions of the defendant, and [3] that
20 the injury will likely be redressed by a favorable decision."
21 *Bennett v. Spear*, 520 U.S. 154, 162 (1997) (quoting *Lujan v.*
22 *Defenders of Wildlife*, 504 U.S. 555, 560-61 (1992)). To have
23 standing, a litigant is required to have a concrete
24 particularized injury, as opposed to a generalized grievance.
25 *United States v. Hays*, 515 U.S. 737, 742-743 (1995).

26 Plaintiffs in this case are the Pacific Coast Federation of
27 Fishermen's Associations/Institute for Fisheries Resources
28 ("PCFFA"); The Bay Institute ("BI"); Baykeeper and its

1 Deltakeeper Chapter (collectively "Baykeeper"); California Trout;
2 Friends of the River ("FOR"); Natural Resources Defense Council
3 ("NRDC"); Northern California Council of the Federation of Fly
4 Fishers ("the Council"); Sacramento Preservation Trust ("the
5 Trust"); and the Winnemem Wintu Tribe ("the Tribe").

6
7 1. PCFFA.

8 PCFFA's members represent approximately 2,000 commercial
9 fishing families in California, Oregon and Washington, most of
10 whom are small and mid-sized commercial fishing boat owners and
11 operators. Most of PCFFA's members derive all or part of their
12 income from the harvesting of Pacific salmon, a valuable business
13 enterprise for the West Coast and particularly for California
14 economies. The decline of California's salmon species in recent
15 years has severely impacted PCFFA members in California by
16 limiting commercial salmon harvest opportunities, both through
17 lost production of impaired stocks and because of additional
18 restrictions imposed on the fishing fleet to protect impaired
19 salmon populations. PCFFA and its sister organization, the
20 Institute for Fisheries Resources ("IFR"), have been vocal
21 advocates for sustainable aquatic resource use and the protection
22 and recovery of salmon throughout Northern California and the
23 Pacific Northwest. Much of PCFFA's and IFR's advocacy work is in
24 the area of protecting the fisheries PCFFA members depend on for
25 their livelihoods.

26 Salmon spawning and rearing habitat losses have cost the
27 west coast salmon fishing industry approximately 72,000 salmon-
28 produced family wage jobs over the past thirty years. These

1 losses are directly related to widespread inland salmon habitat
2 destruction, including that resulting from the construction of
3 dams and diversions of water as part of the CVP and SWP. As a
4 fishing industry trade association PCFFA has been active for
5 nearly thirty years in efforts to rebuild salmon populations in
6 California's Central Valley streams and rivers. These facts
7 sufficiently demonstrate IFR and PCFFA and its members may be
8 actually injured by alleged damages to the species resulting from
9 the 2004 OCAP, the BiOp, and the Federal Defendants' operation of
10 the CVP. PCFFA and IFR have standing to bring this lawsuit.

11
12 2. Bay Institute.

13 The Bay Institute is a non-profit conservation organization
14 incorporated under the laws of California and dedicated to the
15 preservation, protection and restoration of the Sacramento-San
16 Joaquin River Delta and its fish and wildlife resources. The Bay
17 Institute and its over 2,500 members have a direct interest in
18 the survival and perpetuation of fish species and other aquatic
19 resources, including the salmon and steelhead species at issue in
20 this case, that are affected by the CVP and SWP. Most of The Bay
21 Institute's members live on or near the water resources affected
22 by the CVP and SWP, and many rely on this region for their
23 livelihood in the commercial and sports fishing and boating
24 industries. In addition, many of The Bay Institute's members
25 regularly visit and use the water bodies affected by the CVP and
26 SWP for recreational experiences and aesthetic enjoyment. The
27 Bay Institute regularly participates in administrative and
28 judicial proceedings on behalf of its members to protect, enhance

1 and restore declining populations of native California fishes,
2 including the five salmon and steelhead ESUs, throughout the area
3 affected by Project operations. Since its founding in 1981, The
4 Bay Institute has applied a science, education, and advocacy
5 approach to Sacramento-San Joaquin River Delta issues. This
6 approach naturally encompasses the Delta, but also considers the
7 entire region, from the headwaters of the Sacramento and San
8 Joaquin River systems in the Sierra Nevada to the Golden Gate, as
9 a single, interdependent watershed.

10 The Bay Institute works collaboratively with government
11 agencies, independent experts, water users and land owners to
12 design and implement large-scale ecological restoration programs
13 through the CALFED Bay-Delta Program, the CVPIA, the Anadromous
14 Fish Restoration Program, and other initiatives. The Bay
15 Institute commented on the original environmental impact
16 statement and environmental impact report for the 1986 CVP/SWP
17 Coordinated Operating Agreement. In July 2003, The Bay Institute
18 submitted formal comments and scientific information to the
19 Bureau regarding the impacts of its then-proposed OCAP on the
20 five salmon and steelhead ESUs. These uncontested alleged facts
21 sufficiently demonstrate The Bay Institute and its members may be
22 actually injured by the 2004 OCAP, the BiOp, and the Federal
23 Defendants' operation of the CVP. The Bay Institute has
24 standing.

25

26 3. Baykeeper.

27 Baykeeper and its Deltakeeper Chapter ("Baykeeper") is a
28 regional non-profit public benefit corporation organized under

1 the laws of the State of California, with its principal place of
2 business in San Francisco, California. Baykeeper's mission is to
3 protect and enhance the water quality of the San Francisco
4 Bay-Delta estuary and its watershed for the benefit of its
5 ecosystems and human communities. Through its three chapters,
6 Baykeeper patrols thousands of miles of waterways throughout San
7 Francisco Bay, the Sacramento-San Joaquin River Delta and the
8 Petaluma River, investigating pollution problems and bringing
9 enforcement actions directly against polluters when necessary.
10 Founded in 1989, Baykeeper is a legal and policy advocate for the
11 San Francisco Bay and Delta and their vast watershed, from the
12 high Sierra to the Golden Gate. Using targeted administrative
13 and legal advocacy before federal, state and regional regulators,
14 Baykeeper plays a lead role in developing sound legal standards,
15 permits, and regulations. A key area of Baykeeper's focus is
16 ensuring that state and federal environmental laws are properly
17 implemented and enforced. Where necessary, Baykeeper initiates
18 enforcement actions on behalf of the organization and its
19 members.

20 The Deltakeeper Chapter of Baykeeper, located in Stockton,
21 California, carries out the Baykeeper mission on the Delta and
22 its tributaries in California's Central Valley. Baykeeper has
23 approximately 1,200 members who reside in the San Francisco
24 Bay-Delta watershed, of whom approximately 150 belong to the
25 Deltakeeper Chapter. Deltakeeper Chapter staff regularly comment
26 on measures required to protect salmonids, including the five
27 salmon and steelhead ESUs, under a variety of permits and
28 regulatory programs. For example, the Deltakeeper Chapter

1 commented on: the Port of Stockton Clean Water Act dredging and
2 wastewater permits; the development of various Total Maximum
3 Daily Load limits on the San Joaquin and Sacramento Rivers and
4 Cache Creek; and the proposed South Delta Improvement Project.

5 The Deltakeeper Chapter staff and members maintain frequent
6 contact with staff from the California Department of Fish and
7 Game, NMFS and FWS regarding various OCAP issues and the BiOp,
8 and have attended numerous public meetings held by the Bureau and
9 other agencies regarding the 2004 OCAP. Deltakeeper Chapter
10 staff and members also participate regularly in technical forums
11 and workgroups concerning salmonids and implementation of the
12 2004 OCAP, including for example, the Bureau's Tracy Technical
13 Action Team; CALFED's South Delta Fish Facility Forum, North
14 Delta Fish Facilities and Predation Symposium meetings; the
15 Central Valley Fish Facilities Review Team; and the Collection
16 Handling Transportation and Release Team meetings. Deltakeeper
17 Chapter staff serve on the Calaveras River Fish Group Technical
18 Advisory Committee, which is endeavoring to restore the salmon
19 and steelhead fisheries of the Calaveras River. These undisputed
20 facts sufficiently demonstrate Baykeeper and its members may be
21 actually injured by the 2004 OCAP, the BiOp, and the Federal
22 Defendants' operation of the CVP. Baykeeper has standing.

23

24 4. California Trout.

25 California Trout ("CalTrout") is a non-profit conservation
26 corporation organized in 1971 under the laws of the State of
27 California with its principal place of business in San Francisco,
28 California. CalTrout's mission is to protect and restore wild

1 trout, steelhead, and other native fish species such as the five
2 salmon and steelhead ESUs, to protect the waters that nurture
3 these fish species throughout the State of California, including
4 specifically the Sacramento River and San Joaquin River and the
5 Bay-Delta, and to create high quality angling opportunities for
6 the public to enjoy. CalTrout fulfills its mission by working to
7 protect wild trout and steelhead habitat throughout California,
8 and the native biodiversity associated with this riparian
9 habitat, including related salmonid species.

10 In pursuing its mission to protect freshwater habitat for
11 native fish, CalTrout has participated in stream restoration
12 efforts that include (1) establishing the Wild Trout Program,
13 which today protects 1,000 miles of wild trout streams and
14 represents the state's most successful wildlife management
15 program; (2) ensuring that habitat protections were included in
16 the Pit River Relicensing process by negotiating, through the
17 California Hydropower Reform Coalition, a new hydropower dam
18 license agreement for important reaches of the Pit River that
19 establishes springtime flushing flows that better mimic the
20 natural cycle of free-flowing rivers and provides for increased
21 base flows throughout the summer months; and (3) protecting the
22 golden trout, California's state fish and a state-listed
23 sensitive species, by gathering essential data to complete
24 genetics studies, habitat assessments and restoration work.
25 CalTrout represents 4,000 recreational anglers, of whom more than
26 1,000 live near and within areas affected by Project operations
27 and regularly use these areas for fishing, photography, and
28 hiking and to seek aesthetic relief from the urban environments

1 of the Bay Area.

2 CalTrout members support the conservation of entire
3 watersheds and all of their associated biodiversity, as well as
4 the effective implementation and enforcement by government
5 regulatory agencies of planning and conservation laws, like the
6 ESA, that relate to the protection of these watersheds and their
7 native biodiversity. CalTrout commented on the original EIS/EIR
8 for the CVP/SWP Coordinated Operating Agreement in 1986. In
9 September of 2004, CalTrout provided comments to the Governor,
10 urging him to sign California Assembly Bill 2121, which would
11 require the state to produce guidelines for maintaining instream
12 flows for fish in coastal streams from the Mattole River south to
13 San Francisco Bay and in streams entering northern San Pablo Bay.

14 CalTrout takes an active role in protecting the five salmon
15 and steelhead ESUs through its membership in the Coho Recovery
16 Team, a stakeholder advisory group that provided input to the
17 California Department of Fish and Game that led to the listing of
18 SONCC coho salmon under the California Endangered Species Act,
19 and in the California Advisory Committee on Salmon and Steelhead
20 Trout, a stakeholder group that provides recommendations to the
21 Director of the DFG on appropriating funding for proposals to
22 restore salmon and steelhead habitat across the state. These
23 undisputed facts sufficiently demonstrate CalTrout and its
24 members may be actually injured by the 2004 OCAP, the BiOp, and
25 the Federal Defendants' operation of the CVP. CalTrout has
26 standing.

27

28 5. FOR.

1 Friends of the River was founded in 1973 to preserve,
2 protect, and restore free flowing streams and watersheds
3 throughout California. FOR accomplishes these goals through
4 public education and the promotion of sound environmental policy.
5 Most of FOR's 5,400 members live in the greater Bay-Delta region
6 and rely upon the delta for recreational purposes. FOR members
7 take more than 2,000 people on rafting trips on rivers that flow
8 into the delta. FOR also conducts public rafting trips on the
9 Sacramento River to view spawning salmon and other wildlife. FOR
10 also advocates for policies to protect the Sacramento River's
11 salmon and steelhead populations. FOR members and staff
12 supported the federal and state endangered species listings of
13 the spring-run Chinook, winter-run Chinook, and CV steelhead.
14 FOR also submitted extensive comments in support of the Red Bluff
15 Diversion Dam Fish Improvement Project to raise the gates of the
16 dam to facilitate year-round fish passage. According to FOR,
17 this proposal was nullified by the 2004 OCAP.

18 Representatives of FOR attended public meetings held by the
19 Bureau concerning the 2004 OCAP and submitted comments on the
20 2004 OCAP's potential impact on listed salmon and steelhead
21 species, including the continued operation of the RBDD, the
22 elimination of cold water storage behind Shasta Dam, and the
23 reduction of the temperature standard for salmon in the
24 Sacramento River. These undisputed facts sufficiently
25 demonstrate FOR and its members may be actually injured by the
26 2004 OCAP, the BiOp, and the Federal Defendants' operation of the
27 CVP. FOR has standing.

28

1 6. NRDC.

2 NRDC is a non-profit environmental organization with more
3 than 550,000 members nationwide, including more than 100,000
4 members in California and thousands of members in Alameda, Contra
5 Costa, Del Norte, Humboldt, Lake, Mendocino and Napa Counties.
6 NRDC maintains an office in San Francisco, California. NRDC's
7 purpose is to safeguard the Earth: its people, its plants and
8 animals and the natural systems on which all life depends. The
9 organization works to restore the integrity of the elements that
10 sustain life—air, land and water—and to defend imperiled natural
11 places. NRDC seeks to establish sustainability and good
12 stewardship of the Earth as central ethical imperatives of human
13 society and strives to protect nature in ways that advance the
14 long-term welfare of present and future generations. For more
15 than two decades, NRDC has advocated extensively for the
16 protection of the nation's waterways and wildlife, including the
17 salmon and steelhead species at issue here.

18 For example, in July 2003, NRDC submitted formal comments
19 and scientific information to the Bureau raising concerns about
20 the impacts of the Bureau's then-proposed 2004 OCAP on salmon and
21 steelhead ESUs, and in August 2004, NRDC submitted formal
22 comments and scientific information to NMFS regarding the impacts
23 of the 2004 OCAP on the five salmon and steelhead ESUs, during
24 the ESA consultation that resulted in the Biological Opinion
25 challenged here. In addition, NRDC has long worked to protect
26 the water resources affected by the CVP and SWP, including the
27 five salmon and steelhead ESUs and their habitat, in
28 non-litigation settings. For example, NRDC was involved in the

1 development of, and actively supported the enactment of, the
2 CVPIA; participated actively in the negotiation of the record of
3 decision for the CALFED Bay-Delta Program, the mission of which
4 is to develop and implement a long-term comprehensive plan that
5 will restore ecological health and improve water management for
6 beneficial uses of the Bay-Delta estuary; and currently sits on
7 the CALFED public advisory committee. NRDC commented on the
8 original EIS/EIR for the CVP/SWP Coordinated Operating Agreement
9 in 1986. These undisputed facts sufficiently demonstrate NRDC
10 and its members may be actually injured by the 2004 OCAP, the
11 BiOp, and the Federal Defendants' operation of the CVP. NRDC has
12 standing.

13
14 7. The Council.

15 The Council is part of the Federation of Fly Fishers, an
16 international non-profit conservation organization dedicated to
17 the promotion of fly fishing through education and conservation.
18 The Council works on behalf of both fish and fly fishers in
19 Northern California. The Council has approximately 3,000 members
20 who live in Northern California and enjoy recreational fishing
21 throughout the Sacramento River and San Joaquin River watersheds.
22 The general purposes of the Council include the protection and
23 restoration of aquatic habitat for anadromous fish, including the
24 five ESA listed salmon and steelhead species affected by this
25 lawsuit.

26 The Council has consistently advocated the protection of the
27 five salmon and steelhead species with respect to CVP operation,
28 CVP contracts, and the 2004 OCAP. The Council commented on the

1 BiOp pointing out that FWS had used inappropriate modeling
2 inputs. The Council has continuously opposed the South Delta
3 Improvement Project, a future component of the 2004 OCAP, and the
4 increased export of water from the state pumps. These undisputed
5 facts sufficiently demonstrate the Council and its members may be
6 actually injured by the 2004 OCAP, the BiOp, and the Federal
7 Defendants' operation of the CVP. The Council has standing.

8

9 8. The Tribe.

10 The Tribe are a historical California Native Tribe
11 recognized by the California Native American Heritage Commission.
12 The Winnemem's historical territory included the east side of the
13 Sacramento River watershed, the McCloud River watershed from
14 origination to termination, the Squaw Creek watershed from
15 origination to termination, and approximately twenty miles of the
16 Pit River from the confluence of the McCloud River, Squaw Creek
17 and Pit River up to Big Bend. The Winnemem has tribal members
18 living and tribal concerns in many parts of the area impacted by
19 operations of the CVP and SWP, including Clear Creek from
20 Whiskeytown Dam to the Sacramento River, the Sacramento River
21 from Shasta Dam to the Delta, and Spring Creek from the Debris
22 Dam to Keswick Dam.

23 For centuries, the Winnemem have had a deep cultural and
24 spiritual relationship with the salmon that use these rivers.
25 The Winnemem sing to the salmon and the waters that sustain them.
26 The Winnemem's history, traditions, ceremonies, and culture are
27 filled with respect, reverence, appreciation, and dependence on
28 the salmon and these waters. Salmon are also the staple of the

1 Winnemem. Salmon is also the food necessary to complete and
2 fulfill many of the Winnemem's special and sacred ceremonies.
3 The Winnemem are also involved in advocacy work in the area of
4 protecting the natural resources upon which the Winnemem depend
5 for their cultural and religious existence. As far back as 1872,
6 the Winnemem opposed the United States Fish Commission's (now the
7 United States Fish and Wildlife Service) building of a salmon
8 fish hatchery on the McCloud River due to the threat it would
9 pose to the existing wild salmon. In 1937, the Winnemem opposed
10 the Bureau's construction of Shasta Dam because it blocked salmon
11 migration. The Winnemem have also testified at numerous hearings
12 before the Bureau, the United States Senate, and the CALFED Bay
13 Delta Authority, in attempts to achieve protection for the
14 Sacramento River salmon and steelhead. These undisputed facts
15 sufficiently demonstrate that the Winnemem may be actually
16 injured by the 2004 OCAP, the BiOp, and the Federal Defendants'
17 operation of the CVP, all of which have allegedly had adverse
18 impacts on the salmon. The Winnemem have standing.

19
20 9. The Trust.

21 The Trust, based in Chico, California, is a non-profit
22 corporation organized under the laws of the State of California.
23 Formed in 1984, the Trust's purpose is to protect, preserve, and
24 restore the natural values of the Sacramento River ecosystem from
25 its headwaters to the San Francisco Bay/Sacramento-San Joaquin
26 River Delta ("Bay-Delta") and the wildlife it supports, including
27 the five salmon and steelhead ESUs. Many of the Trust's more
28 than 1,000 members regularly use the Sacramento River and Bay-

1 Delta for recreational and educational purposes including
2 fishing, swimming, boating, aesthetic appreciation, and nature
3 study. These members intend to continue doing so on an on-going
4 basis in the future. Additionally, many of the Trust's members
5 live and work in the counties that surround the Sacramento River
6 and Bay-Delta.

7 The Trust has worked continuously, through all legal means,
8 to protect native salmon and steelhead species in the Sacramento
9 River watershed and to restore the Sacramento River to its former
10 richness. For years, the Trust has actively sought legislative
11 reform of the CVP and SWP to make those projects more responsive
12 to the needs of fish and wildlife species in the Sacramento River
13 and Bay-Delta, especially the Sacramento River winter-run salmon.
14 As a member of the "Share The Water" coalition, the Trust and its
15 members lobbied and sent letters to Congress advocating the
16 passage of the CVPIA. Particularly important to the Trust was
17 the CVPIA's revision of the CVP's purpose to include protection
18 of fish and wildlife as a co-equal CVP goal. Water set aside for
19 fish protection purposes under the CVPIA is now an important
20 baseline of the CALFED Bay-Delta Program.

21 The Trust has a long history of actions on behalf of
22 Sacramento River winter-run Chinook salmon. In 2002, for example,
23 the Trust intervened in a lawsuit on behalf of the federal
24 government to defend water management practices aimed at
25 protecting winter-run Chinook salmon and delta smelt. The Trust
26 has opposed efforts to weaken the CALFED Bay-Delta Program's
27 habitat and ecosystem restoration provisions, and most recently
28 has asked CALFED to investigate the effects of rollbacks of

1 environmental protections included in the CALFED Record of
2 Decision on Delta fisheries. The Trust has long participated in
3 matters specifically related to the CVP, SWP and OCAP. The Trust
4 commented on the original CVP/SWP Coordinated Operating Agreement
5 EIS/EIR in 1986 and, in October 2004, submitted comments on the
6 2004 OCAP. These undisputed facts sufficiently demonstrate the
7 Trust may be actually injured by the 2004 OCAP, the BiOp, and the
8 Federal Defendants' operation of the CVP. The Trust has
9 standing.

10
11 B. Plaintiffs' Request for Judicial Notice.

12 Plaintiffs request that the court take judicial notice of
13 the following three documents: (1) the Declaration of Ronald
14 Milligan, the Manager of the Central Valley Operations Office of
15 the Bureau, (2) the Declaration of Bruce Oppenheim, a Fishery
16 Biologist in the Sacramento office of NMFS, and (3) the
17 Declaration of Cay Collette Goude, an Assistant Field Supervisor
18 in the Sacramento office of the United States Fish and Wildlife
19 Service. (Doc. 170) These documents are declarations from
20 representatives of the Federal Defendants that were submitted in
21 the related Delta smelt case, *NRDC v. Kempthorne*, 1:05-cv-01207-
22 OWW-GSA. The Federal Defendants submitted the Declarations of
23 Ronald Milligan and Bruce Oppenheim with their opposition to the
24 plaintiff's motion for a temporary restraining order and
25 preliminary injunction in June 2007. The Federal Defendants
26 submitted the Declaration of Cay Collette Goude with their notice
27 regarding a status conference on June 1, 2007.

28 Plaintiffs offer these declarations to demonstrate the

1 authorized publically stated views of the federal agency
2 representatives regarding implementation and operation of the
3 2004 OCAP and challenged biological opinions, not for the truth
4 of the matters asserted therein. Plaintiffs assert that these
5 declarations will assist the court in assessing the Bureau's
6 compliance with its ongoing duties under the ESA to ensure that
7 its actions do not jeopardize listed species or adversely modify
8 critical habitat.

9 The Federal Defendants do not object to Plaintiffs' request
10 for judicial notice because these were declarations filed by the
11 Bureau in the companion case which directly involves the OCAP.
12 DI San Luis & Delta Mendota Water Authority objects to any
13 consideration of these declarations because they are post-
14 decisional documents.

15 "A judicially noticed fact must be one not subject to
16 reasonable dispute in that it is either (1) generally known
17 within the territorial jurisdiction of the trial court or
18 (2) capable of accurate and ready determination by resort to
19 sources whose accuracy cannot reasonably be questioned." Fed. R.
20 Evid. 201(b). "A court shall take judicial notice if requested
21 by a party and supplied with the necessary information." Fed. R.
22 Evid. 201(d). Judicially noticed facts often consist of matters
23 of public record, such as prior court proceedings, *see, e.g.,*
24 *Emrich v. Touche Ross & Co.*, 846 F.2d 1190, 1198 (9th Cir. 1988).
25 A court may take judicial notice of court records in another
26 case. *United States v. Howard*, 381 F.3d 873, 876 fn. 1 (9th Cir.
27 2004) (citing *United States v. Wilson*, 631 F.2d 118, 119 (9th
28 Cir. 1980)).

1 To the extent the declarations refer to a different case and
2 species, they are not directly relevant. Unless the declarations
3 contain relevant admissions, they were prepared for use in
4 litigation, and are hearsay. The DI object to the contents of
5 these declarations as disputed both as to content and purpose.
6 Under Federal Rule of Evidence 201(b), a court may take judicial
7 notice of facts "not subject to reasonable dispute. . . ." Rule
8 201(b) is not satisfied here by reason of the dispute over the
9 contents of the declarations. Plaintiffs' request for judicial
10 notice is DENIED WITHOUT PREJUDICE. Judicial notice is taken of
11 the fact that each of the three declarations was filed on behalf
12 of the Federal Defendants to express views in related ESA
13 litigation over the 2004 OCAP and the Delta smelt. The documents
14 are post-record, offered to show Agency bad faith and may be
15 considered for that limited purpose.

16

17 C. The Endangered Species Act.

18 The Ninth Circuit has succinctly summarized relevant
19 provisions of the ESA:

20 The ESA requires federal agencies to "insure that any
21 action authorized, funded, or carried out by such
22 agency . . . is not likely to jeopardize the continued
23 existence of any endangered species or threatened
24 species or result in the destruction or adverse
25 modification of [designated critical] habitat" *15 U.S.C. § 1536(a)(2)*. The ESA imposes a procedural
26 consultation duty whenever a federal action may affect
27 an ESA-listed species. *Thomas v. Peterson*, 753 F.2d
28 754, 763 (9th Cir. 1985). To that end, the agency
planning the action, usually known as the "action
agency," must consult with the consulting agency. This
process is known as a "Section 7" consultation. The
process is usually initiated by a formal written
request by the action agency to the consulting agency.
After consultation, investigation, and analysis, the
consulting agency then prepares a biological opinion.

1 See generally *Ariz. Cattle Growers' Ass'n v. U.S. Fish*
2 & *Wildlife Serv.*, 273 F.3d 1229, 1239 (9th Cir. 2001).

3 The consulting agency evaluates the effects of the
4 proposed action on the survival of species and any
5 potential destruction or adverse modification of
6 critical habitat in a biological opinion, 16 U.S.C. §
7 1536(b), based on "the best scientific and commercial
8 data available." *Id.* § 1536(a)(2). The biological
9 opinion includes a summary of the information upon
10 which the opinion is based, a discussion of the effects
11 of the action on listed species or critical habitat,
12 and the consulting agency's opinion on "whether the
13 action is likely to jeopardize the continued existence
14 of a listed species or result in the destruction or
15 adverse modification of critical habitat. . . ." 50
16 C.F.R. § 402.14(h)(3). In making its jeopardy
17 determination, the consulting agency evaluates "the
18 current status of the listed species or critical
19 habitat," the "effects of the action," and "cumulative
20 effects." *Id.* § 402.14(g)(2)-(3). "Effects of the
21 action" include both direct and indirect effects of an
22 action "that will be added to the environmental
23 baseline." *Id.* § 402.02. The environmental baseline
24 includes "the past and present impacts of all Federal,
25 State or private actions and other human activities in
26 the action area" and "the anticipated impacts of all
27 proposed Federal projects in the action area that have
28 already undergone formal or early section 7
consultation." *Id.* If the biological opinion
concludes that jeopardy is not likely and that there
will not be adverse modification of critical habitat,
or that there is a "reasonable and prudent alternative[
]" to the agency action that avoids jeopardy and
adverse modification and that the incidental taking of
endangered or threatened species will not violate
section 7(a)(2), the consulting agency can issue an
"Incidental Take Statement" which, if followed, exempts
the action agency from the prohibition on takings found
in Section 9 of the ESA. 16 U.S.C. § 1536(b)(4); *ALCOA*
v. BPA, 175 F.3d 1156, 1159 (9th Cir. 1999).

. . . .

23 The issuance of a biological opinion is considered a
24 final agency action, and therefore subject to judicial
25 review. *Bennett v. Spear*, 520 U.S. 154, 178, 117 S.Ct.
1154, 137 L.Ed.2d 281 (1997); *Ariz. Cattle Growers'*
Ass'n, 273 F.3d at 1235.

26 *National Wildlife Federation v. National Marine Fisheries*
27 *Service*, 481 F.3d 1224 (9th Cir. 2007) (*NWF v. NMFS*).

28 The questions presented here are whether the NMFS BiOp:

- 1 1. relies on factors not intended by Congress to be
2 considered;
- 3 2. entirely failed to consider an important aspect of
4 the problem;
- 5 3. offered an explanation for the BiOp that runs
6 counter to the evidence before NMFS;
- 7 4. is so implausible that it cannot be ascribed to a
8 difference in view or the product of agency expertise;
- 9 5. makes a clear error of judgment.

10 *National Ass'n of Homebuilders v. Defenders of Wildlife*, 129
11 S.Ct. 2518, 2529 (2007) *PCFFA v. NMFS*, 265 F.3d at 1034.

12
13 D. NMFS Claims.

- 14 1. Whether NMFS Failed to Establish Any Reasonable
15 Connection Between the Impacts It Identified and
16 the BiOp's "No Jeopardy" and "No Adverse
17 Modification" Conclusions.

18 Plaintiffs contend the BiOp falls short of meeting any of
19 the requirements of ESA § 7(a)(2) and its implementing
20 regulations, which require, among other things, that: (1) NMFS
21 use the best scientific and commercial data available to evaluate
22 the current status of the listed species and its critical
23 habitat; (2) that NMFS evaluate the effects of the action and
24 cumulative effects on the listed species and critical habitat;
25 and (3) that NMFS formulate its biological opinion as to whether
26 the action, taken together with cumulative effects, is likely to
27 jeopardize the continued existence of listed species or result in
28 the destruction or adverse modification of critical habitat.

 Specifically, Plaintiffs argue NMFS failed to establish a

1 reasonable connection between the impacts it identified in the
2 BiOp and its no jeopardy and no adverse modification of critical
3 habitat conclusions. Plaintiffs maintain: (1) the BiOp
4 establishes no link between the significant adverse Project
5 effects it identifies and its "no jeopardy" and "no adverse
6 modification" conclusions, and that the BiOp's findings
7 contradict its conclusions; (2) NMFS failed to conduct an
8 analysis of the Projects' impacts in the context of the species'
9 life cycles and population dynamics; (3) NMFS's focus on
10 incremental impacts arbitrarily ignored significant adverse
11 effects associated with baseline conditions and is unsupported by
12 the BiOp's factual findings; and (4) NMFS failed to conduct a
13 comprehensive analysis of impacts associated with the entire
14 federal action during formal consultation with the Bureau.

15 In light of rulings made in *NRDC v. Kempthorne*, and the
16 Ninth Circuit's recent decision in *NWF v. NMFS*, Federal
17 Defendants acknowledge the following of Plaintiffs' claims are
18 valid:

- 19 (1) The need for further explanation of its "no jeopardy"
20 analysis to address recovery implications for winter-
21 run Chinook, spring-run Chinook, and CV steelhead.
- 22 (2) The need for further explanation of its critical
23 habitat analysis for winter-run Chinook to address the
24 impacts to the primary constituent elements and whether
25 an adverse modification of critical habitat occurred.
- 26 (3) The need for further explanation of the analysis of
27 salmonid life cycles and baseline conditions with
28 respect to effects of CVP operations on critical

1 habitat and no jeopardy conclusion.

2 Despite these admissions, Federal Defendants do not concede
3 the validity of Plaintiffs' ultimate contentions that any of the
4 species is "jeopardized;" that critical habitat is "adversely
5 modified;" or that combined operations of the Projects under the
6 2004 OCAP effect a *per se* or patent violation of the ESA. In the
7 Federal Defendants' view, these issues should not be resolved on
8 the presently "incomplete" AR, and the Court should find there is
9 insufficient information in the AR to explain the "no jeopardy"
10 and "no adverse modification" conclusions in the BiOp. The
11 Federal Defendants argue that the BiOp should be remanded so NMFS
12 can issue a new biological opinion which explains in further
13 detail, whether continued Project operations will, or will not,
14 jeopardize the continued existence of salmonid species or
15 adversely modify designated critical habitat.

16 The DI contend NMFS articulated a rational connection
17 between its factual findings and no jeopardy and no adverse
18 modification conclusions except as to the CV steelhead. As a
19 practical matter, this position is untenable in view of the
20 Federal Defendants' above-identified admissions that those
21 specified BiOp findings are incomplete or unsupported.

22 NMFS and the United States Fish and Wildlife Service ("FWS")
23 have issued joint regulations interpreting the ESA. Under the
24 regulations, NMFS and FWS have defined the terms "jeopardize the
25 continued existence of," "destruction or adverse modification,"
26 and "critical habitat." "Jeopardize the continued existence of"
27 means "to engage in an action that reasonably would be expected,
28 directly or indirectly, to reduce appreciably the likelihood of

1 both survival and recovery of a listed species in the wild by
2 reducing the reproduction, numbers, or distribution of that
3 species." 50 C.F.R. § 402.02. "Destruction or adverse
4 modification" means:

5 a direct or indirect alteration that appreciably
6 diminishes the value of critical habitat for both the
7 survival and recovery of a listed species. Such
8 alterations include, but are not limited to,
9 alterations adversely modifying any of those physical
10 or biological features that were the basis for
11 determining the habitat to be critical.

12 *Id.* "Critical habitat refers to an area designated as critical
13 habitat listed in 50 CFR parts 17 or 226." *Id.*

14 No critical habitat was designated for spring-run or CV
15 steelhead as of the time the BiOp issued. As a matter of law,
16 NMFS could not have made a no adverse modification of an
17 undesignated critical habitat, because it is undeniable both
18 species then had critical habitats, despite that NMFS chose not
19 to designate it. The post-record September 2, 2005, designation
20 of critical habitat for these two species raises substantial
21 question whether the NMFS and the Bureau nonetheless knew of such
22 critical habitat in 2004 in spite of its non-designation. This
23 abdication on the issue of critical habitat for two of the
24 species is an entire failure to consider an important aspect of
25 the problem and/or so implausible that it cannot be ascribed to a
26 difference in view or the product of agency expertise.

27 a. Whether NMFS's Factual Findings Directly
28 Contradict the No Jeopardy and No Adverse
Modification Conclusions in the BiOp.

Review under the arbitrary and capricious standard is
deferential to the agency. *National Ass'n of Homebuilders v.*

1 *Defenders of Wildlife*, 127 S.Ct. at 2529. A reviewing court
2 should not vacate an agency's decision unless the agency:

3 has relied on factors which Congress had not intended
4 it to consider, entirely failed to consider an
5 important aspect of the problem, offered an explanation
6 for its decision that runs counter to the evidence
before the agency, or is so implausible that it could
not be ascribed to a difference in view or the product
of agency expertise.

7 *Id.* (citing *Motor Vehicle Mfrs. Ass'n of United States, Inc. v.*
8 *State Farm Mut. Auto. Ins. Co.*, 463 U.S. 29, 43 (1983). A court
9 should "uphold a decision of less than ideal clarity if the
10 agency's path may be reasonably discerned." *Id.* at 2530.

11 Essentially, a court "must ask whether the agency considered the
12 relevant factors and articulated a rational connection between
13 the facts found and the choice made." *Pacific Coast Fed'n of*
14 *Fishermen's Ass'ns, Inc. v. National Marine Fisheries Service*,
15 265 F.3d 1028, 1034 (9th Cir. 2001).

16 Plaintiffs maintain the BiOp does not establish the required
17 path from the adverse project impacts NMFS identified in the
18 record and the no jeopardy and no adverse modification
19 conclusions. Plaintiffs painstakingly argue that the BiOp's
20 factual findings are irreconcilable with and contradict its
21 conclusions. Each species is addressed separately, as the
22 findings regarding each species differ.

23

24 (1) Winter-run Chinook.

25 The BiOp reached the following conclusion regarding the
26 winter-run Chinook:

27 After reviewing the best scientific and commercial
28 information available, the current status of the
species, the environmental baseline for the action

1 area, the effects of the proposed action, and
2 cumulative effects, it is NOAA Fisheries biological
3 opinion that the action, as proposed, is not likely to
4 jeopardize the continued existence of Sacramento River
5 winter-run Chinook Salmon. In addition, NOAA Fisheries
6 has determined that the action, as proposed, is not
7 likely to adversely modify critical habitat for
8 Sacramento River winter-run Chinook salmon.

9 NMFS AR 5940.

10 Plaintiffs argue the BiOp's "no jeopardy" and "no adverse
11 modification" conclusions starkly contrast with NMFS's concerns
12 about the species raised in the actual text of the BiOp; in
13 NMFS's draft biological opinion⁶ issued a few weeks prior to the
14 BiOp; and in the administrative record. According to Plaintiffs,
15 NMFS identified adverse impacts to the winter-run Chinook and its
16 habitat from the Projects' in-Delta operations and upstream river
17 operations. In addition to other impacts to the winter-run
18 Chinook, two particular Project operations that evoked the
19 greatest concern were the Bureau's proposal to move the
20 Sacramento River temperature compliance point ("TCP") nineteen
21 (19) miles upstream from Bend Bridge to Balls Ferry, and to
22 modify the 1.9 million acre-foot ("MAF") end-of-water-year

23 ⁶ NMFS's draft biological opinion is not binding or
24 determinative whether the final BiOp is arbitrary and capricious.
25 See *National Ass'n of Homebuilders*, 127 S. Ct. at 2530 (stating
26 "federal courts ordinarily are empowered to review only an
27 agency's final action, see 5 U.S.C. § 704, and the fact that a
28 preliminary determination by a local agency representative is
later overruled at a higher level within the agency does not
render the decisionmaking [sic] process arbitrary and
capricious.") (emphasis in original). Federal agencies are
entitled to change their minds, so long as the proper procedures
were followed. *Id.* The draft may raise questions the Agency
needs to address, however, a draft is not the definitive opinion
by which the BiOp is judged.

1 carryover storage requirement ("COS") at Shasta Reservoir from a
2 requirement to a target.

3
4 (a) Impacts Relating to the Movement of
5 the TCP and Elimination of the COS
6 Requirement.

7
8 i) Background of the TCP and COS
9 Requirement.

10 The Shasta Division⁷ of the CVP includes facilities that
11 conserve water on the Sacramento River for flood control,
12 navigation maintenance, conservation of fish in the Sacramento
13 River, protection of the Delta from intrusion of saline ocean
14 water, agricultural water supplies, municipal and industrial
15 water supplies, and hydroelectric generation. NMFS AR 5754. The
16 Shasta Division includes Shasta Dam, Lake, and Powerplant;
17 Keswick Dam, Reservoir, and Powerplant; and the Toyon Pipeline.
18 NMFS AR 5754.

19 Shasta Dam and Lake is the largest storage reservoir on the
20 Sacramento River with a 4.55 MAF capacity. NMFS AR 5754.
21 Completed in 1945, Shasta Dam controls flood water and stores
22 winter runoff for various uses in the Sacramento and San Joaquin
23 valleys. NMFS AR 5754. Keswick Dam, located approximately 9
24 miles downstream from Shasta Dam, creates an afterbay with a 23
25 thousand acre-foot ("TAF") capacity for Shasta Lake and Trinity
26 River diversions. NMFS 5754.

27 Water temperature in the upper Sacramento River has been
28

27 ⁷ The Bureau uses the term "Unit" interchangeably with CVP
28 "Divisions."

1 recognized as a key factor for the habitat needs for Chinook
2 salmon stocks inhabiting the river. USBR AR 4937. The 56°F
3 temperature control point is the benchmark above which the
4 winter-runs' survival is put in jeopardy. Water temperature on
5 the Sacramento River system is influenced by several factors,
6 including the relative water temperatures and ratios of releases
7 from Shasta Dam and from the Spring Creek Powerplant. USBR AR
8 4937. The temperature of water released from Shasta Dam and the
9 Spring Creek Powerplant is a function of: (1) the reservoir
10 temperature profiles at the discharge points at Shasta and
11 Whiskeytown; (2) the reservoir depths from which releases are
12 made; (3) the seasonal management of the deep cold water
13 reserves; (4) ambient seasonal air temperatures and other
14 climatic conditions; (5) tributary accretions and water
15 temperatures; and (6) residence time in Keswick, Whiskeytown and
16 Lewiston Reservoirs, and in the Sacramento River. USBR AR 4937.

17 The Bureau operates the Shasta, Sacramento River, and
18 Trinity River Divisions of the CVP to meet, to the extent
19 possible, the provisions of SWRCB Order 90-05 and the 1993
20 winter-run Chinook biological opinion ("1993 BiOp"). NMFS AR
21 5754, USBR AR 4935. In 1990 and 1991, the SWRCB issued Water
22 Rights Orders 90-05 and 91-01 modifying Reclamation's water
23 rights for the Sacramento River. NMFS AR 5754. These SWRCB
24 orders include temperature objectives for the Sacramento River
25 including a daily average water temperature of 56°F at RBDD
26 during periods when higher temperatures would be harmful to
27 fisheries. NMFS AR 5754. Under the Orders, the compliance point
28 may be changed when the objective cannot be met at RBDD. NMFS AR

1 5754, USBR AR 4937. DI assert the temperature objective has
2 never been met at RBDD.

3 The SWRCB orders also required the Bureau to establish the
4 Sacramento River Temperature Task Group ("SRTTG") to formulate,
5 monitor, and coordinate temperature control plans for the upper
6 Sacramento and Trinity Rivers. USBR AR 4937-38. This group
7 consists of representatives from the Bureau, SWRCB, NOAA
8 Fisheries, FWS, California Department of Fish and Game, Western,
9 California Department of Water Resources, and the Hoopa Valley
10 Indian Tribe. USBR AR 4938. Each year, with finite cold water
11 resources and competing demands usually an issue, the SRTTG has
12 devised operation plans with the flexibility to provide the best
13 protection consistent with the CVP's temperature control
14 capabilities and considering the annual needs and seasonal
15 spawning distribution monitoring information for winter-run and
16 fall-run Chinook salmon. USBR AR 4938. In every year that the
17 SRTTG has operated, its temperature plans have included modifying
18 the RBDD compliance point to make best use of the cold water
19 resources based on the location of spawning Chinook salmon. USBR
20 AR 4938.

21 The SWRCB water rights orders also recommended the
22 construction of the Shasta Temperature Control Device ("Shasta
23 TCD") to improve the management of limited cold water resources.
24 USBR AR 4937. Construction of the Shasta TCD at Shasta Dam was
25 completed in 1997. USBR AR 4938. This device is designed for
26 greater flexibility in managing the cold water reserves in Shasta
27 Lake while enabling hydroelectric power generation to occur and
28 to improve salmon habitat conditions in the upper Sacramento

1 River. USBR AR 4938. The Shasta TCD is also designed to enable
2 selective release of water from varying lake levels through the
3 power plant in order to manage and maintain adequate water
4 temperatures in the Sacramento River downstream of Keswick Dam.
5 USBR AR 4938.

6 Prior to construction of the Shasta TCD, the Bureau released
7 water from Shasta Dam's low-level river outlets to alleviate high
8 water temperatures during critical periods of the spawning and
9 incubation life stages of the winter-run Chinook stock. USBR AR
10 4938. Releases through the low-level outlets bypass the power
11 plant and result in a loss of hydroelectric generation at the
12 Shasta Powerplant. USBR AR 4938. The release of water through
13 the low-level river outlets was a major facet of Reclamation's
14 efforts to control upper Sacramento River temperatures from 1987
15 through 1996. USBR AR 4938.

16 The seasonal operation of the Shasta TCD is generally as
17 follows: during mid-winter and early spring the highest elevation
18 gates possible are utilized to draw from the upper portions of
19 the lake to conserve deeper colder water resources. USBR AR
20 4938. During late spring and summer, the operators begin the
21 seasonal progression of opening deeper gates as Shasta Lake
22 elevation decreases and cold water resources are utilized. USBR
23 AR 4938. In late summer and fall, the Shasta TCD side gates are
24 opened to utilize the remaining cold water resource below the
25 Shasta Powerplant elevation in Shasta Lake. USBR AR 4938.

26 The Shasta TCD gives the Bureau flexibility in managing cold
27 water resources, but not without some problems. The seasonal
28 progression of the Shasta TCD operation is designed to maximize

1 the conservation of cold water resources deep in Shasta Lake,
2 until the time the resource is of greatest management value for
3 fishery management purposes. USBR AR 4939. Recent operational
4 experience with the Shasta TCD has demonstrated significant
5 operational flexibility improvement for cold water conservation
6 and upper Sacramento River water temperature and fishery habitat
7 management purposes. USBR AR 4939. This operational experience
8 has also demonstrated the Shasta TCD has significant leaks that
9 are inherent in its design. USBR AR 4939. Also, operational
10 uncertainties cumulatively impair the seasonal performance of the
11 Shasta TCD to a greater degree than was anticipated in previous
12 analysis and modeling used to describe long-term Shasta TCD
13 benefits. USBR AR 4939.

14 NOAA Fisheries issued the 1993 BiOp in February 1993. USBR
15 AR 4939. The 1993 BiOp includes a reasonable and prudent
16 alternative ("RPA") addressing CVP operations criteria for
17 temperature control objectives. USBR AR 4939. Under this RPA,
18 the Bureau must make its February 15 forecast of deliverable
19 water based on an estimate of precipitation and runoff at least
20 as conservatively as 90 percent probability of exceedance.⁸ USBR
21 AR 4939. The use of this conservatively based forecasting
22 approach reduces the risk of over committing potential annual
23 cold water reserves by limiting the Central Valley water supply
24 estimates to a one in ten chance of the remaining annual
25 hydrologic conditions being drier than the estimate. USBR AR
26 4939. This forecasting strategy places an allocation emphasis on

27

28 ⁸ This requirement continues in effect. NMFS AR 5955-56.

1 reserving sufficient cold water resources during the winter-run
2 Chinook salmon incubation and spawning seasons. USBR AR 4939.

3 In seven of ten years preceding the BiOp, NMFS moved the
4 temperature compliance point upstream from Bend Bridge to Jelly's
5 Ferry, and sometimes as the year progressed, to Balls Ferry.
6 USBR 3142, 3162-63, 3200, 3271, 3310-11, 3319-24, 3394, 3435-36,
7 3438-39. Two of these years were dry, and the compliance point
8 was at Jellys Ferry. USBR 3354, 3397. In those two years,
9 Project operations were modified to optimize limited cold water
10 resources for all salmon runs. Moving the compliance point
11 upstream from Bend Bridge also conserved cold water resources.
12 NMFS 5920-21, USBR 3353-54, 3380-81, 3392. This was required
13 because cold water resources must be shared between winter-run
14 and spring-run that spawn later in the year. USBR 3351; NMFS
15 5956.

16 Releasing large quantities of comparatively warmer water
17 from higher elevations on Shasta Dam causes other impacts to the
18 fishery:

19 a. Hastened depletion of the cold water pool in
20 Shasta Lake;

21 b. Lower the Lake to a point where there was
22 potential to totally lose control over release temperatures, a
23 disastrous scenario for later spawning spring and fall-run. USBR
24 3351.

25 c. If spawning distribution is in downstream
26 locations, temperature protection could not be provided in a dry
27 year. NMFS predicted additional early life stage mortality to be
28 a nominal increase, 0.54%. NMFS 5920.

1 d. NMFS also realized an adaptive management process
2 to reduce potential temperature related losses by moving
3 temperature compliance location downstream to protect redds.
4 NMFS 5845-56.

6 a) Shasta COS Requirement.

7 The 1993 BiOp contains an RPA requiring the Bureau to
8 maintain a minimum end-of-water-year (September 30) carryover
9 storage in Shasta Reservoir of 1.9 MAF. USBR AR 4939. This is
10 the COS requirement. The 1.9 MAF COS Requirement is intended to
11 increase the probability of sufficient cold water resources to
12 maintain suitable water temperature conditions for the subsequent
13 water year winter-run incubation and spawning season needs. USBR
14 AR 4939. The 2004 BiOp changes the 1.9 MAF COS to a target, NMFS
15 AR 5956, which does not ensure that adequate cold water reserves
16 (and therefore, winter-run incubation and spawning habitat water
17 temperature) are available during the year the 1.9 MAF COS
18 requirement is required. USBR AR 4939.

19 The 1993 BiOp recognized that it may not be possible to
20 maintain the minimum carryover of 1.9 MAF in the driest ten
21 percent of hydrologic circumstances. USBR AR 4939. Under the
22 1993 BiOp, if the Bureau forecasts end-of-water-year storage
23 levels in Shasta will drop below 1.9 MAF, re-initiation of
24 consultation was required prior to the first water allocation
25 announcement for that year. USBR AR 4939. NMFS offers a
26 reasonable explanation that new mitigation measures and water
27 management actions justify this flexibility in managing COS.

1 b) Sacramento River TCP.

2 Another RPA in the 1993 BiOp sets water temperature
3 compliance location(s) (TCP) from April 15 through October 31 for
4 winter-run needs based on a systematic set of Shasta carryover
5 and annual hydrologic conditions. USBR AR 4939. The 1993 BiOp
6 segregates annual Shasta Reservoir carryover and hydrologic
7 conditions in order to assess the potential cold water resources
8 available from Trinity and Shasta Reservoirs and to determine a
9 strategy for the water TCP. USBR AR 4940. Generally, the 1993
10 BiOp sets the TCP at Bend Bridge on the Sacramento River in
11 conditions of high carryover storage or above normal hydrologic
12 conditions. USBR AR 4940. For lower carryover storage
13 conditions and dry or critical hydrologic conditions, the 1993
14 BiOp sets the TCP farther upstream at Jelly's Ferry on the
15 Sacramento River. USBR AR 4940. For low carryover storage and
16 critical or very critical hydrologic conditions (generally
17 associated with extended drought conditions) the 1993 BiOp
18 requires re-initiation of consultation to determine the
19 TCP. USBR AR 4940.

20 In almost every year since 1993, the Bureau has reconsulted
21 with NOAA Fisheries and modified the TCP or allowed short-term
22 fluctuation above the 56°F objective because of insufficient cold
23 water resources, extreme ambient air temperature events, or high
24 downstream tributary flows of warm water. USBR AR 4940. The
25 reconsultation actions have been coordinated through the SRTTG to
26 the extent possible. USBR AR 4940.

27
28 c) Management of the Upper

1 Sacramento River
2 Temperature Objectives
3 Since the Issuance of the
4 1993 BiOp.

5 Since the issuance of the temperature objectives contained
6 in the 1993 BiOp, the long-term cold water management operation
7 of the Trinity-Shasta reservoir system has been changed and
8 influenced by several significant water management actions that
9 have occurred during the intervening period. USBR AR 4940.

10 These water management actions include:

- 11 • Implementation of CVPIA Section 3406 (b) (2)
- 12 • Implementation of SWRCB Delta D-1641
- 13 • Continuing implementation of the Trinity River ROD as
14 ordered by the District Court
- 15 • Installation and actual performance characteristics of
16 the Shasta TCP.

17 USBR AR 4940. Each of these water management actions has changed
18 the availability and the management of cold water resources for
19 the Upper Sacramento River. USBR AR 4940.

20 ii) Proposed Actions and Effects
21 Under the 2004 BiOp.

22 One of the proposed actions in the BiOp moves the TCP
23 nineteen miles upstream to Balls Ferry from Bend Bridge (the TCP
24 location established in the 1993 BiOp). As discussed, the 1.9
25 MAF COS requirement is now a "target" that the Bureau will
26 attempt to meet at the end of each water year.

27 With respect to moving the TCP from Bend Bridge to Balls
28 Ferry, the EFFECTS OF THE ACTION section of the BiOp (section V)

1 states:

2 Higher water temperatures and an increase in frequency
3 of very low storage conditions during dry and
4 critically dry years in the mainstream spawning area
5 are expected to reduce spawning success in certain
6 areas through egg and larval mortality. Based on the
7 proposed temperature compliance point of Balls Ferry,
8 approximately 20 miles (42 percent) of the available
9 mainstream spawning habitat of Chinook salmon is
10 expected to be rendered less suitable for egg and
11 larval survival during these years for those fish that
12 spawn in these lower areas. On average, predicted
13 temperatures over the 72 year modeled period at Balls
14 Ferry will exceed 56°F, and exceed baseline predicted
15 temperatures . . . in April (5 of 72 years), May (7
16 years), July (8 years), August (15 years), September
17 (26 years), and October (12 years over 60°F). In
18 general the number of exceedances increases by 1 year
19 over baseline conditions, although August, September,
20 and October exceedances occur in 6, 7, and 2 more
21 years, respectively. Temperatures downstream of this
22 point will also exceed baseline conditions, affecting
23 the spawning success of any adults spawning below Balls
24 Ferry.

25 NMFS AR 5844.

26 Since 1993, NMFS has recommended moving the TCP upstream to
27 conserve cold water in the Shasta Reservoir for August and
28 September when juveniles are most vulnerable to temperature
effects. NMFS AR 5844. The Bureau assumed moving the TCP from
Bend Bridge to Balls Ferry would be insignificant because the
majority of winter-run Chinook (99%) have spawned above Balls
Ferry based on aerial redd surveys in the years 2001 through
2003. NMFS AR 5844-45. NMFS made the following finding in the
EFFECTS OF THE ACTION section of the BiOp regarding the upstream
movement of the TCP:

A review of the historical spawning distribution over
the last ten years (i.e., 1993 to 2003) shows that on
average 3.6 percent of the run spawned below Balls
Ferry since RBDD gate operations were modified
NOAA Fisheries expects that as the population increases
the spawning distribution may vary and a small

1 proportion of the run may be exposed to unsuitable
2 water temperatures below Balls Ferry. This effect is
3 expected to be less than significant, unless large
4 numbers of adults spawn below Balls Ferry. In the last
5 five years this has occurred only once during a wet
6 year (i.e., in 2000, when 16 percent of the run spawned
7 below Balls Ferry). Even in years when a portion of
8 the run spawns downstream of the compliance point not
9 all eggs would be killed, but a small amount of
10 increased mortality would be expected ranging from 8 to
11 15 percent based on a relationship between water
12 temperature and mortality of Chinook salmon eggs . . .
13 .

14 NMFS AR 5845.

15 NMFS also addressed "Habitat Availability and Suitability"
16 in the EFFECTS OF THE ACTION SECTION OF THE BIOP. Regarding
17 moving the TCP from Bend Bride to Balls Ferry, NMFS made the
18 following findings:
19

20 Winter-run Chinook salmon spawning habitat is made less
21 suitable by approximately 19 miles (i.e., 42 percent of
22 available spawning habitat currently available to Bend
23 Bridge) by defaulting to the more upstream temperature
24 compliance point at Balls Ferry compared to Bend Bride
25 under both operations today and in the future. Even
26 though most of the current population is not
27 anticipated to be affected, since generally winter-run
28 Chinook salmon spawn upstream of Balls Ferry, planning
for future temperature control operations at the higher
compliance point could limit potential spawning
distribution. NOAA Fisheries anticipates that the
spawning distribution routinely will be more contracted
(i.e., reduced by 19 miles), therefore population
abundance could be capped as these fish seek out areas
of more suitable, cooler water for spawning and move
farther upstream than they otherwise would do in some
years.

29 NMFS AR 5846, 5939.

30 DI argue that increasing winter-run Chinook populations from
31 1993 to 2003 show that this strategy has not jeopardized, but has
32 benefitted the species.

33 On the change of the 1.9 MAF COS requirement to a "target,"
34

1 NMFS made the following findings in the EFFECTS OF THE ACTION
2 section of the BiOp:

3 The [1993 BiOp] established a minimum end-of-September
4 carryover storage criteria for Shasta Reservoir of 1.9
5 MAF, which in combination with storage reserves in
6 Trinity Reservoir, minimum instream flows during the
7 winter, and D-1485 Delta standards produced a following
8 year May Shasta Reservoir storage in the 3.0 to 3.5 MAF
9 range, with a reasonable amount of cold water available
10 in the second year. Average end-of-September carryover
11 storage in Shasta Reservoir is reduced by 130 TAF under
12 future conditions compared to today's Under a
13 50 percent probability of exceedance, future operations
14 reduce end-of-September carryover storage by about 230
15 TAF from operations today. . . . Reductions in
16 September carryover storage are due to releases for SWP
17 in-basin requirements, compliance with Trinity River
18 requirements, and extra pumping capacity for Joint
19 Point of Diversion. The result will be a reduced
20 ability to control water temperatures in the upper
21 Sacramento River and an increase in frequency of very
22 low storage conditions (as indicated by end-of-
23 September storage below 1.9 MAF). For example, low
24 storage conditions occur in 11 out of 72 years (15
25 percent of the modeled period) under baseline
26 conditions. Under proposed formal consultation
27 actions, low storage conditions increase to 14 out of
28 72 years (19 percent of the modeled period), a 26
percent increase in frequency over baseline conditions.
Further, one year is added to low storage conditions
during two of the three periods of significant drought
in the 72 year modeled period. Decreased water
availability also leads to decreases in deliveries.
During critically dry periods, water deliveries to
agricultural users south of the Delta decrease
significantly: under baseline conditions the Project
might deliver 10 percent of the allocation to these
users; under expected future conditions, these levels
drop to 7 to 8 percent.

22 NMFS AR 5844.

23 Plaintiffs criticize this baseline analysis and observe that
24 the "target" scenario results in an almost 20% lower storage
25 condition which will reduce ability to control temperatures in
26 the upper Sacramento River, directly jeopardizing the winter-run.

27 In the INTEGRATION AND SYNTHESIS OF THE EFFECTS section of
28

1 the BiOp (section VII), NMFS made the following findings
2 regarding the effects of moving the TCP upstream to Balls Ferry
3 and eliminating the Shasta COS Requirement on the winter-run
4 Chinook:

5 Reclamation's Salmon Mortality Model estimates that the
6 proposed operations will increase temperature-related
7 losses of the early life stages of winter-run Chinook
8 salmon on average 1-2 percent under both conditions
9 today and in the future (i.e., assuming 99 percent of
10 adults spawn above Balls Ferry). Average mortality is
11 less than 5 percent in most years except critically
12 dry, as discussed below. Through the SRTTG, protective
13 actions are anticipated to reduce this loss.
14 Therefore, for most water years the increase in average
15 egg and fry loss is not expected to be significant.

16 Based on the spawning distribution since operations of
17 the gate at [RBDD] changed in 1993, an average of 3.6
18 percent of the adult winter-run Chinook salmon
19 population has spawned below Balls Ferry The
20 impact of proposed temperature operations for those
21 fish that spawn below Ball's Ferry equates to a 0.54
22 percent loss of the total juvenile production on
23 average, based on 8-15 percent of the eggs being lost
24 due to a 1-2 degree difference in water temperatures.
25 Under future conditions, if the population increases or
26 higher winter flows shift spawning downstream, adults
27 would be expected to utilize habitat below Balls Ferry
28 to a greater extent than today, thus the loss in the
juvenile production would be expected to increase. In
wet years there is likely to be sufficient cold water
available to provide suitable water temperatures below
Balls Ferry and to accommodate shifts in spawning
distribution.

Increases in water temperatures during critically dry
years in the winter-run Chinook salmon spawning area
are expected to result in high levels of egg and larval
mortality. Under baseline conditions, the winter-run
Chinook salmon population experienced an estimated 41
percent mortality in 15 percent of the modeled 72 year
period. The proposed formal consultation actions are
expected to increase both the amount and frequency of
these high mortality levels to 44 percent and 19
percent, respectively.

Through flexibility in real time operations and the
adaptive management process (i.e., SRTTG and B2IT)
protective actions (i.e., increased flows, warm water
bypasses, use of the TCD, and low level outlets) would
be taken early on to avoid temperature effects to early

1 life stages of winter-run Chinook salmon.

2 NMFS AR 5920.

3 This analysis is consistent with Defendants' projected
4 increases of 3% to 4% annual mortality for winter-run when the
5 new regime is used.

6 In the "Population Impacts and Potential for Recovery"
7 subsection of the INTEGRATION AND SYNTHESIS OF THE EFFECTS
8 section of the BiOp, NMFS made the following findings. "Current
9 operations result in the loss of 42 percent of the winter-run
10 Chinook salmon juvenile population" NMFS AR 5931. At
11 the same time, the effects of the BiOp's proposed actions are
12 that "[o]verall project effects are expected to result in the
13 loss of an additional 3 to 20 percent of the winter-run Chinook
14 salmon juvenile population" NMFS AR 5930. "Analysis of
15 population estimates taken at RBDD since 1986, indicates that the
16 population growth rate . . . for winter-run Chinook salmon is
17 0.97 (95 percent confidence intervals: 0.87 and 1.09), indicating
18 a population that may be declining at 3 percent per year,"
19 although the confidence intervals at 95 percent allow for a
20 population decreasing at a rate of 13 percent per year or
21 increasing at 9 percent per year. NMFS AR 5933.

22 The "[e]stimated mean log growth rate indicates a population
23 that is generally declining, although confidence interval values
24 also indicate that the population may be generally increasing."
25 NMFS AR 5933. Short-term productivity has been increasing. NMFS
26 AR 5933. "In the last three years, the population has been
27 increasing due to hatchery supplementation, restrictions on ocean
28

1 harvest, use of the TCD on Shasta Dam, and changes in Project
2 operations due to the 1993 BiOp." NMFS AR 5933.

3 While the pre-BiOp short-term population numbers for the
4 winter-run Chinook population are positive, NMFS made the
5 following findings:

6 Despite short-term increases in the population over the
7 last three years, winter-run Chinook salmon remain
8 susceptible to extinction due to the elimination of
9 access to most of their historical spawning grounds and
10 the reduction of their population structure to a single
11 population dependent for its survival on cold water
12 releases from Shasta Dam. Population abundance is low,
13 with the average number of adults (males and females)
14 over the past five years at 50 percent of the recovery
15 goal (i.e., 10,000 females for 13 years) as identified
16 in the draft recovery plan

17 Combined Project impacts are likely to reduce the
18 juvenile population by 3 to 20 percent over baseline
19 conditions in most years Early life-stage
20 mortality in the upstream spawning areas will increase
21 by 3 percent over Today's condition to 44 percent in
22 years with very low carryover storage (below 1.9 MAF).
23 Due to proposed operations, these conditions will occur
24 more frequently, occurring 19 percent of the time in
25 the modeled period versus 15 percent under baseline
26 conditions. The likelihood that an individual year
27 class will be significantly reduced by drought
28 conditions increases in two out of the three drought
year sequences modeled by CALSIM, adding one more year
of sustained high mortality to the year class.
Proposed changes in temperature management could render
approximately 42 percent of spawning habitat less
suitable, reducing adult spawning distribution and
success. Adaptive management based on actual spawning
distributions and operation conditions is expected to
decrease effects, although we cannot quantify to what
extent. Loss of juveniles at non-Project unscreened
diversions will also continue to occur at various
locations along the mainstream Sacramento River and in
the Delta. Under baseline conditions, this annual
impact results in the loss of 33 percent of the winter-
run Chinook salmon juvenile population. Proposed
Project operations are expected to increase this loss
between 34 and 49 percent.

Given the positive indicators in the population
observed over the last 8 years, it would appear that
the winter-run Chinook salmon population is recovering.
While it is concerning that future Project operations

1 are likely to result in the loss of more juveniles from
2 each year class, NOAA Fisheries expects that adaptive
3 management processes will reduce these increased
4 impacts to low levels. For example, the estimated 22
5 percent loss includes both a 2.4 percent loss due to
6 decreased production for individuals spawning below
7 Ball's Ferry and a 16 percent increase in indirect
8 mortality from increased pumping, based on mark-
9 recapture data presented in salmon workshops
10 As these losses may not occur in every year, due to
11 both ecological and operational conditions and
12 protective actions, Project effects in many years may
13 be less than 5 percent. NOAA Fisheries reasons that
14 these losses are not sufficient to reduce the
15 likelihood of survival and recovery of the winter-run
16 Chinook salmon based on the observed and estimated
17 recovery rates in the ESU. Recent cohort replacement
18 rates in the population have been high enough that
19 minor reductions due to a 5 percent loss of juveniles
20 would not cause the population to decline, however some
21 reduction in the rate of ESU recovery may occur.

12 NMFS AR 5933-34.

13 The winter-run population will decline from 3% up to 20% in
14 juveniles and 3% up to 44% in early life stages from Project
15 operations and adverse climate and carryover storage conditions.
16 This will be offset by future adaptive management. Non-Project
17 losses from diversion coupled with Project operations are 1% to
18 16%. NMFS concludes the mortality risks will be offset by
19 adaptive management to prevent population loss, i.e., survival.
20 No other analysis is performed for recovery.

21
22 (b) Adverse Impacts Not Relating to the
23 Movement of the TCP and Elimination
of the COS Requirement.

24 Plaintiffs maintain NMFS failed to explain how its "no
25 jeopardy" and "no adverse modification" conclusions were
26 consistent with identified Project impacts to the winter-run
27 Chinook not related to the upstream movement of the TCP or
28 elimination of the COS requirement. For example, in the

1 INTEGRATION AND SYNTHESIS OF THE EFFECTS section of the BiOp
2 (BiOp section VII) NMFS states, "[b]ased on the most current
3 population estimates . . . and our analysis, current operations
4 of the RBDD gates will block or delay approximately . . . 15
5 percent of the winter-run Chinook population (approximately 1,220
6 adults)" NMFS AR 5921. NMFS expects an increase in
7 passage delays in the future due to more frequent early gate
8 closures caused by increased demands for water in the upper
9 Sacramento River Basin. NMFS AR 5921. "Chinook salmon delayed at
10 [RBDD] can consume a greater amount of their energy stores than
11 if there been [sic] no obstacle in their path which may subject
12 them to: a greater chance of disease, . . . increased adult pre-
13 spawning mortality[,] . . . and decreased egg viability[,] . . .
14 all of which may result in the reduction in annual recruitment."
15 NMFS AR 5921.

16 In describing "Interior Delta Mortality" in the INTEGRATION
17 AND SYNTHESIS OF THE EFFECTS section NMFS states:

18 Those fish that are not lost to predation are
19 susceptible to loss due to irrigation diversions in the
20 central and south Delta. In addition, NOAA Fisheries
21 anticipates that fish drawn into the central and south
22 Delta will be subjected to adverse water quality,
23 pollution, pathogens, and delayed migration which may
24 lead to physiological stress, disease, disorientation,
25 and overall decreased likelihood of successful
26 outmigration and survival. The available data suggest
27 that the increased mortality associated with the
28 indirect effects of moving water and fish across the
interior of the Delta can range from 4 to 40 percent in
the baseline for the juvenile population entering the
Delta (i.e., using winter-run Chinook salmon
juveniles). [A] forty percent loss would occur when
cross-Delta survival is very low (e.g., at a 95 percent
mortality level) and the export salvage reaches 2
percent of the winter-run Chinook JPE. This would be a
worst case condition. In the best case scenario, four
percent of the winter-run Chinook JPE is lost crossing
the Delta (e.g., at a 33 percent mortality level).

1 NMFS AR 5927.

2 This analysis concludes that minimum net mortality for fish
3 diverted by pumps and flows into the Delta is 4% to 40%.

4 In the EFFECTS OF THE ACTION section of the BiOp (BiOp
5 section V), NMFS analyzed the effects of "Delta Pumping Rates:"

6
7 To satisfy the increased demand for water, additional
8 volumes of water will have to be diverted from the
9 Delta by the SWP and CVP facilities in the South Delta.
10 This additional volume of water will be predominately
11 obtained by periodically increasing the pumping rates
12 at the facilities. The increases in the pumping rates
13 are anticipated to increase the level of entrainment of
14 listed salmonids at the fish collection facilities in
15 the south Delta.

16 NMFS AR 5877.

17 The most that NMFS concludes is that survival is possible.
18 Recovery is not addressed. This analysis is incomplete. It
19 cannot be ascertained if recovery will be achieved.

20 Plaintiffs contend the BiOp's no jeopardy and no adverse
21 modification of critical habitat findings contradict the text of
22 the BiOp, a draft copy of the BiOp, and the administrative
23 record. In light of the Ninth Circuit's decision in *NWF v. NMFS*,
24 NMFS concedes it needs to further explain its no jeopardy
25 analysis to address recovery implications of the winter-run
26 Chinook arising from the BiOp's proposed actions. NMFS also
27 acknowledges the need for further explanation of its critical
28 habitat analysis to address the impacts on the winter-run Chinook
and whether an adverse modification of critical habitat occurred.

It is impossible to ascertain from the BiOp what the impact
on habitat will be as critical habitat, the Sacramento River
above Balls Ferry is only superficially mentioned as the area

1 where spawning will occur. No other critical habitat analysis is
2 provided. The DI maintain the BiOp provides a complete and well-
3 reasoned explanation of why the combined future effects of
4 Project operations will not jeopardize the survival or recovery
5 of the winter-run Chinook species, however, all record references
6 describe adverse effects from movement of the species by Project
7 operations.

8 *NWF v. NMFS* held that a jeopardy regulation issued jointly
9 by NMFS and FWS requires the agencies to consider both recovery
10 and survival impacts on listed species. *NWF v. NMFS*, 481 F.3d at
11 1237. The jeopardy regulation provides, "*Jeopardize the*
12 *continued existence of* means to engage in an action that
13 reasonably would be expected, directly or indirectly, to reduce
14 appreciably the likelihood of both the survival and recovery of a
15 listed species in the wild by reducing the reproduction, numbers,
16 or distribution of that species." 50 C.F.R. § 402.02. NMFS had
17 interpreted this regulation in a manner that only considered the
18 effects of a species survival. *Id.* at 1236-37. The court found
19 that NMFS's interpretation of its own regulation was unreasonable
20 in light of NMFS's prior interpretation and application of the
21 jeopardy regulation. *Id.* at 1237. The court also observed that
22 NMFS had consistently interpreted the jeopardy regulation (50
23 C.F.R. § 402.02) as requiring a joint analysis of both survival
24 and recovery impacts until the issuance of the 2004 biological
25 opinion in that case. *Id.*

26 Here, like the biological opinion at issue in *NWF v. NMFS*,
27 NMFS only considered the survival impacts on the winter-run
28 Chinook due to proposed Project operations and failed to analyze

1 recovery implications. NMFS's failure to consider recovery
2 implications as required under its own regulations and NWF
3 necessarily renders the BiOp incomplete. NMFS's failure to
4 follow its own regulation to address recovery implications to the
5 winter-run Chinook renders the BiOp arbitrary and capricious as
6 to this species. See *National Ass'n of Homebuilders*, 127 S. Ct.
7 at 2529 (stating a reviewing court should not vacate an agency's
8 decision unless, among other things, the agency "entirely failed
9 to consider an important aspect of the problem").

10 Plaintiffs correctly point out that NMFS's findings about
11 the likely reduction in the species population resulting from
12 proposed Project operations set forth in the text of the BiOp
13 contradict its no jeopardy and no adverse modification
14 conclusions. For example, in the EFFECTS OF THE ACTION section
15 of the BiOp, NMFS states spawning success will be reduced and 42
16 percent of spawning habitat is expected to be rendered less
17 suitable by moving the TCP upstream to Balls Ferry. NMFS 5844-
18 46. NMFS also found that on average 3.6 percent of the winter-
19 run Chinook spawn below Balls Ferry, and that a change in the TCP
20 at Balls Ferry will be less than significant unless large numbers
21 spawn below Balls Ferry (which occurred once in a wet year).
22 NMFS AR 5845. Yet, NMFS found that current operations result in
23 the loss of 42 percent of the juvenile winter-run Chinook
24 population, and proposed project effects are expected to result
25 in an additional 3 to 20 percent loss of the juvenile population.
26 NMFS AR 5930-31.

27 NMFS also found that despite short-term increases in the
28 population over the last three years, winter-run Chinook remain

1 susceptible to extinction due to the elimination of most of their
2 historical spawning grounds and reduction of their population
3 structure. NMFS AR 5933-34. NMFS went on to find: "[g]iven the
4 positive indicators in the population observed over the last 8
5 years, it would appear that the winter-run Chinook salmon
6 population is recovering[,]” yet in the same discussion NMFS
7 stated the population may be declining at 3 percent per year and
8 the log growth rate indicates a population that is generally
9 declining. NMFS AR 5933-34.

10 A reviewing court should “uphold a decision of less than
11 ideal clarity if the agency’s path may be reasonably discerned.”
12 *National Ass’n of Homebuilders v. Defenders of Wildlife*, 127 S.
13 Ct. at 2530. Here, not only do NMFS’s factual findings partly
14 contradict its no jeopardy and no adverse modification
15 conclusions, the factual findings are themselves internally
16 contradictory. When an agency’s factual findings and analyses
17 are contradictory, or when such findings and analyses contradict
18 the BiOp’s conclusion, the agency’s path cannot reasonably be
19 discerned. See, *Homebuilders*, 127 S.Ct. at 2530.

20 In their briefs supporting their motion for summary judgment
21 (and opposing Plaintiffs’ motion for summary judgment) and at the
22 hearing on the parties’ motions, the Federal Defendants
23 painstakingly explained the rationale for changing the 1.9 MAF
24 Shasta COS Requirement from a hard-wired requirement to a
25 “target,” and moving the TCP upstream from Bend Bridge to Balls
26 Ferry. The primary reason offered for these proposed changes is
27 that the 1993 BiOp was outdated, because new methods of
28 conserving and managing cold water resources came into play,

1 including, construction of the TCD, implementation of CVPIA
2 (b) (2) water, SWRCB D-1641, and implementation of the Trinity
3 River ROD, as well as the listing of new species. In the BiOp's
4 present incomplete state, since none of these new actions have
5 been analyzed, it cannot be ascertained whether they will or will
6 not jeopardize the winter-run Chinook salmon or adversely modify
7 its critical habitat.

8 The Bureau is charged with operating this overwhelmingly
9 complex Project, and NMFS must ensure the Bureau's actions comply
10 with the ESA. The Bureau remains free to implement its proposed
11 actions of changing the 1.9 MAF Shasta COS Requirement from a
12 requirement to a target, and moving the TCP from Bend Bridge to
13 Balls Ferry. However, the forthcoming biological opinion must
14 accurately and completely analyze whether these proposed actions
15 will or will not jeopardize the continued existence and recovery
16 of the winter-run Chinook and adversely modify its critical
17 habitat.

18 For all these reasons, NMFS's findings and analysis
19 regarding the winter-run Chinook are incomplete, arbitrary and
20 capricious because (1) NMFS failed to consider recovery of the
21 species as required by the regulations and *NWF v. NMFS*; and (2)
22 NMFS's factual findings and analyses are themselves contradictory
23 as to the survival of the species, and these findings and
24 analyses contradict its no jeopardy conclusions. There is no
25 analysis of adverse effect on critical habitat. On this issue,
26 Plaintiffs' motion for summary judgment is GRANTED. Federal
27 Defendants' motion for summary judgment is DENIED.

28

1 (2) Spring-run Chinook.

2 After formal consultation, NMFS reached the following
3 conclusion regarding the spring-run Chinook in the BiOp:

4 After reviewing the best scientific and commercial
5 information available, the current status of the listed
6 species, the environmental baseline for the action
7 area, the effects of the proposed action, and
8 cumulative effects, it is NOAA Fisheries biological
9 opinion that the action, as proposed, is not likely to
10 jeopardize the continued existence of Central Valley
11 spring-run Chinook salmon. Critical habitat for
12 Central Valley spring-run Chinook salmon has not been
13 designated, therefore, none will be affected.

14 NMFS AR 5941.

15 Plaintiffs assert that the BiOp's no jeopardy conclusion for
16 the spring-run is contradicted by NMFS's BiOp's factual findings.
17 Plaintiffs assert the following project operations threaten the
18 mainstream population of the spring-run Chinook. First, changing
19 the 1.9 MAF Shasta dam COS requirement to a target and the
20 upstream shift of the 56° F Sacramento River temperature
21 compliance point. Second, the RBDD blocks or delays adult
22 spring-run from reestablishing their population in the only
23 available habitat for recovery, notwithstanding the tributaries
24 population.

25 Spring-run Chinook migrate above RBDD towards Keswick dam
26 from April to July as they seek cooler water (less than 56° F) for
27 spawning. NMFS AR 5843. Spawning occurs in September and
28 October, and fry begin to emerge in December and January. NMFS
AR 5843. However, very few spring-run Chinook spawn in the
mainstream Sacramento River because of the effects of Shasta Dam
and past Project operations. NMFS AR 5843.

In the INTEGRATION AND SYNTHESIS OF THE EFFECTS section of

1 the BiOp (BiOp section VII), NMFS made the following factual
2 findings: the overall abundance of the spring-run Chinook ESU is
3 low, but has increased since 1992 due to a large population
4 increase in the Deer, Mill, and Butte Creek stream tributaries.
5 NMFS AR 5934. However, the increase in population abundance in
6 these tributaries masks the significant decline in the portions
7 of the population residing in the mainstream Sacramento River and
8 the Feather River. NMFS AR 5934. These two rivers were home to
9 significant portions of the spring-run Chinook ESU. NMFS AR
10 5934. Additionally, the Butte Creek population may be at or near
11 carrying capacity levels, which supports the inference that
12 further recovery cannot occur in that area. NMFS AR 5934.

13 The mainstream Sacramento River and Feather River spring-run
14 Chinook populations probably represent 20 to 30 percent of the
15 current total population. NMFS AR 5934. This finding is
16 directly contradicted by the California Department of Fish and
17 Game biologists' belief that the spring-run Chinook population
18 has nearly disappeared from the mainstream Sacramento River.
19 NMFS AR 5935. The spatial structure of the spring-run Chinook
20 ESU is very limited. NMFS AR 5935. In the upper Sacramento
21 River, RBDD blocks or delays adults' passage and prevents them
22 from re-establishing populations in the only available habitat
23 for recovery. NMFS AR 5935.

24 In its analysis of Project impacts on the spring-run
25 Chinook, NMFS states "proposed Project operation impacts in the
26 upstream areas of the Sacramento River are likely to reduce the
27 mainstream Sacramento River juvenile spring-run Chinook salmon
28 population by 4 percent over current conditions in most years,

1 increasing total loss to 25 percent of the mainstream juvenile
2 population" NMFS AR 5935. Project related losses are
3 expected to continue into the future under formal and early
4 consultation and prevent the species from expanding its
5 distribution unless new areas can be restored. NMFS AR 5935
6 NMFS then goes on to state "[w]e expect that proposed operations
7 will continue the decline of the mainstream (Sacramento River)
8 population and *likely lead to its extirpation.*" NMFS AR 5935
9 (emphasis added). This morbid projection is inconsistent, if not
10 irreconcilable, with "no jeopardy," which is expected to result
11 from reduction of mainstream juvenile population by 25%.
12 Recovery is not addressed. In practical terms this forecasts
13 elimination of spring run salmon from the Sacramento River, a
14 total loss of habitat, despite the NMFS conclusion there will be
15 no adverse impact or jeopardy to the species or its nonexistent
16 "critical" habitat, as to which NMFS nonetheless concluded "none
17 will be affected." It is unexplained why NMFS concludes in
18 October 2004, the spring-run have no critical habitat, but
19 designate critical habitat in September, 2005. This omission to
20 address critical habitat for spring-run under the ESA is equally
21 applicable to CV steelhead.

22
23 (a) Critical Habitat.

24 "Critical habitat" consists of those areas which have
25 "physical or biological features (I) essential to the
26 conservation of the species and (II) which may require special
27 management considerations or protection." 16 U.S.C.
28 § 1532(5)(A).

1 The failure to designate critical habitat for the spring-
2 run, must be evaluated under 16 U.S.C. § 1536(a)(2) which
3 requires that the adverse modification inquiry examine a given
4 Project's effect on critical habitat, that is, the land
5 specifically designated by the Secretary of Interior for that
6 purpose. *Gifford Pinchot Task Force v. U.S. Fish & Wildlife*
7 *Service*, 378 F.3d 1059, 1075 (9th Cir. 2004).

8 The purpose of designating "critical habitat" is to set
9 aside certain areas as "essential" for the survival and recovery
10 of the threatened species. 16 U.S.C. § 1532(5). Critical
11 habitat is designated after extensive study, detailed analysis,
12 and, ultimately, notice and comment rule-making that designates
13 critical habitat. Once designated, critical habitat receives its
14 legal protection because it is subject to the § 7 consultations
15 and analysis required by law. Section 1533(a)(3)(a) requires the
16 Secretary of the Interior, by promulgated regulation,
17 concurrently with the listing of an endangered or threatened
18 species, to designate any habitat of such species which is then
19 considered to be critical habitat. Section 1533(b)(B)(2)
20 requires the Secretary to designate critical habitat on the basis
21 of the best scientific data available and after taking into
22 consideration the economic impact, impact on national security,
23 and any other relevant impact of specifying any particular area
24 as critical habitat. The Secretary may exclude any area from
25 critical habitat if it is determined that the benefits of such an
26 exclusion outweigh the benefits of designation, specifying such
27 areas as part of the critical habitat, unless it is determined,
28 based on the best scientific and commercial data available, that

1 the failure to designate such area as critical habitat will
2 result in the extinction of the species concerned.

3 *Center for Biological Diversity v. U.S. Fish & Wildlife*
4 *Service*, 450 F.3d 930, 935 (9th Cir. 2006) characterizes critical
5 habitat designations as mandatory except where not prudent or not
6 determinable. 16 U.S.C. § 1533(a) (3); Title 50 C.F.R.
7 § 424.12(a) (2) defines "not determinable," as an excuse from
8 completing a designation of critical habitat when information
9 sufficient to perform requirements and analyses of the impacts of
10 designation is lacking or the biological needs of the species are
11 not sufficiently well known to permit identification of an area
12 as critical habitat. It is "not prudent" to complete a
13 designation of critical habitat where it would be detrimental to
14 the species. 50 C.F.R. § 424.12(a) (1). Arguably, these
15 provisions apply once the decision to designate critical habitat
16 has been made. Here, NMFS has succeeded in avoiding any critical
17 habitat analysis required by the ESA for two species by simply
18 concluding, without explanation or findings that it is not
19 determinable or prudent to designate critical habitat, that there
20 is no critical habitat for two of the species. Under ESA
21 § 1533(b) (2) the Secretary may only exclude portions of habitat
22 from critical habitat designation "if he determines that the
23 benefits of such exclusion outweigh the benefits of specifying
24 such area as part of the critical habitat." It cannot reasonably
25 be suggested that the spring-run does not have critical habitat.
26 No evidence is provided why NMFS could not designate or analyze
27 critical habitat, particularly in view of the changing spawning
28 and migration patterns of the spring-run. See also *Natural*

1 *Resources Defense Council v. U.S. Dept. of the Interior*, 113 F.3d
2 1121, 1125 (9th Cir. 1997).

3
4 (b) Feather River.

5 As to the Feather River, NMFS states that "project
6 operations are expected to provide generally adequate flows and
7 temperatures for spring-run Chinook salmon spawning, incubation,
8 and rearing." NMFS AR 5935. Additionally, "Project operations
9 in the Feather River are not expected to increase the primary
10 threat to spring-run Chinook salmon in that river: redd super-
11 imposition by fall-run Chinook salmon and hybridization with
12 hatchery fish." NMFS AR 5935. "Nor are project operations
13 expected to reduce these threats." NMFS AR 5935. These
14 conclusions that Project operations will have no adverse effect
15 on the Feather River population are directly contradicted by
16 NMFS's next conclusion which states, "[o]verall, Feather River
17 operations are expected to result in an increase of the
18 population's vulnerability to extinction due to chronic losses of
19 juveniles due to flow fluctuations." NMFS AR 5936. The BiOp
20 goes on to state, "[h]arm to the Feather River population and
21 loss of the mainstream Sacramento River population due to the
22 direct and indirect effects of Project operations, are expected
23 to reduce the ESU's numbers, reproduction, and distribution."
24 NMFS AR 5936. "Continuation of and, in some cases, increases in
25 the adverse direct and indirect effects of Project operations are
26 expected to increase the probability of extinction of the Feather
27 River and Sacramento River populations with little chance of
28 recovery or re-establishment without implementation of other

1 recovery measures." NMFS AR 5936.

2 NMFS has not explained or reconciled this contradictory
3 record evidence with the no jeopardy finding for spring run in
4 the Feather River. NMFS's conclusion is that these two rivers
5 (non-habitat) containing up to 30% of the spring run population,
6 will lose 30% of the species directly to OCAP operations.

7 NMFS conclusory mentions but does not analyze the effects of
8 Project actions on the recovery of the spring-run Chinook
9 species. See *NWF v. NMFS*, 481 F.3d at 1237 (holding that "the
10 jeopardy regulation requires NMFS to consider both recovery and
11 survival impacts.").

12 The text of the BiOp speaks not of jeopardy as defined by
13 regulation 50 C.F.R. § 402.02, but of extinction of the spring-
14 run Chinook in the Sacramento and Feather Rivers. How
15 extirpation of approaching one-third of the species affected by
16 Project operations does not constitute jeopardy is not explained.
17 NMFS's no jeopardy conclusion for the Project operations' effects
18 on the spring-run Chinook is expressly contradicted by underlying
19 data and opinions of the BiOp.

20 NMFS's inability to specifically define the spring-run's
21 critical habitat, yet reach the conclusion that Project
22 operations will have no adverse effect on such undefined habitat
23 "because there is none" is a non-sequitur. The BiOp as to
24 spring-run is incomplete, contradictory, and violates the ESA and
25 APA because it has: (1) failed to define and consider effects on
26 spring-run critical habitat, an important aspect of a no jeopardy
27 § 7 BiOp; (2) failed to explain why the no jeopardy findings are
28 contradicted by record evidence developed by the agency; and (3)

1 failed to adequately analyze recovery of the spring-run.

2 Plaintiffs' motion for summary judgment on this issue is
3 GRANTED. Federal Defendants' cross-motion for summary judgment
4 is DENIED.

5

6 (3) CV Steelhead.

7 After formal consultation, NMFS's BiOp reached the following
8 conclusion regarding the CV steelhead:

9 After reviewing the best scientific and commercial
10 information available, the current status of the
11 species, the environmental baseline for the action
12 area, the effects of the proposed action, and
13 cumulative effects, it is NOAA Fisheries biological
14 opinion that the action, as proposed, is not likely to
15 jeopardize the continued existence of Central Valley
16 steelhead. Critical habitat for Central Valley
17 steelhead has not been designated, therefore, none will
18 be affected.

19 NMFS AR 5941.

20 Plaintiffs correctly assert that the text of the BiOp offers
21 a "bleak prognosis" for the CV steelhead, yet it arrives at a
22 contradictory "no jeopardy" conclusion. For example, the BiOp's
23 summary of the environmental baseline states: "For steelhead, the
24 limited habitat below project dams has declined to a point where
25 it can only support low population levels." NMFS AR 5826. In
26 the same paragraph the BiOp states "the availability of habitat
27 is so reduced for steelhead within the action area that remaining
28 habitat likely cannot support a recoverable population." NMFS AR
29 5826. The BiOp further states:

30 Abundance estimates for steelhead in three of the five
31 project rivers in the action area (*i.e.*, the
32 Stanislaus, Feather, and American Rivers) presently are
33 so low that continued viability of the populations is
34 questionable (McElhany *et al.* 2000). The resilience of
35 these populations to any further adverse impacts to

1 individuals or habitat is likely to be impaired.

2 NMFS AR 5826.

3 When describing the effects of the Projects on the
4 population impacts and potential for recovery of the CV steelhead
5 the BiOp states:

6 Overall Project impacts are likely to reduce the
7 juvenile population by 12 to 27 percent over current
8 conditions . . . in most years, resulting in an average
9 total of 51 to 66 percent juvenile mortality when added
10 to the effects of current operations. Mortality in the
11 upstream spawning areas is likely to increase on the
12 American and Feather Rivers due to flow fluctuations,
13 higher temperatures, and low flows.

11 NMFS AR 5938.

12 The BiOp goes on to state that the CV steelhead ESU "has
13 been reduced to small, remnant populations both inside and
14 outside the Project action area, and the most recent available
15 data indicate that the natural population is continuing to
16 decline" NMFS AR 5936. Additionally, the limited
17 habitat below Project dams has declined in quality to a point
18 where it can only support low population levels. NMFS AR 5936.
19 The "[s]patial structure for [CV] steelhead is fragmented and
20 reduced by elimination or significant reduction of the major core
21 populations . . . that provided a source for the numerous smaller
22 tributary and intermittent stream populations" NMFS AR
23 5937. "Tributary populations can likely never achieve the size
24 and variability of the core populations in the long-term,
25 generally due to the size and available resources of the
26 tributaries." NMFS AR 5937.

27 The final paragraph discussing the population impacts and
28 potential for recovery states:

1 Given the trends observed in the [CV] steelhead
2 populations throughout the action area, continuation of
3 past project impacts and expected increases in losses
4 of juveniles due to both future demands and early
5 consultation actions, NOAA Fisheries expects that the
6 proposed project operations under both formal and early
7 consultation will increase the likelihood of steelhead
8 population extinction in most Project Rivers. As a
9 result, the ESU would be rendered more vulnerable to
10 demographic and other stochastic extinction processes
11 by reductions in the number of populations, population
12 abundances, ESU diversity, and spatial distribution.
13 Based on recent status and trends, the current ESU is
14 comprised of several populations all with high
15 probabilities of extinction. Minor increases in the
16 likelihood of extinction of one or more populations
17 within such a species could have measurable impacts on
18 the regional probability of extinction, based on the
19 proportional relationship between local and regional
20 probabilities of persistence in species.

21 NMFS AR 5938-39.

22 This BiOp analysis paints a dark picture and anticipates
23 regional extinction of CV steelhead populations resulting from
24 project operations and cumulative effects in most Project rivers.
25 Contrary to this materially negative evidence, NMFS's conclusion
26 that no jeopardy to the species will occur and there will be no
27 adverse effect on critical habitat because there is none, is the
28 diametric opposite of the AR evidence.

29 The BiOp is also legally incomplete as it does not address
30 the impacts to recovery of the CV steelhead species. *NWF v.*
31 *NMFS*, 481 F.3d at 1236-38 ("the jeopardy regulation requires NMFS
32 to consider both recovery and survival impacts."). The Federal
33 Defendants and DI concede that "further explanation" is needed
34 regarding NMFS's no jeopardy conclusion for the CV steelhead
35 species.

36 As to critical habitat, Federal Defendants and DI admit the
37 BiOp fails to define or analyze the CV steelhead habitat, an

1 abdication of this ESA responsibility. Where, as here, critical
2 habitat is unidentified and unanalyzed because there is "none,"
3 NMFS has no basis to opine on the Projects' effects on such non-
4 existent "habitat." It is telling that critical habitat was
5 designated for the CV steelhead by September, 2005. For these
6 reasons, the BiOp's conclusion that Project operations under the
7 2004 OCAP will not jeopardize the CV steelhead survival and
8 recovery is arbitrary, capricious, and not in accordance with the
9 law, because it is irreconcilably inconsistent with the AR
10 evidence and not explained. The complete failure to perform
11 critical habitat analysis is a further violation of the ESA.

12 Plaintiffs' motion for summary judgment is GRANTED. Federal
13 Defendants' cross-motion is DENIED.

14

15 b. Whether NMFS Failed to Conduct Any Analysis
16 of Project Impacts in the Context of the
Species' Life Cycles and Population Dynamics.

17 Plaintiffs contend that NMFS failed to analyze the Projects'
18 impacts on winter-run Chinook, spring-run Chinook, and CV
19 steelhead life cycles. NMFS admits that the analysis of salmonid
20 life cycles requires additional explanation. Specifically, NMFS
21 asserts it thoroughly discussed the species lifecycles, but
22 additional explanation is appropriate to ensure conformity with
23 the Ninth Circuit's decision in *NWF v. NMFS*, 481 F.3d at 1236 and
24 *NRDC v. Kempthorne*, 506 F. Supp. 2d 322. The DI contend NMFS
25 properly considered Project impacts on the species life cycles
26 and concluded that Project operations would not jeopardize the
27 species.

28 In *NWF v. NMFS*, the court affirmed the district court's

1 rejection of a biological opinion that failed to "consider near-
2 term habitat loss to populations with short life cycles." *NWF v.*
3 *NMFS*, 481 F.3d at 1224. "NMFS must consider near-term habitat
4 loss to [species] with short life cycles." In that case, the
5 biological opinion found that the proposed operations would have
6 significant negative impacts on each of the species' (sockeye
7 salmon) critical habitat in the short term, despite planned
8 mitigation efforts. *Id.* at 1240. The court found that NMFS "did
9 not adequately demonstrate that these impacts would not affect
10 the fishes' survival and recovery, in light of their short life-
11 cycles and current extremely poor habitat conditions." *Id.* The
12 NWF Project resulted in degraded habitat conditions for five
13 years before improvement in the sixth year. No sufficient
14 provision was made for the sockeye species that had a two year
15 life cycle.

16 Here, Plaintiffs argue NMFS failed to analyze Project
17 impacts on the species prospect for survival and recovery. The
18 AR finds that winter-run Chinook spawn after three years. In
19 most cases, this defines the life cycle of spawning winter-run,
20 estimated between 56% and 87% of the species. NMFS AR 5789.
21 NMFS admits as much by its undertaking to provide analysis in
22 light of the recent case law. The BiOP does discuss in great
23 detail species life history and population dynamics of chinook
24 salmon, see, NMFS AR at 5787-95, and steelhead, see, NMFS AR at
25 5799-5803. However, the BiOp does not analyze proposed project
26 impacts on these species in relation to their actual life
27 expectancy. For example, the BiOp found that proposed operations
28 will increase temperature-related losses to eggs and fry of

1 winter-run Chinook by moving the TCP to Balls Ferry and estimated
2 early life stage mortality will increase from 41 percent to 44
3 percent in critically dry years. NMFS AR 5845.

4 The BiOp does not make estimates of temperature-related
5 mortality or sublethal effects on adult salmon from relocation
6 upriver of the temperature control point, nor flow diversions to
7 the Central Delta, or predation, although, it does acknowledge
8 these effects will occur. NMFS AR 5834-52, 5834, 5876-5901,
9 5923-34. The BiOp provides estimates of juvenile mortality due
10 to entrainment at the pumps and indirect effects such as poor
11 water quality and predation without relating and analyzing these
12 effects to the decreased number of fish that make it to the
13 juvenile stage as a result of egg and larval mortality or
14 decreased number of spawning adults. NMFS AR 5896-97, 5923-28,
15 and 5930-31. DI rejoin that each life stage is discussed in
16 terms of temperature management as a whole. With respect to the
17 winter-run Chinook, the BiOp also recognizes an increased
18 likelihood that an individual class year may be significantly
19 reduced by drought conditions.

20 While NMFS identified impacts on the species due to proposed
21 changes in Project operations, it did not fully explain and
22 analyze the impacts on most life stages of the salmon and
23 steelhead species' in view of chances for survival and recovery,
24 except to conclude that one to two years of critically dry
25 conditions would not be problematic," although winter-run
26 spawners have a three year life cycle. NMFS AR 5933-34. DI
27 ignore the Ninth Circuit's command that NMFS "must consider near-
28 term habitat loss to populations with short life cycles," as it

1 specifically applies to this case. *NWF v. NMFS*, 481 F.3d 1224.
2 It is recognized that the law is evolving however, where, as
3 here, non-spawning survivors in the species have five to six year
4 life-expectancies, it is unnecessary to hold the BiOp unlawful or
5 arbitrary and capricious, on this issue, on which it is
6 incomplete on the condition NMFS complete the agreed additional
7 analysis and explanation it has committed to provide.

8 Plaintiffs' motion for summary judgment is DENIED upon the
9 condition that NMFS complete the required ESA analysis on the
10 three species' life cycles and population dynamics as informed by
11 continuing changes in the law. Federal Defendants' cross-motion
12 is DENIED.

13
14 c. Whether NMFS's Focus on Incremental Project
15 Impacts Arbitrarily Ignored Significant
16 Adverse Effects Associated With Baseline
17 Conditions and is Unsupported by the BiOp's
18 Findings.

19 Plaintiffs contend NMFS impermissibly based its no jeopardy
20 and no adverse modification conclusions on the incremental
21 effects of Project operations rather than analyzing Project
22 impacts "within the context of other existing human activities
23 that impact the listed species;" i.e., the entire agency action.
24 NMFS concedes that its analysis of baseline conditions needs
25 further explanation to ensure that this BiOp conforms with *NWF v.*
26 *NMFS*, 481 F.3d 1236, and *NRDC v. Kempthorne*, 506 F. Supp. 2d 322.
27 The DI again seek to overcome the Agency's admission by
28 contending NMFS properly considered baseline conditions and
analyzed the combined direct and indirect impacts of baseline
Project operations in combination with the additional impacts

1 caused by proposed future operations. This contention requires
2 no further discussion in view of Federal Defendants' concession.

3 The Interagency Cooperation regulations promulgated under
4 the ESA assign NMFS the following responsibilities during formal
5 consultation:

- 6 (1) Review all relevant information provided by the
7 Federal agency or otherwise available. Such
8 review may include an on-site inspection of the
9 action area with representatives of the Federal
10 agency and the applicant.
- 11 (2) Evaluate the current status of the listed species
12 or critical habitat.
- 13 (3) Evaluate the effects of the action and cumulative
14 effects on the listed species or critical habitat.
- 15 (4) Formulate its biological opinion as to whether the
16 action, taken together with cumulative effects, is
17 likely to jeopardize the continued existence of
18 listed species or result in the destruction or
19 adverse modification of critical habitat.

20 50 C.F.R. § 402.14(g) (1) - (4) .

21 In *NWF v. NMFS*, the Ninth Circuit affirmed a district
22 court's conclusion that the disputed biological opinion in that
23 case impermissibly failed to incorporate degraded baseline
24 conditions into its jeopardy analysis. *NWF v. NMFS*, 481 F.3d at
25 1235. The NWF biological opinion "evaluated the effects of the
26 proposed action as compared to the reference operation, rather
27 than focusing its analysis on whether the action effects, when
28 added to the underlying baseline conditions, would tip the
species into jeopardy." *Id.* The court rejected NMFS's
interpretation of the jeopardy regulation that NMFS may satisfy
the ESA by comparing the effects of proposed operations on listed
species to the risk posed by baseline conditions, and only if

1 those effects are "appreciably" worse than baseline conditions
2 must a full jeopardy analysis be made. *Id.* Under this approach,
3 the court noted, a listed species could be gradually destroyed,
4 so long as each step on the path to destruction was sufficiently
5 modest. *Id.* The court concluded "[t]his type of slow slide into
6 oblivion is one of the very ills the ESA seeks to prevent."

7 "[W]here baseline conditions already jeopardize a species,
8 an agency may not take action that deepens the jeopardy by
9 causing additional harm." *Id.* at 1236. The approach enunciated
10 by the court in *NWF v. NMFS* "does not require NMFS to include the
11 entire environmental baseline in the 'agency action' subject to
12 review." *Id.* "It simply requires that NMFS appropriately
13 consider the effects of its actions 'within the context of other
14 existing human activities that impact the listed species." *Id.*
15 "[T]he proper baseline analysis is not the proportional share of
16 responsibility the federal agency bears for the decline in the
17 species, but what jeopardy might result from the agency's
18 proposed actions *in the present and future human and natural*
19 *contexts.*" *Id.* (emphasis in original).

20 NMFS included in the BiOp a 10-page description and summary
21 of the environmental baseline for the winter-run Chinook, spring-
22 run Chinook, and CV steelhead species. NMFS AR 5817-5826. The
23 ENVIRONMENTAL BASELINE section of the BiOp (section IV) begins
24 with a description of the status of each species. NMFS AR 5817-
25 18. Next, the BiOp lists and describes factors affecting the
26 species in the action area. NMFS AR 5819-5824. These factors
27 include habitat blockage, which include Project dams, NMFS AR
28 5819-20; water development activities, which include constraints

1 such as the CVPIA, SWRCB water quality control plans, the 1993
2 BiOp, the 1995 Delta Smelt Opinion, the Coordinated Operating
3 Agreement, and other agreements, NMFS AR 5820-21; invasive
4 species that impact the growth and survival of juvenile salmonids
5 including striped bass, largemouth bass, sunfish, Asian clams,
6 and the water hyacinth plant species, NMFS AR 5821; sportfishing,
7 NMFS AR 5821-22; ecosystem restoration, NMFS AR 5822-24; and ESA
8 § 10 permits covering research, NMFS AR 5824. The ENVIRONMENTAL
9 BASELINE sections conclude with a summary of the environmental
10 baseline, although no mortality numbers are included. NMFS AR
11 5824-26.

12 In the INTEGRATION AND SYNTHESIS OF THE EFFECTS section of
13 the BiOp (section VII), NMFS used the following methodology to
14 measure and analyze the effects of proposed Projects on the
15 listed species:

16 [This section of the BiOP] summarizes the physical,
17 chemical, and biotic effects of the proposed operation
18 of the Central Valley Project and State Water Project
19 and their interrelated and interdependent actions to
20 determine (a) if those effects can be expected to
21 reduce the reproduction, numbers, or distribution of
22 threatened or endangered species in the action area,
23 (b) determine if any reductions in reproduction,
24 numbers, or distribution would be expected to
25 appreciably reduce the affected population's likelihood
26 of surviving and recovering in the wild, and (c) if
27 appreciable reductions in the population's likelihood
28 of surviving and recovering in the wild would cause
29 appreciable reductions in the ESU's likelihood of
30 surviving and recovering in the wild.

31 NMFS AR 5917-18.

32 The BiOp compares CV steelhead fry and egg mortality caused
33 by the Projects with baseline mortality, compares average loss at
34 the pumps with baseline loss to determine impacts, and discusses
35 incremental differences in fish mortality due to project

1 operations in the Delta. NMFS AR 5921-31. The "Population
2 Impacts and Potential for Recovery" subsection of the INTEGRATION
3 AND SYNTHESIS OF THE EFFECTS section contains two tables
4 summarizing (1) the expected effects of the proposed actions, and
5 (2) the expected effects of current operations on the winter-run
6 Chinook, spring-run Chinook, and CV steelhead species. NMFS AR
7 5930-31 (Tables 9 and 10).

8 Table 9 includes a summary of the direct and indirect
9 impacts of the proposed actions and interrelated and
10 interdependent actions, where quantification was possible. NMFS
11 concluded "[o]verall Project effects are expected to result in
12 the loss of an additional 3 to 20 percent of the winter-run
13 Chinook salmon juvenile population, 5 to 20 percent of the
14 spring-run Chinook salmon juvenile population, and 12.5 to 27.5
15 percent of the steelhead juvenile population over baseline
16 conditions." NMFS AR 5930-31.

17 Table 10 includes a summary of the expected effects of
18 current operations on the winter-run Chinook, spring-run Chinook,
19 and CV steelhead species in terms of the percentage loss to
20 juvenile and adult life stages. NMFS concluded "[c]urrent
21 operations result in the loss of 42 percent of the winter-run
22 Chinook salmon juvenile population, 37 percent of the spring-run
23 Chinook salmon juvenile population, and 39 percent of the
24 steelhead juvenile population assuming that 33% of the population
25 dies in the delta due to indirect effects of the project." NMFS
26 did acknowledge some of this mortality may occur with or without
27 the Projects, but without quantification.

28 Extrapolating the numbers provided by NMFS in tables 9 and

1 10, yields the following overall effects of proposed Project
 2 operations when added to the baseline conditions.

EFFECTS	WINTER-RUN CHINOOK	SPRING-RUN CHINOOK	STEELHEAD
Baseline juvenile mortality due to <u>current Project operations</u>	42%	37%	39%
Additional juvenile mortality due to <u>proposed Project operations</u>	3% - 20%	5% - 20%	12.5% - 27.5%
TOTAL JUVENILE MORTALITY	45% - 62%	42% - 57%	51.5% - 66.5%

14 NMFS AR 5930-32. The extrapolated totals, when proposed effects
 15 from Project operations are added to baseline conditions, results
 16 in total increases in juvenile mortality for winter-run Chinook
 17 from 42% to a minimum of 45% and as high as 62%. Juvenile
 18 mortality increases from 37% to a minimum of 42% and as high as
 19 57% for spring-run Chinook salmon. Juvenile mortality increases
 20 from 39% to a minimum of 51.5% and as high as 66.5% for CV
 21 steelhead.

22 NMFS reached its no jeopardy conclusion based on whether
 23 incremental impacts, *i.e.*, impacts resulting from proposed
 24 operations, limiting the analysis to only proposed Projects that
 25 have come or are coming on-line, would jeopardize the listed
 26 species; rather than basing its conclusion on an analysis of the
 27 overall effects of proposed Project operations added to baseline
 28

1 conditions. The ESA requires NMFS's focus and analysis to
2 address all the combined effects on the listed species of losing
3 between 45% to 62% of winter-run Chinook juveniles, 42% to 57% of
4 spring-run Chinook juveniles, and 51.5% to 66.5% of steelhead
5 juveniles, rather than limiting the "effects" to incremental
6 losses due to proposed operations of 3% to 20% (winter-run
7 Chinook), 5% to 20% (spring-run Chinook), and 12.5% to 27.5%
8 (steelhead). NMFS has undertaken to remedy any shortcoming or
9 ambiguity in this area of concern.⁹ Such compliance should bring
10 the BiOp into conformity with the evolving law. A finding of
11 illegality is not required absent NMFS's failure to do so.

12 Plaintiffs' motion for summary judgment is DENIED,
13 conditioned upon NMFS completing its incremental Project impacts
14 in relation to baseline conditions. Federal Defendants' cross-
15 motion is DENIED based on their acknowledgment remand for
16 compliance is necessary.

17

18 d. Whether NMFS Failed to Conduct a
19 Comprehensive Analysis of Impacts Associated
20 With the Entire Federal Action During Formal
Consultation.

21 Citing *Conner v. Burford*, 848 F.2d 1441, 1457-58 (9th Cir.
22 1988), Plaintiffs contend NMFS has not prepared a biological
23 opinion assessing the effects of the "entire agency action" (in
24

25 ⁹ This BiOp suffers from the same defects as the biological
26 opinion at issue in *NWF v. NMFS*, although *NWF v. NMFS* was decided
27 approximately two and one-half years after issuance of the BiOp
28 and approximately one year before the Bureau reinitiated
consultation on the BiOp. On remand, NMFS must ensure its
forthcoming biological opinion is consistent with *NWF v. NMFS*.

1 this case the actions contained in the 2004 OCAP) rather than
2 bifurcating or phasing discrete parts of the entire agency action
3 into formal and early consultation. Plaintiffs also contend NMFS
4 cannot avoid considering the impacts of certain "interrelated or
5 interdependent project components" by deferring such
6 consideration to future, site-specific consultations.

7 Plaintiffs contend NMFS improperly bifurcated its analysis
8 of project impacts resulting in an incomplete analysis under
9 formal consultation, the BiOp ignored impacts associated with
10 construction of the facilities necessary to carry out long-term
11 CVP and SWP operations, and the BiOp only considered a fraction
12 of the total amount of water service contract deliveries it
13 authorizes. The Federal Defendants and DI contend this court
14 rejected the same arguments in *NRDC v. Kempthorne*, 506 F. Supp.
15 2d at 382-87, and should do the same here.

16 The ESA requires NMFS to address impacts associated with the
17 entire agency action. See *Conner*, 848 F.2d at 1453-54 (holding
18 that agency violated the ESA by choosing not to analyze the
19 effects of all stages of oil and gas activity on federal lands).
20 According to ESA regulations, the effects of an agency action
21 include "direct and indirect effects of an action on the species
22 or critical habitat, together with the effects of other
23 activities that are interrelated or interdependent with that
24 action, that will be added to the environmental baseline." 50
25 C.F.R. § 402.02. "[T]he meaning of 'agency action' is determined
26 as a matter of law by the Court, not by the agency." *Greenpeace*
27 *v. NMFS*, 80 F. Supp. 2d 1137, 1146 (W.D. Wash. 2000) (citing
28 *Pacific Rivers Council v. Thomas*, 30 F.3d 1050, 1054 (9th Cir.

1 1994)).

2 NMFS describes its approach and scope to consultation on
3 future actions as follows:

4 The purpose of the proposed action is to continue to
5 operate the CVP and SWP in a coordinated manner to
6 divert, store, and convey Project water consistent with
7 applicable law. In addition to current day operations,
8 several future facilities and actions are to be
9 included in this consultation. These actions are: (1)
10 increased flows in the Trinity River, (2) an intertie
11 between the California Aqueduct (CA) and the Delta-
12 Mendota Canal (DMC), (3) the Freeport Regional Water
13 Project (FRWP), (4) water transfers, and (5) renewal of
14 long term CVP water service contracts. *Early*
15 *consultation* will address: (1) increased pumping at the
16 SWP Banks Pumping Plant (referred to as 8500 Banks),
17 (2) permanent barriers operated in the South Delta
18 (*i.e.*, proposed as part of the SDIP) and water
19 transfers, (3) a long-term EWA, and (4) various
20 operational changes identified as CVP/SWP project
21 integration. The purpose of the SDIP is to increase
22 water supply south of the Delta, ensure water quality
23 and quantity to agricultural diverters within the south
24 Delta, and to reduce straying of Central Valley fall-
25 run Chinook salmon (*O. tshawytscha*) in the south Delta
26 (SDIP 2003). These proposed actions will come online
27 at various times in the future. Thus, the proposed
28 action is a) continued operation of the CVP/SWP without
these actions, and b) operations as they come online.

The future actions listed in the preceding paragraph
are not being implemented at present (except for
increased flows in the Trinity River); however, they
are part of the future proposed action on which [the
Bureau] requested *early consultation*. Only the water
operations associated with the proposed activities are
addressed in this consultation (*i.e.*, Project
activities do not include construction of any
facilities to implement the actions). All site-
specific/localized activities of the actions such as
construction/screening and any other site-specific
effects will be addressed in separate action-specific
section 7 consultations.

25 NMFS AR 5743.

26 NMFS offered the following explanation for dividing
27 consultation into formal consultation and early consultation:

28 After much discussion between [the Bureau] and DWR

1 regarding which facilities and actions to be included
2 in the consultation, such as operation and schedule of
3 the permanent barriers (which are a part of the South
4 Delta Improvement Program [SDIP]), it was agreed upon
5 by all agencies involved in the OCAP consultation to
6 divide the project description into two components
7 consisting of *formal consultation* on the effects of on-
8 going operations and facilities mentioned above^[10],
9 combined with an *early consultation*^[11] on the effects
10 of future operations in the south Delta region.

11 NMFS AR 5739.

12 Only the aspects of the 2004 OCAP that will actually be
13 implemented without further approval were the subject of formal
14 consultation. Other changes that may occur in the future were
15 the subject of early consultation, but the BiOp defers future
16 site-specific and localized activities, including construction,
17 to be addressed in new separate § 7 consultations.

18 Plaintiffs contend NMFS bifurcated its analysis of Project

19 ¹⁰ These operations and facilities with respect to the
20 Bureau's facilities and actions to be addressed in the
21 consultation, include: "ongoing operations at all CVP divisions
22 including the Tracy Pumping Plant and Fish Collection Facility
23 (TFCF), the CVP/SWP Intertie, implementation of the Trinity River
24 Record of Decision (ROD) flows, and operations of the proposed
25 Freeport Regional Water Project." NMFS AR 5739. DWR's
26 facilities and operations addressed in the consultation "include
27 ongoing operations of the following: the Oroville-Thermalito
28 Complex, Harvey O. Banks Delta Pumping Plant (Banks), Clifton
Court Forebay (CCF), Skinner Fish Protective Facility (SFPF),
Northbay Aqueduct, and the Suisun Marsh Salinity Control Gates
(SMSCG)." NMFS AR 5739.

¹¹ "The purpose of early consultation is to reduce the
potential for conflicts between listed species or critical
habitat and proposed actions which usually occur before an
applicant files an application for a Federal permit or license,
in this case a permit to increase pumping at Banks." NMFS AR
5739.

1 impacts resulting in an incomplete analysis under the BiOp's
2 formal consultation. Plaintiffs assert the BiOp defines the
3 proposed actions as including existing CVP and SWP operations and
4 future operations "as they come online." Plaintiffs' main
5 complaint is that NMFS only analyzed a subset of Project impacts
6 under formal consultation and deferred for early consultation,
7 impacts associated with SDIP and integration activities.

8 Plaintiffs maintain Project components relegated to early
9 consultation are part of a long-term management plan, and NMFS
10 had sufficient information before it to include all proposed
11 actions in its formal consultation analysis. According to
12 Plaintiffs, NMFS analyzed early consultation actions at a level
13 of detail similar to those performed under formal consultation.

14 Plaintiffs also contend the BiOp failed to consider
15 interrelated and interdependent Project impacts associated with
16 construction of new CVP and SWP facilities. Plaintiffs contend
17 the construction of CVP and SWP facilities necessary to carry out
18 the operations set forth in the 2004 OCAP are interrelated or
19 interdependent with long-term CVP and SWP operations, and that
20 construction of these facilities has no function apart from the
21 implementation of changes to CVP and SWP operations. These
22 actions include: (1) construction of permanent barriers
23 associated with SDIP; (2) construction of the Intertie; (3)
24 construction activities associated with increased diversion of
25 water from the Sacramento River to the Freeport Regional Water
26 Authority; and (4) increasing the effective storage capacity in
27 the San Luis Reservoir.

28 All of what Plaintiffs argue may be assumed to be true,

1 *arguendo*, but such future Project enhancements are not now being
2 implemented nor is any finite date set for future implementation
3 of any of them. Without formal action pursuant to authorization
4 and funding, all the future measures are conditional and not
5 certain. The Plaintiffs in *NRDC v. Kempthorne* made the same
6 arguments regarding construction of the Intertie, SDIP, and the
7 Freeport Diversion, asserting these projects are interrelated and
8 interdependent with the 2004 OCAP. Plaintiffs present nothing
9 new to change that analysis that these future actions will not
10 occur "but for" the approved actions, because they are
11 independent actions that may or may not be implemented in the
12 future. *NRDC v. Kempthorne* applied the "but for" test derived
13 from the Endangered Species Consultation Handbook to determine
14 whether these proposed actions are interrelated or interdependent
15 so as to be considered part of the action. Using the "but for"
16 test, "[t]he biologist should ask whether another activity in
17 question would occur "but for" the proposed action under
18 consultation. 506 F. Supp. 2d at 384. "If the answer is no,
19 that the activity in question would not occur but for the
20 proposed action, then the activity is interrelated or
21 interdependent and need should be analyzed with the effects of
22 the action." *Id.* "If the answer is 'yes,' that the activity in
23 question would occur regardless of the proposed action under
24 consultation, then the activity is not interrelated or
25 interdependent and would not be analyzed with the effects of the
26 action under consultation." *Id.* The question in *NRDC v.*
27 *Kempthorne* is the same as it is here: whether construction and
28 operation of SDIP, Freeport, and the Intertie are interrelated

1 and interdependent with the proposed action subject to formal
2 consultation?

3 As DI correctly note, that the South Delta Improvement
4 Project and the Intertie would "comprise substantial changes in
5 the facilities and long-term operations" does not make the
6 proposed actions "interrelated or independent." There continues
7 to be no evidence in the record that construction of the Freeport
8 Diversion or the Intertie is dependent in any way upon the pre-
9 approval of delivery of water to the Project or the Project's
10 current operations. Future construction and operation of the
11 South Delta Improvement Project are independent of the OCAP
12 Project operations. The SDIP may or may not ever be constructed.
13 Project operations under the 2004 OCAP do not depend upon the
14 SDIP.

15 The formal consultation at issue here, covers delivery of
16 CVP water to the proposed Freeport Regional Water Project and
17 operation of the Intertie. However, the BiOp expressly excludes
18 impacts of construction associated with these projects. With
19 respect to future actions, only "water operations" as opposed to
20 "construction activities" are addressed in the consultation that
21 produced the BiOp.

22 The future actions listed in the preceding paragraph
23 [increased flows in the Trinity, the Intertie, the
24 Freeport Regional Water Project, water transfers,
25 renewal of long-term CVP water service contracts,
26 increased pumping at Banks, SDIP, and the long-term
27 Environmental Water Account] are not being implemented
28 at present (except for increased flows in the Trinity
River); however, they are part of the future proposed
action on which [the Bureau] requested early
consultation. Only the water operations associated
with the proposed activities are addressed in this
consultation (i.e., Project activities do not include
construction of any facilities to implement the

1 actions). All site-specific/localized activities of
2 the actions such as construction/screening and any
3 other site-specific effects will be addressed in
4 separate action-specific section 7 consultations.

5 NMFS AR 5743.

6 The Freeport Regional Water Project and the Intertie are
7 designed to more effectively distribute CVP and SWP water. There
8 is no record evidence that construction of either project is tied
9 in any way to the preapproval of delivery of water to the
10 Project. Flow operations could be approved after or
11 simultaneously with the approval of new construction. Under the
12 Handbook test, the future construction projects are not
13 interrelated or interdependent with the proposed actions subject
14 to formal consultation (Project water operations). With respect
15 to the SDIP, the BiOp excludes its construction and operation
16 under the 2004 formal consultation. NMFS AR 5743. Applying the
17 Handbook analysis, the construction and operation of SDIP will
18 not occur "but for" the approval of CVP and SWP operations in the
19 2004 OCAP; each action is independent of the OCAP. The SDIP is a
20 separate addition that may or may not be constructed, and in no
21 way do current Project operations depend on or relate to the
22 SDIP. There is no ESA prohibition to addressing future operation
23 and construction of these facilities in a separate § 7
24 consultation at the time these projects or operations are
25 authorized, funded and actually "come online."

26 With respect to water contract deliveries, the BiOp explains
27 that "renewal of long term CVP water service contracts" is one of
28 five future actions specifically included in the 2004 OCAP
consultation. Citing *NRDC v. Rodgers*, 381 F. Supp. 2d 1212,

1 1237-40 (E.D. Cal. 2005), Plaintiffs argue ESA § 7's mandate to
2 consult on the entire agency action means that NMFS was required
3 to analyze the biological effects of delivering the full amount
4 (100%) of water that the Bureau intended to authorize for
5 delivery under the long-term water service contracts. Instead,
6 Plaintiffs assert that NMFS only analyzed the effects of
7 delivering between 10% to 89% of the full amounts authorized
8 under the long-term CVP contracts and as a result NMFS
9 significantly underestimated the impacts of CVP deliveries.

10 "A biological opinion must consider the effects of the
11 entire agency action, meaning 'all activities or programs of any
12 kind authorized, funded or carried out,' including 'the granting
13 of . . . contracts.'" *NRDC v. Kempthorne*, 506 F. Supp. 2d at 386
14 (citing 50 C.F.R. § 402.02). The Bureau delivers water to
15 numerous contractors through long-term CVP contracts. NMFS AR
16 5747. The long-term CVP contracts are interrelated and are
17 considered part of the proposed project. NMFS AR 5747.

18 The CALSIM II studies that incorporated water deliveries
19 into its flow scenarios did not analyze 100% CVP contract
20 deliveries. Rather, the analysis is based on the effects of
21 delivering between 11% and 89% of the full CVP contract
22 allocations. *NRDC v. Kempthorne* determined *Rodgers* was
23 distinguishable on the grounds that it addressed the government
24 authorization of CVP water users' long-term water service
25 contracts, not Project operations under the 2004 OCAP. *NRDC v.*
26 *Kempthorne*, 506 F. Supp. 2d at 387. Here, however, the agency
27 action subject to consultation is not the authorization or merits
28 of new water service contracts, rather, it is the operation of

1 the CVP and SWP under the 2004 OCAP and whether those operations
2 will cause jeopardy to the survival or recovery of the winter-run
3 Chinook, spring-run Chinook, and CV steelhead. "The government
4 is entitled to make reasonable assumptions about the operational
5 volume of water flows, water levels, temperature, and quality
6 based on the historical and projected data contained in the
7 administrative record." *Id.* NMFS was not required to analyze
8 the effects of full contract deliveries as Plaintiffs contend.

9 The agency model for the worst case scenario is
10 indispensable. Analysis of a "best of the best" case
11 in a wet water year is not indispensable, as such "wet"
12 water year conditions do not present any reasonable
13 likelihood of jeopardy, absent an additional showing.
14 However, because such a scenario could eventuate, it is
15 not unlawful for the agency to analyze the effects on
16 the smelt of 100% water contract deliveries. However,
17 the 100% delivery analysis is not required. This is a
18 matter committed to the agency's expertise and
19 discretion.

20 *Id.*

21 No analysis of the effects of 100% Project water to be
22 delivered under future water contracts can now be made, as the
23 form and substance of such renewed water contracts is totally in
24 flux. Existing renewal and any new water service contracts have
25 already been challenged in this litigation. In separate
26 litigation, other water service agreements have been challenged.
27 Plaintiffs have objected to any new water service contracts and
28 the Bureau has agreed to a moratorium for existing, renewal, and
29 new water service contracts pending the outcome of this
30 litigation. Interim water service contract renewals are limited
31 to two years with the possibility of extension for no more than
32 five years.

33 The analysis in the *NRDC v. Kempthorne* decision that 100%

1 contract deliveries representing a "best of the best" case for
2 wet water year conditions, which present no reasonable likelihood
3 of jeopardy to the species or their critical habitat, applies to
4 obviate the need to treat 100% of water deliveries in the BiOp.

5 Plaintiffs' motion for summary adjudication on the failure
6 to address "Entire Agency Action" is DENIED. Federal Defendants'
7 motion on this issue is GRANTED.

8

9 2. Global Climate Change and the Effects on the
10 Hydrology of Northern California Rivers.

11

12 Plaintiffs' contend at the time the BiOp was being
13 formulated, the best available science demonstrated that global
14 climate change would significantly change the hydrology of
15 Northern California's river systems. According to Plaintiffs,
16 the BiOp's analysis relies on temperature and hydrology models
17 that assume the same monthly temperature, hydrologic, and
18 climatic conditions experienced in the Project area from 1922
19 through 1994 will continue for the future twenty-five year
20 duration of the 2004 OCAP operations.

21 NMFS admits that an explanation of its conclusions on the
22 effects of global climate change should have been included in the
23 BiOp. NMFS states it will address global climate change in its
24 ongoing, reinitiated ESA § 7 consultation consistent with *NRDC v.*
25 *Kempthorne*. The DI also concede further explanation of the
26 effects of global climate change is needed.

27 The § 7 formal consultation process is designed to "insure"
28 that any agency action "is not likely to jeopardize the continued
existence of any endangered species or threatened species or

1 result in the destruction or adverse modification of habitat of
2 such species which is determined . . . to be critical”
3 16 U.S.C. § 1536(a) (2). “In fulfilling the requirements of [§
4 1536(a) (2)] each agency shall use the best scientific and
5 commercial data available.” *Id.*

6 An agency has wide discretion to determine what is “the best
7 scientific and commercial data available.” *San Luis & Delta-*
8 *Mendota Water Auth. v. Badgley*, 136 F. Supp. 2d 1136, 1151 (E.D.
9 Cal. 2000) (citing *Southwest Ctr. for Biological Diversity v.*
10 *United States Bureau of Reclamation*, 143 F.3d 515, 523 n.5 (9th
11 Cir. 1998). “The ESA does not explicitly limit the Secretary’s
12 analysis to apolitical considerations.” *Southwest*, 143 F.3d at
13 523 n.5. An agency must make its decision about jeopardy based
14 on the best science available at the time of the decision, and
15 may not defer that jeopardy analysis by promising future studies
16 to assess whether jeopardy is occurring. *Center for Biological*
17 *Diversity v. Rumsfeld*, 198 F. Supp. 2d 1139, 1156 (D. Ariz.
18 2002). While uncertainty is not necessarily fatal to an agency
19 decision, e.g. *Greenpeace Action v. Franklin*, 14 F.3d 1324, 1337
20 (9th Cir. 1992) (upholding agency decision even though there was
21 uncertainty about the effectiveness of management measures
22 because agency premised its decision on a reasonable evaluation
23 of all data), an agency may not entirely fail to develop
24 appropriate projections where data “was available but [was]
25 simply not analyzed.” *Greenpeace v. National Marine Fisheries*
26 *Service*, 80 F. Supp. 2d 1137, 1149-50 (W.D. Wash. 2000).

27 *NRDC v. Kempthorne* addressed 2004 OCAP and Project impacts
28 on the Delta smelt and determined that the FWS acted arbitrarily

1 and capriciously by failing to address the issue of global
2 climate change in that Biological Opinion, finding, "the absence
3 of any discussion in the BiOp of how to deal with any climate
4 change is a failure to analyze a potentially important aspect of
5 the problem." *Kempthorne*, 506 F. Supp 2d. at 370.

6 During the time period when NMFS was formulating this BiOp,
7 readily available scientific data existed regarding the potential
8 effects of global climate change on the hydrology of the Project
9 area river systems including:

10 (1) Studies showing that radiative forcing (warming) had
11 begun to increase steeply around 1970 and is expected
12 to continue into the foreseeable future. USBR SAR
13 79697-99. Scientists predicted this warming would
14 produce less snowfall, more rainfall, and earlier
15 snowmelt, leading to major reductions in the Sierra
16 snowpack and decreases in summer stream flow. USBR SAR
17 79701-02, 79704-05.

18 (2) Plaintiffs NRDC and The Bay Institute expressed their
19 concern to the Bureau in July 2003 that the Draft OCAP
20 and Draft OCAP Biological Assessment failed to consider
21 climate change effects and provided references for
22 several studies and reports on climate change effects
23 on water availability in the Western United States.
24 NMFS AR 1662-64. These concerns were ignored.

25 The BiOp does not discuss this global climate change data or
26 mention that NMFS, at a minimum, considered this data. Instead,
27 the BiOp relies on past hydrology and temperature models that
28 assume the historical monthly temperature, hydrologic, and

1 climatic conditions experienced from 1922 through 1994 will
2 continue for 25 years through the duration of the 2004 OCAP
3 operations. These assumptions were challenged as without basis
4 in then-available science. NMFS AR 5828-31.

5 Plaintiff's motion for summary adjudication is GRANTED as to
6 the climate change claim issue based on NMFS's total failure to
7 address, adequately explain, and analyze the effects of global
8 climate change on the species. Federal Defendants' cross-motion
9 is DENIED.

10
11 3. Sufficiency of Adaptive Management Plan and
12 Mitigation Measures.

13 Plaintiffs dispute that the adaptive management plan and all
14 formulated action and mitigation measures are sufficient,
15 certain, or enforceable.

16 The principal action measures are: (1) movement of the
17 Sacramento River temperature compliance point (TCP) upstream from
18 Bend Bridge to Balls Ferry; (2) changing the 1.9 MAF COS
19 requirement for Shasta Reservoir to a target; and (3) the
20 operation of the RBDD. Plaintiffs further complain about future
21 use of Environmental Water Account assets to reduce Project
22 effects and the potential for increased exports resulting from
23 the South Delta Improvement Project.

24 As Federal Defendants and DI correctly observe, the action-
25 mitigation measures described in the Population Impacts section
26 of the BiOp (NMFS 5930-40), are made part of the "Terms and
27 Conditions" of the BiOp, each of which is a specific part of the
28 Incidental Take Statement ("ITS"), enforceable under civil and

1 criminal law, the ITS provides take coverage for Project
2 operations. NMFS AR 5953-68. The ITS characterizes the "Terms
3 and Conditions" as "non-discretionary" and that Reclamation and
4 DWR must comply or ensure compliance by their contractor(s) "with
5 the following terms and conditions, which implement the
6 reasonable and prudent measures described above." NMFS 5953.

7 Each of the operational concerns Plaintiffs advance,
8 Sacramento River temperature controls, Shasta Reservoir COS and
9 RBDD passage and operations are specifically prescribed by the
10 BiOp's Terms and Conditions and are subject to enforceable
11 definite and certain requirements as specifically analyzed below.
12 It is well established that any biological opinion's ITS
13 constitutes a permit authorizing the agency action to "take" the
14 endangered or threatened species so long as the agency respects
15 those terms and conditions. *Bennett v. Spear*, 520 U.S. 154 at
16 169-70 (1997).

17 By contrast, the Delta Smelt BiOp in the *NRDC v. Kempthorne*
18 case, prescribed mitigation measures in a Delta Smelt Risk
19 Assessment Matrix that had no finite standards which were
20 enforceable through the ITS. Adaptive management of mitigation
21 measures delineated by the ITS Terms and Conditions has been
22 employed for a number of years and DI argue, these measures are
23 working to increase winter-run population and returning adults
24 from a low of 186 in 1994 to nearly 10,000 in 2003. NMFS AR
25 5791-92. DI refer to returning adult spring-run from 1,403 fish
26 in 1993 to more than 8,500 in 2000 and 2003. The efficacy of
27 this analysis has been discussed above.

28

1 a. Temperature Control.

2 Project operations affect salmon which travel from their
3 spawning grounds to and from the ocean. The BiOp contains the
4 following reasonable and prudent measure:

5 Reclamation shall manage the cold water supply within
6 Shasta Reservoir and make cold water releases from
7 Shasta Reservoir to provide suitable habitat for
8 Sacramento River winter-run Chinook salmon, Central
9 Valley spring-run Chinook salmon, and Central Valley
10 Steelhead in the Sacramento River between Keswick Dam
11 and Bend Bridge.

12 NMFS AR 5950. The Supreme Court has defined the word "shall"
13 used in a BiOp to generally indicate a command that admits of no
14 discretion on the part of the person instructed to carry out the
15 directive. *National Ass'n of Home Builders, supra*, 127 S.Ct. at
16 2531.

17 The following temperature control obligation is non-
18 discretionary in the BiOp:

19 Reclamation shall target daily average water
20 temperatures in the Sacramento River between
21 Keswick Dam and Bend Bridge as follows:

22 I. Not in excess of 56°F at compliance
23 locations between Balls Ferry and Bend Bridge
24 from April 15 through September 30 and not in
25 excess of 60°F at the same compliance
26 locations between Balls Ferry and Bend Bridge
27 from October 1 through October 31, provided
28 operations and temperature forecast
demonstrate the capability to achieve and
sustain compliance.

29 NMFS AR 5956.

30 This 56°F requirement was established by State Water
31 Resources Control Board Order 90-5, issued May 2, 1990.

32 Consultation is required with the SWRCB if the Bureau seeks to
33 designate a temperature compliance point upstream of RBDD. USBR
34 AR 06741. Because hydrologic conditions can limit

1 controllability of upstream operations to an inopportune period
 2 of time or upstream of Bend Bridge, the Bureau must maintain
 3 daily average water temperature at 56°F at Bend Bridge or other
 4 locations upstream, depending upon actual hydrology. USBR AR
 5 07859. This is necessary because mortality of eggs and pre-
 6 emergent fry commences at 57°F and reaches 100% at 62°F. (Boles
 7 1988) 1993 NMFS BiOp, USBR AR 7832.

8 In dry and critical years the Bureau must initiate
 9 consultation with concerned agencies regarding temperature
 10 control. USBR AR 07860. In fact, in all but two "wet" years
 11 since 1993, the Bureau and NMFS have re-consulted to adjust the
 12 temperature compliance point upstream of Bend Bridge toward Balls
 13 Ferry in accordance with the fact that most salmon redds and
 14 incubating eggs are located above Balls Ferry. NMFS AR 5843.
 15 Unlike the Delta Smelt Remedial Action Matrix, here, a finite
 16 56°F enforceable temperature requirement is set between Balls
 17 Ferry and Bend Bridge, with adaptive management only used where
 18 compliance cannot be achieved, and actual reinitiation of
 19 consultation with NMFS is required before the Bureau announces
 20 annual CVP water delivery allocations. NMFS AR 5956.

21 Recognizing that in lower storage years at Shasta, the
 22 temperature compliance point has been adjusted using finite
 23 criteria:

May 1 Shasta Cold Water Volume Below 52°F	Compliance Target
<3.3 MAF	Balls Ferry
>3.3 MAF but < 3.6 MAF	Jellys Ferry

1 >3.6 MAF	Bend Bridge
------------	-------------

2
3 NMFS AR 5957. This temperature control protocol requires
4 maintenance of the 56°F ceiling. In the event of noncompliance,
5 consultation and alternative compliance is required and has
6 actually occurred and water allocation measures have been
7 implemented in 8 of 10 years prior to the 2004 BiOp. No more is
8 required.

9
10 b. Shasta Carryover Storage.

11 For Shasta COS, the ITS non-discretionary Terms and
12 Conditions specify:

13 Reclamation shall target a minimum end-of-year
14 (September 30) carryover storage in Shasta Reservoir of
15 1.9 MAF for improvement of cold water resources in the
following water year.

16 NMFS AR 5956.

17 Plaintiffs maintain that the use of the term "target"
18 eliminates a definite and enforceable requirement for Shasta
19 Reservoir COS that was mandated by the 1993 BiOp. DI rejoin that
20 the record shows there was never a mandatory requirement for
21 carryover at Shasta that applied in all years. Although the 1.9
22 MAF is a target, the Bureau must consult with NMFS before it
23 announces water delivery allocations for any year that annual
24 water conditions do not support temperature control compliance at
25 Balls Ferry. NMFS AR 5956. NMFS may object to delivery
26 allocations that reduce the ability to meet temperature control
27 at the location which exists to protect spawning adults and
28 incubating eggs. The Bureau must still reinitiate consultation

1 with NMFS before the first water allocation announcement in
2 February if the Bureau's forecast projects carryover storage
3 levels drop below 1.9 MAF at the end-of-water-year. SWRCB Order
4 90-5.

5

6 c. SWRCB Order 90-5.

7 As a practical matter this criteria is enforceable, as more
8 than two consecutive dry water years with rising temperatures at
9 TCP require reinitiation of consultation. USBR AR 07857-58; NMFS
10 AR 5956. Term and Condition No. 5 requires the Bureau to explain
11 to NMFS in an annual forecast, how the Bureau will comply with
12 the Order 90-5 temperature mandates. NMFS AR 5955 (requiring
13 forecast of deliverable water).

14

15 d. Red Bluff Diversion Dam.

16 To provide upstream and downstream passage at RBDD the BiOp
17 includes the following requirements:

18 Reclamation shall implement all measures practicable to
19 provide unimpeded passage upstream and downstream at
20 the Red Bluff Diversion Dam during the period of
September 1 through June 30 each year.

21 A. As a minimum, Reclamation shall provide unimpeded
22 upstream and downstream passage at the Red Bluff
Diversion Dam from September 15 through May 14 each
year.

23 B. NOAA Fisheries will review proposals for early gate
24 closures (prior to May 15) of up to ten days, one time
25 per year, only in emergency situations where the
alternative water supplies (i.e., new 4th Pump at Red
26 Bluff Pumping Plant and Stony Creek) are unable to meet
TCCA demands. Reclamation will reopen the gates for a
27 minimum of five consecutive days, prior to June 15 of
the same year in a manner that will be least likely to
adversely affect water deliveries.

28 C. Reclamation shall further investigate and implement

1 all practicable opportunities, including improvement to
2 fish ladders, to improve or provide unimpeded upstream
3 and downstream passage at Red Bluff Diversion Dam from
4 May 15 through June 30 and September 1 through
5 September 15 each year.

6 D. Reclamation in coordination with FWS and DFG, shall
7 further investigate the results of blockage or delays
8 in the migration of adult Sacramento winter-run Chinook
9 salmon and Central Valley spring-run Chinook salmon at
10 the RBDD as a result of gate closures between May 15
11 and June 30 and from September 1 through September 15.
12 Written reports shall be provided by to NOAA Fisheries
13 as investigations are completed.

14 NMFS AR 5959.

15 These enforceable Terms and Conditions are imposed with the
16 mandatory "shall" and impose a non-discretionary obligation
17 during specified time periods. If early closure of the RBDD
18 gates is necessary, adaptive management may be implemented by
19 NMFS.

20 e. The Environmental Water Account.

21 Plaintiffs raise again the argument that mitigation measures
22 cannot rely upon "environmental water" because there is no finite
23 certainty the environmental water account will be adequately
24 funded in the future. The Court has previously ruled that:

25 The EWA is simply a means by which the SWP and the CVP
26 can obtain water by purchasing it from willing sellers.
27 EWA water may be used either to protect fish or to
28 compensate Project water users for reduced exports at
the Project pumps. If money is unavailable to fund the
EWA, Defendants are nonetheless required to prevent
smelt take from exceeding permissible take limits.

There is a difference between the DSRAM's failure to
require mitigation actions in response to trigger
events, designed to assure the commitment of necessary
resources to smelt protection, and the duty to have
available or acquire those necessary resources. A
court must leave to the agency the application of its
expertise and authority to manage the complex
hydrological, legal, financial, physical and logistical

1 aspects of protecting the Delta smelt.

2 NRDC v. Kempthorne, 506 F.Supp.2d at 358-59. There is no reason
3 to disturb this ruling.
4

5 f. South Delta Improvement Program.

6 This issue has also been decided in the Smelt BiOp Order:

7 The SDIP is a separate addition that may or may not be
8 constructed. Project operations under the 2004 OCAP in
9 no way depend upon the SDIP. There is no prohibition
10 to addressing future operations, if and when the
11 construction of the SDIP will occur, in a separate
12 consultation.

13 506 F.Supp.2d at 386. In this case the SDIP was treated in the
14 BiOp as a matter for early consultation. NMFS AR 5739. Early
15 consultation regarding salmonids does not result in incidental
16 take protection. NMFS AR 5968. The reasoning of the *Kempthorne*
17 decision has equal applicability. There is no legal impediment
18 to address future operations of the SDIP, if and when it will be
19 constructed, a separate ESA § 7 consultation must then be
20 performed.

21 In this case, the BiOp's mitigation measures are included in
22 the Terms and Conditions of the Incidental Take Statement, are
23 declared to be "non-discretionary" by the BiOp, and are
24 enforceable. For all the reasons described above, the mitigation
25 measures are definite, and sufficiently certain to be
26 enforceable. Their prescription and implementation are within
27 the agency's reasonable discretion to which deference is owed.
28 These measures strike the appropriate balance between the needs
of certainty and flexibility prescribed by law.

1 Plaintiffs' motion for summary adjudication regarding
2 mitigation measures and adaptive management is DENIED. Federal
3 Defendants' cross-motion for summary judgment is GRANTED.
4

5 E. Bureau Claims.

6 1. The Bureau's § 7(a)(2) Obligations.

7 Plaintiffs' claim that the Bureau, as the action agency
8 unjustifiably relied on and accepted the NMFS BiOp, which NMFS
9 produced as the expert consulting agency. The action agency
10 decides "whether and in what manner to proceed with the action in
11 light of its § 7 obligations and the Service's Biological
12 Opinion." 50 C.F.R. § 402.15(a). The relevant inquiry is not
13 whether the BiOp itself is flawed, but rather whether the action
14 agency's reliance on the BiOp was arbitrary and capricious. *City*
15 *of Tacoma, Washington v. FERC*, 460 F.3d 53, 75-76 (D.C. Cir.
16 2006).

17 *City of Tacoma* interprets Ninth Circuit cases which
18 recognize that reliance on a facially flawed BiOp would "likely
19 be arbitrary and capricious," but held the action agency "need
20 not undertake a separate, independent analysis" of the issues
21 addressed in the BiOp. *City of Tacoma*, 460 F.3d at 75-76, citing
22 *Aluminum Co. of Am. v. Adm'r Bonneville Power Admin.*, (*ALCOA v.*
23 *BPA*) 175 F.3d 1156, 1160 (9th Cir. 1999). One test to determine
24 if the Bureau could lawfully rely on the BiOp, is whether "new
25 information" was available to the Bureau when it conducted its
26 biological assessment and consultation, that NMFS did not take
27 into account during formal consultation, was contradictory to
28 NMFS's conclusions. Plaintiffs here do not assert that the

1 Bureau was presented with nor do they identify new information
2 before October 22, 2004, unavailable to NMFS, that gave the
3 Bureau a basis for doubting the expert conclusions in the NMFS
4 BiOp. See *City of Tacoma*, 460 F.3d at 76. Here, when the Bureau
5 received new information, § 7 consultation was reinitiated.

6 The government correctly cites *Pyramid Lake Paiute Tribe of*
7 *Indians v. U.S. Dept. of the Navy*, 898 F.2d 1410, 1415 (9th Cir.
8 1990) for the proposition that an action agency's reliance on the
9 consulting expert agency's BiOp is reviewable under the APA. The
10 government questions the continued viability of Pyramid Lake in
11 view of later U.S. Supreme Court authority, *Bennett v. Spear*, 520
12 U.S. 154 (1997). The government overstates the prerogative of
13 the agency not to perform its own analysis, by citing *ALCOA v.*
14 *BPA*, 175 F.3d at 1162. Although the action agency is not
15 required to rewrite the consulting expert agency's BiOp even
16 where the agencies disagree, the action agency nonetheless must
17 perform its own analysis in adopting a BiOp. *City of Tacoma*, 460
18 F.3d at 75-76.

19 While an action agency cannot rely on a "facially flawed"
20 BiOp, Federal Defendants appropriately argue the Bureau's civil
21 engineers and biologists, as operators and managers of the CVP,
22 had no duty to second guess or rewrite the 2004 NMFS BiOp, but
23 erroneously conclude the Bureau had no obligation to recognize
24 whether that BiOp was fatally flawed. Federal Defendants argue
25 that the Bureau considered and provided to NMFS all information
26 the Bureau had that bore on the issues Plaintiffs raised and
27 supplied NMFS with new information as it became available after
28 considering such information, which caused it to reinitiate

1 consultation, and implement additional protective measures in
2 view of the ongoing consultation. This contention requires
3 scrutiny.

4

5 a. Consideration of Evidence and Consultation
6 Under § 7.

7 Plaintiffs argue that NMFS scientists reached jeopardy
8 opinions based on available evidence and data, but were
9 "ultimately overridden." This is a political bad faith
10 contention. In response to a letter by members of Congress
11 questioning an investigation of the Bureau's "political" role in
12 the 2004 BiOp consultation focused on a bad faith inquiry, the
13 Department of the Interior's Office of the Inspector General
14 report of investigation found: "No BOR employees or contractors
15 tried to influence the consultation process," and that all
16 changes to the 2004 NMFS BiOp could "accurately be described as
17 the result of 'commonplace' collaboration." USBR CD #4a AR
18 80263-80269. The government specifically points to the Bureau's
19 776 page biological assessment (OCAP BA) USBR CD #3 AR 04840-
20 05615 as evidence that the Bureau consulted, analyzed, and
21 provided substantial input on the issues raised by Plaintiff,
22 demonstrating the Bureau's independent efforts to insure § 7
23 compliance through an active and collaborative, ESA § 7
24 consultation process.

25 The Federal Defendants and DI emphasize the incremental
26 annual increases and ignore the balance of substantial record
27 evidence showing continuing adverse conditions discussed above
28 for each species and its critical habitat or "non-habitat." The

1 Bureau did not recognize or address such inconsistencies and
2 contradictions for each species.

3

4 b. The Mitigation Standards.

5 Plaintiffs' "uncertain and unenforceable mitigation
6 standards" claim has been resolved above. The Bureau's OCAP BA,
7 Chapter 15, describes how mitigation measures implemented by the
8 agencies will "mitigate losses of salmon, Delta smelt, and
9 steelhead that cannot reasonably be avoided," USBR AR 05550-
10 05561, through measures including CVPIA (b) (2) water, Delta
11 Pumping Plant Fish Protection Agreement (Four Pumps Agreement),
12 the Tracy Fish Collection Facility Direct Loss Mitigation
13 Agreement, and the California Bay-Delta Authority. The Bureau
14 discussed and analyzed mitigation measures, including (1)
15 temperature management to minimize salmon mortality; (2)
16 implementation of CVPIA § 3406(b) (2) providing 800,000 AF of CVP
17 yield for environmental and fish recovery purposes; (3) the EWA
18 Program; (4) Trinity River releases at Lewiston Dam; (5)
19 regulation of flows and protection of salmonid migration; (6)
20 spawning and incubation in Clear Creek, Sacramento River and
21 American River; and (7) drought management measures. USBR AR
22 05152-05153, 05218-05225. The Bureau thereby employed its own
23 expertise and performed its own independent analysis of how
24 mitigation and minimization efforts would ensure compliance with
25 ESA § 7. Plaintiffs' criticisms of the temperature compliance
26 point management regime; CVPIA (b) (2) water implementation; and
27 related flow measures were rejected in the *NRDC v. Kempthorne*
28 smelt decision. This analysis has not changed. Reasonable

1 experts differ on these issues. Deference is owed to the Agency.
2 The Bureau performed its § 7 responsibilities as to the BiOp for
3 mitigation measures.

4 Plaintiffs' motion for summary adjudication of this issue is
5 DENIED. Federal Defendants' cross-motion on this issue is
6 GRANTED.

7

8 c. Internal Contradictions.

9 The Bureau's OCAP BA explained the agency expected the
10 impacts that would occur would not "wipe out" critical habitat or
11 entire populations as argued by Plaintiffs. Federal Defendants
12 argue that the OCAP BA repeatedly and adequately focused on
13 protection of salmonids and their habitat including Trinity River
14 Chinook salmon essential fish habitat that increased flows in the
15 spring for the restoration program to aid out-migrating Chinook
16 so smolt survival should increase with mitigation measures,
17 centered around temperature control and Shasta COS. As discussed
18 above, the Bureau did not address contradictory evidence in the
19 record. Three aspects that were facially apparent and not
20 discussed were Global Climate Change, recovery of the species and
21 the failure to designate and analyze critical habitat for spring-
22 run and CV steelhead. This is a complete failure to analyze and
23 address an important ESA statutory protection for two of the
24 species.

25 As earlier analyzed, two of the species, spring-run, at
26 moderate risk of extinction and CV steelhead, experiencing an
27 ever-diminishing habitat range, with the ESU reduced to small,
28 remnant populations both inside and outside the Project action

1 areas, and the most recent available data indicates the natural
2 population is continuing to decline, NMFS AR 5936, and likely
3 extirpation from the Sacramento River are at risk, even in light
4 of increases in tributary populations. Substantial question
5 exists whether the Bureau's biologists justifiably accepted this
6 contradictory evidence.

7 Plaintiffs' motion for summary judgment on this issue is
8 GRANTED. Federal Defendants' cross-motion on the issue of BiOp
9 inconsistencies is DENIED.

10

11 d. Global Climate Change.

12 The Bureau's OCAP BA did not discuss global climate change,
13 although the BA refers to three scientific articles: (1) Beamish
14 et al., (1993) Pacific Salmon Production Trend in Relation to
15 Climate; (2) Beamish, et al., (1998) Large Scale Climate Related
16 Changes in the Carrying Capacity of Salmon in the Strait of
17 Georgia and Northern North Pacific Ecosystem; and (3) McGowan et
18 al., (1998) Climate-Ocean Variability and Ecosystem Response in
19 the Northeast Pacific. USBR AR 5564, 5591. This continues to be
20 an area completely untreated by the Agencies.

21 The Bureau discussed salinity changes, which affect Delta
22 smelt. USBR AR 05135. DIs' contention that X2 is "affected by
23 climate" is not an analysis of continuing climate change as
24 related to salmonids.

25 The true fact is that the word "climate" only appears four
26 times in the Bureau's OCAP BA, once in the text of the BA, three
27 of these cites are found in the reference section that cites the
28 article's titles. It is disingenuous to suggest based on the BA

1 that the Bureau considered global climate change. Neither the BA
2 or the NMFS BiOp did so.

3 Federal Defendants, including the Bureau, have acknowledged
4 that the BiOp must be remanded to remedy this failure. This
5 facial inadequacy, even if known to the Bureau, USBR AR 489
6 (Plaintiffs' letter re climate change); NMFS AR 1653, was
7 arguably not then required by established law.

8 Plaintiffs' motion for summary adjudication on this ground
9 is DENIED conditioned upon REMAND and completion by the Bureau of
10 a legally sufficient BA that considers Global Climate Change.
11 Federal Defendants' cross-motion is DENIED.

12

13 e. Temperature Control Point.

14 The TCP was a subject of substantial debate between NMFS and
15 the Bureau. There was disagreement, the matter was extensively
16 considered. The Bureau relied on SWRCB Order 90-05 and Water
17 Rights Order 91-01 authorizing modification of the water
18 temperature compliance point when temperature objectives cannot
19 be met at RBDD. USBR AR 04937-04938.

20 The Bureau, in two separate sections of the OCAP BA,
21 discussed its approval of a flexible TCP. The OCAP BA at 0941
22 states:

23 Locating the target temperature compliance at Balls
24 Ferry (1) reduces the need to compensate for the
25 warming affects of Cottonwood Creek and Battle Creek
26 during the spring runoff months with deeper cold water
27 releases and (2) improves the reliability of cold water
28 resources through the fall months. Reclamation
proposes this change in Sacramento River temperature
control objective to be consistent with the capability
of the CVP to manage cold water resources and to use
the process of annual planning and coordination with
the Sacramento River Temperature Task Group to arrive

1 at the best use of that capability.

2 Second, OCAP BA Chapter 9, Table 9-8 and related text
3 confirms the Bureau reconsulted on winter-run and has recommended
4 moving the TCP nearly every year in the ten years following the
5 1993 NMFS BiOp. *Id.* at 05227-8.

6 Although TCP as a target is a less definite and certain
7 standard, it is enforceable, and in practice has resulted in
8 action in every year a temperature issue arises. The Bureau's
9 exercise of its expertise and discretion is reasonable and
10 adoption of the BiOp's TCP target methodology was not arbitrary
11 and capricious.

12 Plaintiffs' motions for summary adjudication on the TCP is
13 DENIED. Federal Defendants' cross-motion for summary judgment is
14 GRANTED.

15
16 f. Failure to Consider 100% of Water Deliveries.

17 Plaintiffs' allegation the Bureau failed to consider "the
18 full extent of water deliveries" was rejected in *NRDC v.*
19 *Kempthorne*, May 25, 2007, Order at pp. 115-118 and above. The
20 same analysis applies to the Bureau's BA. Use of a CALSIM Model
21 to evaluate arranged water deliveries without the potential
22 impacts of 100% water deliveries, utilized by the FWS in its
23 Delta smelt BiOp, was found to be an application of reasonable
24 science by the expert agency. Such reliance was justified when
25 NMFS utilized CALSIM modeling. For the same reasons, not
26 repeated here, set forth in *NRDC v. Kempthorne*, the Bureau did
27 not have to analyze a 100% water delivery scenario for the
28

1 salmonid species in the OCAP BA and NMFS BiOp. This alleged
2 failure is not arbitrary or capricious.

3 Plaintiffs' motion for summary adjudication on considering
4 100% of water deliveries is DENIED. Summary adjudication is
5 GRANTED for the Bureau on this issue.

6

7 g. Information Identified After The ESA
8 Consultation Process was Completed.

9 Federal Defendants argue references to the administrative
10 record disprove Plaintiffs' allegations that the Bureau ignored
11 documents and other new information that became available after
12 issuance of the 2004 NMFS BiOp. These references include: (1)
13 conclusions of the Department of Commerce Inspector General; and
14 (2) scientific peer-review studies performed by the California
15 Bay Delta Authority (Cal. Fed.) Science Program and by the Center
16 for Independent Experts, all of which the Bureau considered.¹²

17 Federal Defendants point to a January 10, 2006, meeting
18 between the Bureau and NMFS in the Bureau Director's office to
19 reinitiate consultation on the 2004 NMFS BiOp. The meeting
20 agenda shows new, emerging information was explicitly considered
21 by both agencies including: (1) global climate change; (2)
22 variability in ocean productivity; (3) uncertainty not explained
23 or incorporated into the analysis; (4) flawed models and analyses
24 related to temperature mortality; (5) new species listings and
25 critical habitat designations. The Bureau acknowledged the need

26

27 ¹² This extra-record evidence available after issuance of
28 the 2004 NMFS BiOp is considered for the limited purpose of
evaluating whether the Bureau acted in bad faith.

1 to consider such new information covering all these subjects.
2 USBR AR 05915-16. These post-decisional peer review reports and
3 related documents are offered and are received to disprove that
4 the Bureau acted in bad faith.

5 The Bureau further considered the fact that critical habitat
6 was designated for three newly-listed species. The agencies
7 reinitiated consultation when the new information concerning
8 those three species emerged. 50 C.F.R. § 402.16(d) (requiring
9 reinitiation of consultation "if a new species is listed or
10 critical habitat designated that may be affected by the
11 identified action"). The Bureau, in the letter requesting
12 reinitiated consultation included the following analysis:

13 Reclamation has preliminarily determined that ongoing
14 CVP and SWP operations through October 6, 2006, will
15 not destroy or adversely modify the critical habitats
16 and thereby complies with our § 7(a)(2)
17 responsibilities under the Act. We base this
18 preliminary determination on the fact that both our
19 ongoing CVP and SWP operations in accordance with your
20 October 22, 2004, biological opinion, and the wet water
21 year type will ensure that all the primary constituent
22 elements of the critical habitats are preserved.

23 Ronald Milligan letter February 14, 2007, USBR AR Supp. 05989-
24 05999 (offered to negate bad faith).

25 This record establishes that the Bureau considered new
26 information as it became available and reinitiated consultation
27 as a result. That process is ongoing. The law requires no more.

28 Plaintiff' motion for summary adjudication is DENIED on this
issue. Federal Defendants' cross-motion is GRANTED.

2. Violation of ESA § 7(d)

Plaintiffs argue that the Bureau violated ESA § 7(d) based

1 on the NMFS's invalid BiOp, which prevented the Bureau from
2 "completing consultation." In support of this contention,
3 Plaintiffs cite cases which are distinguishable or inapplicable.
4 *NRDC v. Rodgers*, 381 F.Supp.2d 1246 held the Bureau violated
5 § 7(d) by executing renewed long term CVP water service contracts
6 for two units that were omitted from the consultation, Project
7 operations were not in issue. There was no dispute the FWS did
8 not consider or address the renewed contracts in its BiOp which
9 prevented the Bureau from relying on the expert's agency failure.
10 In *Connor v. Buford*, 848 F.2d 1141, 1454 (9th Cir. 1988), the
11 agency failed to consider the entire action, using the best, but
12 incomplete, data for post-leasing oil and gas activities. The
13 court found the 7(d) claim irrelevant. *Greenpeace v. National*
14 *Marine Fisheries Service*, 80 F.Supp.2d 1137 (W.D. Wash. 2000)
15 found NMFS failed to consult on the entire action violating
16 7(a) (2) by confining its analysis to a single year of fishery
17 management, again § 7(d) was not an issue. In *Pacific Rivers*
18 *Council v. Thomas*, 30 F.3d 1050, 1056-57 (9th Cir. 1994), § 7(d)
19 did not apply because the U.S. Forest Service had not reinitiated
20 consultation.

21 NMFS has reinitiated consultation making ESA § 7(d)
22 applicable, requiring NMFS to maintain the status quo during the
23 reinitiated consultation process to prevent an irreversible or
24 irretrievable commitment of resources that would foreclose
25 formulation or implementation of reasonable and prudent
26 alternatives.

27

28 3. No Jeopardy BiOp.

1 As previously addressed in *NRDC v. Kempthorne*, the Bureau's
2 § 7(d) obligation ended upon issuance of the no jeopardy 2004
3 BiOp on October 22, 2004, and reattached upon the date of
4 reinitiation of consultation in April, 2006.

5 DI acknowledge that if the Bureau disagreed with the "no
6 jeopardy" finding by NMFS the consulting agency, the Bureau,
7 risks noncompliance with the ESA. 51 Fed.Reg. 19940. The
8 required inquiry is whether the Bureau's actions permanently
9 commit resources in a way that ties its hands for future actions.
10 The Bureau has committed to further ESA review and ESA § 7
11 compliance for water enhancement measures, including, the South
12 Delta Improvement Program; Delta-Mendota Canal-California
13 Aqueduct Intertie Project; Yuba Accord, Sacramento Valley Water
14 Management Program, the Lower American River Flow Standards; and
15 the Long Term Environmental Water Account Program.

16 The Federal Defendants argue that NMFS's no jeopardy finding
17 will be revisited during reconsultation and if NMFS reaches a
18 jeopardy determination and needs to issue an RPA in the future,
19 Plaintiffs have not demonstrated jeopardy from allowing ongoing
20 Project operations, subject to limitations on renewal of CVP
21 water service contracts and implementing conservation measures,
22 including (1) the EWA program; (2) receipt of CVPIA(b)(2) water;
23 (3) not increasing flow operations above historic levels; (4)
24 continuing to comply with SWRCB's Water Rights Decision 1641; (5)
25 continuing to implement the Vernalis Adaptive Management Plan;
26 (6) continuing to address salmonid passage issues at RBDD; all of
27 which will prevent irreversible or irretrievable commitments of
28 resources in the interim. The law requires that the Court "leave

1 to the agency the application of its expertise and authority to
2 manage the complex hydrological, legal, financial, physical and
3 logistical aspects of protecting the Delta smelt." Under a
4 parity of reasoning the same protective conservation measures can
5 be reasonably applied to protect the salmonid species at dispute
6 during reconsultation.

7 To the extent that Plaintiffs seek a cessation of Project
8 operations, the 7(d) proscription is for the agency not to make
9 any irreversible or irretrievable commitment of resources which
10 forecloses the formulation or implementation of any reasonable
11 and prudent alternative measures. 16 U.S.C. § 1536(d). An
12 inoperative Project would not maintain the status quo, rather it
13 would produce catastrophic results to the public and all parties
14 in interest. *Washington Toxics Coalition v. EPA*, 413 F.3d 1024,
15 1035 (9th Cir. 2005). To address the consequences and potential
16 effects during the reconsultation period, all parties recognize
17 the need for the adoption of interim remedies. Non-jeopardy
18 agency actions may take place during the ongoing § 7 consultation
19 process. *Southwest Ctr. for Biological Diversity v. U.S. Forest*
20 *Serv.*, 307 F.3d 964, 973 (9th Cir. 2002), opinion withdrawn as
21 moot *Southwest Ctr. for Biological Diversity v. U.S. Forest*
22 *Serv.*, 355 F.3d 1203 (9th Cir. 2004).

23 Based on the findings of arbitrary and capricious action and
24 unlawful failure to consider any aspects of critical habitat for
25 two of the species, the Bureau's cross-motion for summary
26 judgment concerning its 7(a)(2) responsibilities, cannot be
27 granted, on the record before the court. The Bureau's motion for
28 summary adjudication as to its alleged violation of § 7(d) is

1 GRANTED on the condition that Federal Defendants continue to take
2 no actions during reconsultation that make any irreversible or
3 irretrievable commitment of resources which forecloses the
4 formulation or implementation of reasonable and prudent
5 alternative measures. It is necessary that further proceedings
6 be held to determine whether the 2004 BiOp should be vacated.
7 The 2004 BiOp must be REMANDED to NMFS and the Bureau for further
8 consultation in accordance with the requirements of law.

9

10

VII. Conclusion.

11

12 It is not the Court's prerogative nor within its competence
13 to usurp the executive function to perform the Agency's work to
14 determine whether Project operations will or will not jeopardize
15 the winter-run Chinook, fall-run Chinook, or CV steelhead species
16 or adversely modify their critical habitat. These
17 responsibilities are by law committed to the discretion and
18 expertise of the expert agency, NMFS, and action agency, the
19 Bureau. The Court's authority is limited to determining the
20 lawfulness of the Agencies' actions or inactions.

21

22 The 2004 BiOp did not analyze the recovery of the three
23 species and any effect global climate change will have over the
24 next 25 years, the relevant duration of Project operations. The
25 BiOp is incomplete and in the respects specifically identified,
26 inexplicably inconsistent as to the species' survival and
27 recovery. The BiOp is unlawfully silent on critical habitat
28 effects.

29

30 An entire failure to consider an important aspect of the
31 problem and a failure to explain contradictory record evidence

1 makes the BiOp arbitrary and capricious under *National Ass'n of*
2 *Home Builders*, 127 S.Ct. at 2529. Under the APA, a reviewing
3 court must then remand the BiOp to the consulting agency. The
4 court is without authority to proceed to decide the merits of the
5 dispute until the Agencies have had the opportunity to discharge
6 their statutory duties under the ESA. NMFS must provide rational
7 and fact-based grounds for its new biological opinion based on
8 the best science available.

9 The following rulings are issued on the pending motions:

10 1. On the NMFS BiOp, Plaintiffs' motion for summary
11 judgment is:

12 a. GRANTED as to NMFS's record findings and analyses
13 which fail to explain contradictory evidence as to the survival
14 and recovery of all three species. Federal Defendants' cross-
15 motion for summary judgment on this issue is DENIED;

16 b. GRANTED as to the failure to analyze the adverse
17 effect and modification on the critical habitat of the three
18 species. Federal Defendants' cross-motion for summary judgment
19 on this issue is DENIED;

20 c. GRANTED as to ESA analysis on the three species'
21 life cycles and population dynamics. Federal Defendants' cross-
22 motion for summary judgment on this issue is DENIED;

23 d. GRANTED on the condition that NMFS complete its
24 incremental Project impact analysis in relation to baseline
25 conditions. Federal Defendants' cross-motion on this issue is
26 DENIED;

27 e. DENIED as to the failure to address "Entire Agency
28 Action." Federal Defendants' cross-motions for summary judgment

1 motion on this issue is GRANTED;

2 f. GRANTED as to the issue of Global Climate Change
3 and effects of the Hydrology of Northern California Rivers.
4 Federal Defendants' cross-motion for summary judgment on this
5 issue is DENIED;

6 g. DENIED on the issue of the sufficiency of Adaptive
7 Management Plan and Mitigation Measures. Federal Defendants'
8 cross-motion on this issue is GRANTED;

9 2. Plaintiffs' motion for summary judgment as to the
10 Bureau's ESA § 7(a)(2) Obligations and § 7(d) Obligations is:

11 a. DENIED as to the issue that the Bureau could not
12 rely on the 2004 NMFS BiOp. Federal Defendants' cross-motion on
13 this issue is DENIED;

14 b. GRANTED as to unexplained internal contradictions
15 about survival and recovery of the species. Federal Defendants'
16 cross-motion on this issue on is DENIED;

17 c. GRANTED on the issue of Global Climate Change.
18 Federal Defendants' cross-motion on this issue is DENIED;

19 d. DENIED as to the issue of the Temperature Control
20 Point location. Federal Defendants' cross-motion for summary
21 judgment on this issue is GRANTED;

22 e. DENIED as to alleged Failure to Consider 100% of
23 Water Deliveries. Federal Defendants' motion on this issue is
24 GRANTED;

25 f. DENIED on the issue of failure to explain
26 Information Identified After the ESA Consultation Process was
27 completed. Federal Defendants' cross-motion for summary judgment
28 on this issue is GRANTED;

