3.8.22 Stanislaus County Environmental Review Committee

STAN

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STANISLAUS COUNTY ENVIRONMENTAL REVIEW COMMITTEE

May 19, 2011

Ms. Michelle Banonis
San Joaquin River Restoration Program
Reclamation
2800 Cottage Way MP-170
Sacramento, CA 95825

SUBJECT: **ENVIRONMENTAL REFERRAL – Draft Program Environmental Impact Statement/Environmental Impact Report – Notice of Completion and Public Hearings**

Ms. Banonis:

STAN-1 The Stanislaus County Environmental Review Committee (ERC) has reviewed the subject project and has no comments at this time.

The ERC appreciates the opportunity to comment on this project.

Sincerely,

Raul Mendez, Senior Management Consultant
Environmental Review Committee

cc: ERC Members

RM:kg

Classification	ENV-6.00
Project	214
Control No.	1104 2794
Folder I.D.	1148370
Date Input & Initials	5-23-2011

Response to Comment from Stanislaus County Environmental Review Committee

STAN-1: Comment noted. Text has not been revised.

3.8.23 State Water Contractors

SWC

September 21, 2011

Ms. Michelle Banonis
SJRRP Natural Resources Specialist
Bureau of Reclamation
2800 Cottage Way, MP-170
Sacramento, CA 95825-1898
peisrcomments@restoresjr.net

Ms. Fran Schulte
SJRRP Program Office
Department of Water Resources
South Central Region Office
3374 E. Shields Avenue
Fresno, CA 93726

Dear Ms. Banonis and Ms. Schulte:

The State Water Contractors ("SWC") appreciate the opportunity to submit these comments regarding the US Bureau of Reclamation (Reclamation) and Department of Water Resources (DWR) San Joaquin River Restoration Program (SJRRP) Draft Program Environmental Impact Statement/ Environmental Impact Report (DPEIS/R).

As stated in the DPEIS/R, the purpose of the document is to analyze and disclose the direct, indirect and cumulative impacts of implementing the Stipulation of Settlement in *NRDC, et al., v. Kirk Rodgers, et al.* (Settlement) consistent with the San Joaquin River Restoration Settlement Act (Act) in Public Law 111-11. As described in the DPEIS/R, implementation of the Settlement would involve releases of water from Friant Dam, a combination of channel and structural modifications along the San Joaquin River below Friant Dam, and reintroduction of Chinook salmon. Implementation of the Settlement would also involve recirculation, recapture, reuse, exchange, or transfer of the Interim and Restoration flows to reduce or avoid impacts to water deliveries to all of the Friant Division long-term contractors caused by the Interim and Restoration flows. The DPEIS/R identifies areas that may be potentially affected by implementation of the Settlement, including the Sacramento-San Joaquin Delta (Delta) and water service areas of the State Water Project (SWP). SWC-1

The SWC is an organization representing 27 of the 29 public water entities[1] that hold contracts with the California Department of Water Resources (DWR)

[1] The SWC members are: Alameda County Flood Control & Water Conservation District, Zone 7; Alameda County Water District; Antelope Valley East Kern Water Agency; Casitas Municipal Water District on behalf of the Ventura County Flood Control District; Castaic Lake Water Agency; Central Coast Water Authority on behalf of the Santa Barbara County Flood Control & Water District; City of Yuba City; Coachella Valley Water District; County of Kings; Crestline-Lake Arrowhead Water Agency; Desert Water Agency; Dudley Ridge Water District; Empire-West Side Irrigation District; Kern County Water Agency; Littlerock Creek Irrigation District; The Metropolitan Water District of Southern California; Mojave Water Agency; Napa County Flood Control & Water Conservation District; Oak Flat Water District; Palmdale Water District; San Bernardino Valley Municipal Water District; San Gabriel Valley Municipal Water District; San Gorgonio Pass Water Agency; San Luis Obispo County Flood Control & Water Conservation District; Santa Clara Valley Water District; Solano County Water Agency; and, Tulare Lake Basin Water Storage District.

SWC-1 cont'd

for the delivery of water from the State Water Project (SWP). Collectively, the members of the SWC provide all, or a part, of the water supply delivered to approximately 25 million Californians, roughly two-thirds of the State's population, and to over 750,000 acres of irrigated agriculture. The members of the SWC provide this water to retailers, who, in turn, serve it to consumers throughout the San Francisco Bay Area, the San Joaquin Valley, the Central Coast, and Southern California.

The SWP water supply delivered through the Delta constitutes a significant portion of the water supplies available to SWC members. As a result, the SWC is very interested in matters affecting the ability of the SWP to deliver water supply through the Delta. Unfortunately, the DPEIS/R fails to adequately analyze and disclose important potential effects on Delta fisheries and SWP water supply. Therefore, the DPEIS/R is inadequate, failing to uphold the principles of both the California Environmental Quality Act ("CEQA") and the National Environmental Policy Act ("NEPA"). Further discussion and analysis is needed, as described below, to adequately disclose the potential effects on Delta fisheries and SWP water supply.

Effects of recapture and recirculation of Interim and Restoration flows in the Delta are not adequately analyzed or disclosed.

SWC-2

All alternatives described in the DPEIS/R include recapture of Interim and Restoration flows in the Delta using the Central Valley Project (CVP) Jones Pumping Plant and the SWP Banks Pumping Plant (Banks). The DPEIS/R states that "Interim and Restoration flows reaching the Delta would be recaptured at existing facilities within the Delta consistent with applicable laws, regulations, BO's, and court orders in place at the time of recapture". Additionally, the DPEIS/R states that "recirculation would be subject to available capacity within CVP/SWP storage and conveyance facilities" and would require "mutual agreements between Reclamation, DWR, Friant Division long-term contractors, and other south-of-Delta CVP/SWP contractors". These agreements "would be negotiated so as not to impact CVP/SWP deliveries or operation of the CVP/SWP". (Section 2.4.1 of the DPEIS/R)

Although the DPEIS/R clearly described the intent of no impact to CVP/SWP deliveries or operations due to recapture and recirculation of Interim and Restoration flows in the Delta, there is no analysis or discussion of how this goal would be accomplished. There is no analysis or discussion of how the proposed increase in pumping at the CVP and SWP plants would affect fishery species of concern in the Delta or how that increase in pumping and the resulting increase in take might impact the CVP's and SWP's ability to pump to meet their contractors' requirements. In fact, Delta ESA issues are not discussed or mentioned in this document. Further discussion of the potential measures that may be taken to ensure no impact to SWP water deliveries or operations due to recapture and recirculation of Interim and Restoration flows in the Delta needs to be included in the DPEIS/R to adequately address potential effects of implementation of the Settlement.

SWC-3

The DPEIS/R included an analysis of the amount pumping could be increased to recirculate restoration flows through Banks and Jones pumping plants. CALSIM II was used to determine the amount of restoration flows that could be pumped through the Banks and Jones pumping plants. However, the CALSIM II increased export analysis in the DPEIS/R did not include

consideration of the effects of the OCAP BO operational restrictions on CVP and SWP available export capacity at Jones and Banks pumping plants. The CVP and SWP Delta exports are currently regulated under the Fish and Wildlife Service (FWS) and National Marine Fisheries Service (NMFS) Operations Criteria and Plan (OCAP) Biological Opinions (BO's). Using a
SWC-3 cont'd CALSIM II version that has the OCAP BO operational restrictions must be done and would substantially alter the available export capacity for recapture of Interim and Restoration flows in the Delta and the identified effects of implementation of the Settlement. Therefore, CVP and SWP operations under the FWS and NMFS OCAP BO's must be considered when determining the potential for recapture of Interim and Restoration flows in the Delta and the potential effects of this recapture.

Further, the DPEIS/R does not consider the effects of recapture of Interim and Restoration flows in the Delta on state and federally listed endangered species, particularly delta smelt. There is no discussion of the potential increased entrainment or take of Delta fish species at Jones and Banks pumping plants due to increased exports for recapture of Interim and Restoration flows. SWP water supply could be affected by increased entrainment through the imposition of more
SWC-4 stringent operational restrictions under the OCAP BO's due to increased threat of entrainment at Jones and Banks pumping plants. Additionally, the incidental take limits set in the OCAP BO's could be met more quickly due to recapture of Interim and Restoration flows, limiting the ability of the CVP and SWP to export at Jones and Banks pumping plants. The effects of the potential increased entrainment on both the fishery biological resources and SWP water supply due to implementation of the Settlement must be analyzed and disclosed in the DPEIS/R. Therefore, the impact of increased export of restoration flows on key OCAP BO criteria such as Old and Middle rivers flow must be included in this DPEIS/R.

Effects of Reintroduction of Chinook Salmon Population are not adequately analyzed or disclosed.

The DPEIS/R states that Paragraph 14 of the Settlement calls for reintroduction of spring-run and fall-run Chinook salmon between Friant Dam and the confluence of the San Joaquin River and the Merced River by December 31, 2012. Spring-run Chinook salmon is currently listed as threatened under both the state and federal endangered species acts. CVP and SWP Delta exports are regulated based entrainment of spring-run Chinook salmon under the NMFS OCAP BO.

SWC-5 The San Joaquin River Restoration Act contains the following language:

However, as stated in the Act (Article 10 Section 10011) reintroduction of Chinook salmon:

> "…will not impose more than de minimus: water supply reductions, additional storage releases, or bypass flows on unwilling third parties due to such reintroduction."

Where "third parties" are defined as

> "…persons or entities diverting or receiving water pursuant to applicable State and Federal laws and shall include Central Valley Project contractors outside of the Friant Division of the Central Valley Project and the State Water Project."

Therefore, the Act requires that reintroduction of spring-run Chinook be carried out in a manner that does not result in a water supply or operational impact to the SWP. The DPEIS/R does not

SWC-5 cont'd

discuss or address how reintroduction of spring-run Chinook salmon would be implemented without affecting SWP operations due to entrainment at Jones or Banks pumping plants. For instance, there is no discussion of how the experimental population of spring-run Chinook salmon reintroduced on the San Joaquin River as part of implementation of the Settlement would be differentiated from spring-run Chinook salmon originating from other areas of the Central Valley. A discussion of the measures that will be taken to ensure that reintroduction of spring-run Chinook salmon does not affect SWP water supply and operations must be included in the DPEIS/R.

The DPEIS/R will need to be re-circulated.

SWC-6

Based on the issues described above, the DPEIS/R will need to be re-circulated. The DPEIS/R will need to be revised to include further analysis and discussion of the effects of recapture and recirculation of Interim and Restoration flows in the Delta on SWP water supply and Delta fisheries, including a discussion of measures that may be taken to avoid impacts to the SWP, the consideration of CVP and SWP operations under the OCAP BO's, a discussion of the effects of increased fishery entrainment at Jones and Banks pumping plants. Additionally, the DPEIS/R will need to describe how reintroduction of spring-run Chinook salmon under the Settlement will be accomplished without affecting CVP and SWP water supply and operations.

We appreciate your consideration of our comments. If you have any questions regarding the SWC comments, please contact me at (916) 447-7357, ext. 203.

Sincerely,

Terry L. Erlewine
General Manager

Responses to Comments from State Water Contractors

SWC-1: Comment noted. Text has not been revised.

SWC-2: Increased diversions at Jones and Banks pumping plants consistent with applicable laws, regulations, BOs, and court orders in place at the time the water is recaptured are addressed in the Draft PEIS/R at a project level of detail. The potential for the action alternatives to impact special-status species, sensitive communities, and habitat, including vegetation, wildlife, and fisheries throughout the study area, including in the Delta, is described in Chapter 5.0, "Biological Resources – Fisheries," and Chapter 6.0, "Biological Resources – Vegetation and Wildlife," of the Draft PEIS/R. Specific analyses include Impacts FSH-31 through FSH-39 (pages 5-98 through 5-111), Impact VEG-14 (page 6-79), and Impact VEG-24 (page 6-105). As described on page 5-101 of the Draft PEIS/R, Alternatives A1 through C2 would increase Delta exports during most months and water year types. The increased diversions alone would result in higher entrainment risks for fish located in the south Delta. However, increased San Joaquin River inflows, and associated ratios of the inflows to reverse flows predicted for Alternatives A1 through C2, are expected to result in no net change in fish entrainment. This conclusion supports the findings of the Draft PEIS/R that Impacts FSH-31 through FSH-39 would be less than significant (or less than significant and beneficial).

Potential changes in CVP and SWP deliveries and storages as a result of changes in diversions at existing Delta facilities are summarized beginning on page 13-187 of the Draft PEIS/R. Detailed impact analyses of the economic effects of changes in water deliveries to CVP and SWP water service areas are found in Chapter 22.0, "Socioeconomics," of the Draft PEIS/R. Recirculation of recaptured water to the Friant Division long-term contractors, a program-level action, would be subject to available capacity within CVP/SWP storage and conveyance facilities. Available capacity is defined as capacity that remains after satisfying all statutory and contractual obligations to existing water service or supply contracts, exchange contracts, settlement contracts, transfers, or other agreements involving or intended to benefit CVP/SWP contractors served water through CVP/SWP facilities. Therefore, the increase in Delta pumping would not impact the CVP's and SWP's ability to pump to meet their contractors' requirements.

This comment includes text introducing comments SWC-3, SWC-4, and SWC-5. See responses to comments SWC-3, SWC-4, and SWC-5.

SWC-3: The analyses and impact assessment presented in the Draft PEIS/R were completed using the best available modeling tools and information. The modeling tools used in the Draft PEIS/R analyses were selected because they are publicly available, have a knowledgeable user community, and are widely accepted for use in similar systemwide analysis of resources in California's Central Valley. The modeling assumptions, modeling analyses and results, and baseline conditions used to support the environmental analysis in the Draft PEIS/R were based on the best available information and modeling tools at the time the Draft PEIS/R was prepared. The sensitivity analyses contained in Appendix C to this Final PEIS/R were completed using the same set of tools and information, as modified only to reflect an interim representation of the RPAs set forth in

the 2008 USFWS CVP/SWP Operations BO and 2009 NMFS CVP/SWP Operations BO (2009a).

The analyses presented in the Draft PEIS/R were based, in part, on a water supply operations modeling tool, CalSim-II. The CalSim-II model is widely accepted as the standard for simulating the long-term effects of operational changes to CVP and SWP facilities. At the time evaluations were completed in support of the Draft PEIS/R, there was no representation of the full set of RPAs set forth in the 2008 USFWS CVP/SWP Operations BO and 2009 NMFS CVP/SWP available for use in the CalSim-II model. Therefore, the baseline for analyses presented in the Draft PEIS/R was developed using the best available information, remains the most defensible baseline, and has not been revised in the Final PEIS/R. At the time the sensitivity analyses were completed in support of the Final PEIS/R, Reclamation and NMFS continued to discuss and work toward the representation of the 2008 and 2009 RPAs into a singular CalSim-II baseline. However, a representation that sufficiently captures the range of potential RPA implementation scenarios was available at the time the sensitivity analyses were developed, allowing for an evaluation of the potential for the 2008 and 2009 RPAs to change the anticipated effects of the program alternatives from those presented in the Draft PEIS/R.

The sensitivity analyses presented in Appendix C of this Final PEIS/R were performed to represent a comprehensive range of RPA implementation scenarios and evaluate the potential for the 2008 and 2009 RPAs to change the anticipated effects of the program alternatives from those presented in the Draft PEIS/R, which are based on the conditions evaluated in the 2005 USFWS and 2004 NMFS BOs. The CalSim-II simulations for the sensitivity analyses presented in Appendix C to the Final PEIS/R were developed to identify the range of potential operation changes that could occur under any RPA implementation scenario. CalSim-II output from these simulations was then used in analyzing the potential for the RPAs to change the anticipated effects to related resources using the same set of tools and information used in the Draft PEIS/R, including Delta hydrodynamics (using DSM2), groundwater (using the Schmidt Tool and mass balance method), agricultural economics (using CVPM), regional economics (using IMPLAN), and long-term power system power generation to reflect the updated surface water model. The sensitivity analyses results demonstrate that the overall impact mechanisms and significance determinations presented in the Draft PEIS/R would not change under a baseline that includes the RPAs set forth in the 2008 USFWS CVP/SWP Operations BO and 2009 NMFS CVP/SWP Operations BO.

In comparison to the results presented in the Draft PEIS/R, the results of the sensitivity analyses presented in Appendix C to the Final PEIS/R do not identify new significant environmental impacts or a substantial increase in the severity of an environmental impact, and do not create a feasible project alternative or mitigation measure that would clearly lessen environmental impacts of the action alternatives (including the proposed project). Therefore, inclusion of the sensitivity analyses in the Final PEIS/R does not trigger a need to recirculate a revised Draft PEIS/R under either NEPA or CEQA. Rather, the sensitivity analyses demonstrate that the overall impact mechanisms and significance determinations presented in the Draft PEIS/R would not change under a baseline that

includes the RPAs set forth in the 2008 USFWS CVP/SWP Operations BO and 2009 NMFS CVP/SWP Operations BO, confirming that the analyses and conclusions presented in the Draft PEIS/R are thorough, accurate, and unlikely to change in light of the RPAs. For the reasons set forth above, Reclamation and DWR believe that the PEIS/R provides a thorough, appropriate analysis of all relevant impacts of the action alternatives (including the proposed project) and the alternatives as required by NEPA and CEQA.

SWC-4: Chapter 5.0, "Biological Resources – Fisheries," of the Draft PEIS/R and especially Impacts FSH-12, FSH-26, and FSH-35 discuss the potential for changes in entrainment as a result of the SJRRP, and concludes that increased entrainment would not occur. The potential for this conclusion to change under the USFWS 2008 *Biological Opinion (BO) on the Coordinated Operations of the CVP and SWP* (2008 USFWS CVP/SWP Operations BO) and the NMFS 2009 *Final Biological and Conference Opinion on the Long-Term Operations of the CVP and SWP* (2009 NMFS CVP/SWP Operations BO) (2009a) is analyzed in Appendix C, "CVP/SWP Long-Term Operations Sensitivity Analyses," of this Final PEIS/R. The analyses presented in Appendix C conclude that these impacts (FSH-12, FSH-26, and FSH-35) would not change from the Draft PEIS/R. Text has not been revised.

SWC-5: The reintroduction of Chinook salmon is analyzed at a program level in the PEIS/R. All actions evaluated at a program level in the Draft PEIS/R must complete additional analysis pursuant to NEPA and/or CEQA at a project level of detail, including an analysis of the potential to impact water users, where appropriate. See also response to comment SWC-2.

SWC-6: The commenter summarizes the concerns raised in comments SWC-2 (measures that may be taken to avoid impacts to the SWP), SWC-3 (consideration of CVP and SWP operations under the CVP/SWP Operations BOs), SWC-4 (risk of entrainment at Jones and Banks pumping plants), and SWC-5 (impacts of reintroduction of spring-run Chinook salmon on CVP and SWP water supply and operations), and concludes that the issues identified in those comments would necessitate revisions to and recirculation of the Draft PEIS/R. For the reasons set forth in response to comments SWC-2 through SWC-5, no changes to the PEIS/R are necessary, and recirculation of the PEIS/R is not required. For additional information responding to the points raised in this comment, see responses to comments SWC-2 through SWC-5.

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3.8.24 Shafter-Wasco Irrigation District

SWID

Shafter~Wasco Irrigation District

16294 Highway 43
P.O. Box 1168
Wasco, California 93280
Business Office: (661) 758-5153
Fax: (661) 758-6167
Water Department: (661) 758-5369

September 21, 2011

VIA ELECTRONIC MAIL

Ms. Michele Banonis
SJRRP Natural Resources Specialist
U.S. Bureau of Reclamation
2800 Cottage Way, MP-170
Sacramento, CA 95825-1898

Ms. Fran Schulte
SJRRP Program Office
Department of Water Resources South Central Region Office
3374 E. Shields Avenue
Fresno, CA 93726

Re: Comments on Draft Program Environmental Impact Statement/Environmental Impact Report (DPEIS/R) for the San Joaquin River Restoration Program (SJRRP)

Dear Ms. Banonis and Ms. Schulte:

SWID-1 The Shafter-Wasco Irrigation District (District) has reviewed the DPEIS/R for the SJRRP and is agreement with all the comments submitted by the Friant Water Authority.

SWID-2 Without minimizing other comments of the Authority, as one of the southernmost districts on the Friant-Kern Canal we emphasize that we have significant concerns regarding the potential water quality impacts from recirculation and potential introduction of Delta water into the District. The DPEIS/R does not evaluate the recirculation at a Project level and we see no water quality impact analysis in the DPEIS/R that would support its conclusions.

We look forward to working with the Reclamation and the other Settling Parties to ensure that the environmental documentation for the SJRRP is complete and legally defensible and that it will adequately inform those that make the final determinations.

Sincerely,

JERRY L. EZELL
General Manager

Responses to Comments from Shafter-Wasco Irrigation District

SWID-1: Comment noted. The Friant Water Authority comments and responses are shown in Section 3.8, "Regional and Local Government Comments and Responses," of this Final PEIS/R. See responses to comments FWA-1 to FWA-74 in Section 3.8 of this Final PEIS/R.

SWID-2: The PEIS/R provides a program-level evaluation of the potential impacts to water quality associated with the recirculation of recaptured Interim and Restoration flows through a regional evaluation of the potential water quality impacts within the Friant Division. As such, the Draft PEIS/R does not explicitly evaluate potential effects of introducing more Delta water into the lower end of the Friant-Kern Canal. Introducing recirculation water into the Friant-Kern Canal would require a site-specific project-level analysis once additional information is known. During subsequent site-specific analyses of recirculation, the project proponent would work with Friant Division long-term water contractors to formulate alternatives that would avoid, minimize, or reduce adverse impacts to environmental resources, including water quality. Reclamation understands that Shafter-Wasco Irrigation District is concerned that the introduction of Delta water into the Friant-Kern Canal would degrade water quality due to high salinity of Delta water and that the buildup of such salts and other constituents of concern in Shafter-Wasco Irrigation District's groundwater basin could result in substantial water quality changes that could adversely affect beneficial uses.

Recirculation of recaptured Interim and Restoration flows either at existing facilities or at new infrastructure on the San Joaquin River between the Merced River and the Delta, and associated impacts to water quality, are addressed at a program level in the Draft PEIS/R. The specific locations for delivery of recaptured water in the Friant Division are not known at this time, and the Implementing Agencies acknowledge that additional analysis pursuant to NEPA and/or CEQA will be required in the future for activities addressed at a program level in the Draft PEIS/R, after specific project details are identified. At that time, the Implementing Agencies would require compliance with the applicable mitigation measures set forth in the PEIS/R, as well as any new project-level mitigation measures and conditions for approval of subsequent actions.

Based on the significance criteria in the Draft PEIS/R for surface water and/or groundwater quality and anticipated continuation of water exchanges within the Friant Division of the CVP, program-level recapture of Interim and Restoration flows either at existing facilities or at new infrastructure on the San Joaquin River between the Merced River and the Delta are expected to have a less-than-significant impact on water quality.

Reclamation is in the process of developing a Recapture and Recirculation Plan, pursuant to Paragraph 16 of the Settlement, in consultation with the Settling Parties, Third Parties, and the State, and will conduct a subsequent site-specific evaluation of implementation of the Recapture and Recirculation Plan, in compliance with NEPA and CEQA, as appropriate. Because sufficient details to support project-level evaluation were not available at the time the Draft PEIS/R was prepared, the Draft PEIS/R presents a program-level evaluation of recirculation. Any action to introduce recirculation water

into the Friant-Kern Canal as a component of the Recapture and Recirculation Plan would require additional analysis at a project level of detail.

In response to this comment, text on page 2-36, line 16, of the Draft PEIS/R has been revised to clarify that the Draft PEIS/R does not evaluate the direct discharge of water from south-of-Delta facilities into the Friant-Kern Canal at a project level of detail. If discharge of water from south-of-Delta facilities into the Friant-Kern Canal is proposed as part of the Recapture and Recirculation Plan, it would require further review pursuant to NEPA and/or CEQA. See Chapter 4.0, "Errata," of this Final PEIS/R.

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3.9 Comments from Special Interest Groups and Responses

This chapter contains copies of comment letters (and any attachments) from the special interest groups listed in Table 3.9-1. As noted previously, each comment in the comment letters was assigned a number, in sequential order (note that some letters may have more than one comment). The numbers were then combined with an abbreviation for the organization (example: AUD-1). For some comments, letters were added alphabetically to further identify related comments (example: COAL-2a).

Responses to the comments follow the comment letters, and are also numbered, corresponding to the numbers assigned in the letters. The letters and associated responses are sorted alphabetically by abbreviation and appear in the chapter in that order.

Table 3.9-1.
Special Interest Groups Providing Comments on
Draft Program Environmental Impact Statement/Report

Abbreviation	Special Interest Group
AUD	Audubon California
COAL	California Water Impact Network, California Sportfishing Protection Alliance, AquAlliance, Pacific Coast Federation of Fishermen's Associations, Planning and Conservation League, Institute for Fisheries Resources
FFFC	Fresno Fly Fishers for Conservation
MILL	Mill Creek Conservancy
NRDC	Natural Resources Defense Council and The Bay Institute
PRBO	PRBO Conservation Science
RIV	River Partners
SJRP	San Joaquin River Partnership
SJRPCT	San Joaquin River Parkway and Conservation Trust
TNC	The Nature Conservancy

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3.9.1 Audubon California

AUD

Audubon CALIFORNIA

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Tel: (916) 649-7600
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September 21, 2011

Alicia Forsythe
SJRRP Program Manager
Bureau of Reclamation
2800 Cottage Way, MP-170
Sacramento, CA 95825

Re: San Joaquin River Restoration Draft Program Environmental Impact Statement/Environmental Impact Report

Dear Ms. Forsythe,

On behalf of our more than 150,000 members and supporters in California, I offer the following comments on the San Joaquin River Restoration Draft Program Environmental Impact Statement/Environmental Impact Report (PEIS/R).

AUD-1 The San Joaquin Valley is a critical stopover on the Pacific Flyway with more than 6 million water birds and many more songbirds passing through our region each year. The heart of this valley is the San Joaquin River. Unfortunately, for more than a half century much of this river has been fragmented and deprived of its natural flows, resulting in serious declines in bird populations with extirpation of some species entirely from the region. The restoration of the San Joaquin River presents an incredible opportunity to bring back a living river ecosystem. This will require restoring and managing for biodiversity beyond fish. We encourage the Bureau to consider full restoration of a functioning river ecosystem that incorporates floodplains, riparian and wetland habitat, and natural river hydrology and morphology.

AUD-2 Of critical importance to Audubon is the restoration of riparian habitat along the San Joaquin River. Over 95 percent of this habitat has been lost in the San Joaquin Valley and species such as the Least Bell's Vireo and Yellow Billed Cuckoo have been severely impacted. Chapter 6 of the PEIS/R acknowledges the importance of native habitats for a variety of wildlife. Where appropriate, the Bureau should make every effort to create habitat with multi-species benefits – including planning restorations that incorporate native riparian habitat to support migratory and resident birds.

AUD-3 The San Joaquin River is an incredible natural resource that belongs to all Valley residents and visitors. Currently, public access to the river beyond the San Joaquin River Parkway is extremely limited. We encourage the Bureau to work closely with state, federal, and non-governmental partners to increase public access and amenities along the river. Chapter 21 does not go far enough to ensure that adequate public access will be provided. We encourage the Bureau to further develop an access and recreation plan. While development of this plan should include coordination with other state, federal, and non-governmental stakeholders, implementation of this plan should not be left solely to state or local governments which are continuing to face mounting budget cuts in park funding and maintenance. Residents should have the opportunity to enjoy and use the river. The long-term protection and viability of this river requires that residents and visitors have a sense of ownership and pride in this amazing natural resource.

Audubon California fully supports the San Joaquin River Restoration and very much appreciates the efforts of the Bureau to ensure the successful restoration of this once great river. We see this restoration as a once-in-a-lifetime opportunity that can positively change the history of this river, diversify and increase the populations of species that rely on the river and its surrounding habitats, and provide Valley residents and visitors with a natural amenity that contributes to their physical, mental, and economic health.

Thank you for the opportunity to provide these comments.

Sincerely,

Daniel Taylor
Director of Public Policy

Responses to Comments from Audubon California

AUD-1: The action alternatives described in the Draft PEIS/R are generally consistent with the "living river ecosystem" recommended for development by the commenter. Recognizing that agencies and stakeholders may have different approaches and objectives that go beyond those described in the Settlement, Act, or PEIS/R, the Implementing Agencies have developed the action alternatives with as much flexibility as possible so that implementing the Settlement would not preclude any future opportunities to modify or expand the river corridor to meet other goals, such as those identified by the commenter.

The purpose, need, and objectives of the project (described on page 1-13 through page 1-14 of the Draft PEIS/R) establish the basis for developing a range of alternatives to achieve the stated purpose and objectives. The purpose, need, and objectives of the project are consistent with and responsive to the direction provided to the Secretary in the Act, which states, "The Secretary of the Interior is hereby authorized and directed to implement the terms and conditions of the Settlement in cooperation with the State of California." Identification of alternatives that are evaluated in the PEIS/R was the culmination of an extensive process undertaken by Reclamation and DWR and involving the Implementing Agencies in coordination with Settling Parties, other stakeholders, and interested members of the public. The potential range for each Restoration and Water Management action was represented within the alternatives presented in the IPAR (SJRRP 2008). As the Initial Restoration and Water Management alternatives were developed, the Implementing Agencies also identified data requirements for their evaluation.

In recognition of the data limitations associated with the SJRRP and reliance on future monitoring data, the action alternatives are defined broadly and include provisions for flexibility when implemented. Accordingly, action alternatives evaluated in the Draft PEIS/R address large-scale systemwide variations, with flexibility for different methods of implementation. The different methods of implementation represent key decision points, including the ultimate extent of channel modifications and flow routing within the Restoration Area, and the extent and location of long-term water recapture opportunities. The living river ecosystem recommended by the commenter fits with and complements this essential aspect of the action alternatives, and none of the action alternatives precludes developing and implementing a more holistic river corridor strategy in the future.

Similarly, a living river ecosystem complements two key pieces of the project description that are common to all action alternatives: the Conservation Strategy and the Physical Monitoring and Management Plan. As described in Chapter 2.0, "Description of Alternatives," of the Draft PEIS/R, all action alternatives include the Conservation Strategy, which consists of management actions necessary to provide a net increase in the extent and quality of riparian and wetland habitats in the Restoration Area, to avoid reducing the long-term viability of sensitive species, and to be consistent with adopted conservation plans. Additionally, as described in Chapter 2.0 of the Draft PEIS/R, the action alternatives include many actions to encourage, incorporate, and conserve functional floodplains, riparian and wetland habitat, and natural river hydrology and

morphology. In addition to actions identified in the Settlement to incorporate integrated floodplain habitat in Reaches 2B and 4B1, the action alternatives include program-level actions to modify floodplain and side-channel habitats beyond Reaches 2B or 4B1 (as described on pages 2-45 and 2-46 of the Draft PEIS/R), as well as implementation of the Conservation Strategy (described in Section 2.4.4 of the Draft PEIS/R). The Conservation Strategy consists of management actions that would result in a net benefit for riparian and wetland habitats in the Restoration Area, to avoid reducing the long-term viability of sensitive species, and to be consistent with adopted conservation plans. Text has not been revised.

AUD-2: As described in Chapter 2.0, "Description of Alternatives," of the Draft PEIS/R, the action alternatives include many actions to encourage, incorporate, and conserve riparian, aquatic, and wetland habitat, which is anticipated to provide benefits to many species, including migratory and resident birds.

For instance, in addition to actions identified in the Settlement to incorporate integrated floodplain habitat in Reaches 2B and 4B1, the action alternatives include program-level actions to modify floodplain and side-channel habitats beyond Reaches 2B or 4B1 (as described on pages 2-45 and 2-46 of the Draft PEIS/R), as well as implementation of the Conservation Strategy (described in Section 2.4.4 of the Draft PEIS/R). The Conservation Strategy consists of management actions that would result in a net benefit for riparian and wetland habitats in the Restoration Area, to avoid reducing the long-term viability of sensitive species, and to be consistent with adopted conservation plans. The Conservation Strategy includes measure RHSNC-1 to avoid and minimize loss of riparian habitat and other sensitive natural communities, and measure RHSNC-2 to compensate for loss of riparian habitat and other sensitive natural communities, including development of the Riparian Habitat Mitigation and Monitoring Plan. These measures would identify, map, and quantify riparian and other sensitive habitats in potential construction areas, and ensure the creation and conservation of those habitats or compensation for unavoidable loss of those habitats, as feasible within the scope and purpose of the SJRRP, consistent with Section 1602 of the California Fish and Game Code and in coordination with the USFWS or DFG, as appropriate.

All action alternatives also include implementing the Physical Monitoring and Management Plan (described in Appendix D and Section 2.4.3, "Physical Monitoring and Management Plan," of the Draft PEIS/R). The Physical Monitoring and Management Plan includes a component plan for propagating native vegetation. The plan includes monitoring and immediate and long-term management actions designed to achieve the objective of establishing and maintaining native riparian habitat, which could provide a benefit for multiple species.

See also response to AUD-1, which provides further information on restoration of the river ecosystem beyond fish habitat. Text has not been revised.

AUD-3: Comment noted. Because increasing public access to the San Joaquin River is not an objective of the SJRRP, and is not considered necessary to support the purpose and need of the project, actions to increase public access are not described as part of the

action alternatives. Consistent with one of the purposes of the PEIS/R (to disclose the potential direct, indirect, and cumulative impacts of implementing the Settlement, as directed by the Act, consistent with NEPA/CEQA requirements, as described on page 1-7 of the Draft PEIS/R), Chapter 21.0, "Recreation," of the Draft PEIS/R assesses potential impacts of the Settlement on recreation. Where implementing the Settlement would potentially cause significant impacts to recreation, mitigation measures are proposed (see Mitigation Measures REC-3, REC-4, REC-5, REC-9, and REC-12 on pages 21-30, 21-33, 21-35, 21-42, and 21-50 of the Draft PEIS/R, respectively) to reduce the significance of those impacts. Increased recreational opportunities, while not an objective of the program, is a beneficial impact in some portions of the Restoration Area. Moreover, none of the action alternatives preclude future development and implementation of improved public access and/or amenities.

While increasing public access to the San Joaquin River is not an objective of the SJRRP, the lead agencies recognize the importance of working with downstream land owners and districts, flood system planners and managers, conservation organizations, public and private wetlands agencies, and/or counties and communities to achieve the Restoration Goal in a manner that benefits those who live, work, and play on the river. The Implementing Agencies have conducted and will continue to conduct extensive public and stakeholder outreach activities to engage and inform interested parties of SJRRP activities early in the scoping process, throughout the development of the PEIS/R, and into the future as SJRRP actions are implemented and monitored. Public involvement and outreach activities conducted by the Implementing Agencies seek to create an open and transparent process through which the general public, stakeholders, affected Third Parties, and other interested parties can track and participate in SJRRP activities.

Text has not been revised.

3.9.2 California Water Impact Network, California Sportfishing Protection Alliance, AquAlliance, Pacific Coast Federation of Fishermen's Associations, Planning and Conservation League, Institute for Fisheries Resources

COAL

September 21, 2011

Alicia Forsythe,
SJRRP Program Manager
Bureau of Reclamation
2800 Cottage Way, MP-170
Sacramento, CA 95825 email: PEISRComments@restoresjr.net

Subject: Comments on Draft Program Environmental Impact Statement/Environmental Impact Report on San Joaquin River Restoration Program

Dear Ms. Forsythe:

We submit these comments on behalf of the California Water Impact Network (C-WIN), the California Sportfishing Protection Alliance (CSPA), AquAlliance, the Pacific Coast Federation of Fishermen's Associations (PCFFA), the Planning and Conservation League (PCL) and the Institute for Fisheries Resources (IFR) on the Draft Program Environmental Impact Statement/Environmental Impact Report (EIS/EIR) for the San Joaquin River Restoration Program. CSPA and PCFFA were plaintiffs in the NRDC v. Patterson litigation that resulted in the San Joaquin River Settlement Act and subsequent San Joaquin River Restoration Program.

Alternatives

COAL-1 We support selection of Alternative A2 as the environmentally preferred alternative because it would provide flows of 4,500 cfs in Reach 4B1 and allow recapture of flows in the Delta rather than upstream. As we understand it, this alternative would allow the maximum amount of water to flow to the Delta for recapture and the maximum potential flows through Reach 4B1. We believe that this alternative would provide the greatest benefits to the fishery by allowing the maximum volume

COAL-1 cont'd

of clean water released from Friant Dam to be available in-river the longest possible distance from Friant Dam to the state and federal Delta pumps.

Impact Analysis- Selenium

COAL-2a

While we support the successful reintroduction of fall run and spring run Chinook salmon in the San Joaquin River, the impact analysis does not adequately describe the risks to salmon due to selenium pollution from irrigation of the western San Joaquin Valley. The Grasslands Bypass Project has been discharging highly contaminated groundwater and agricultural pollution from the northerly area of the San Luis Unit of the CVP since 1995. At the time of the San Joaquin River Settlement Agreement it was assumed that polluted discharges from the Grasslands Bypass Project into Mud Slough North and the San Joaquin River would cease by 2010. However, plans are to continue doing so through 2019. The harmful impacts of these discharges on juvenile salmonids in the San Joaquin River have not been analyzed in this Draft Program EIS/EIR. These impacts should be analyzed, especially in light of the recent U.S. Geological Survey report on the toxicity of selenium in the Bay-Delta[1] and the recent water quality report on the Delta-Mendota Canal which showed violations of the 2 ppb water quality objective in Delta Mendota Canal (Check 21) adjacent to the Mendota Pool for five of the first six months of 2011.[2]

USGS Selenium Report

COAL-2b

Since 2002, under the Clean Water Act, Section 303, and the Endangered Species Act, the United States Environmental Protection Agency (USEPA) has been required to adopt national and California acute and chronic aquatic life criteria for Selenium under what is called "The California Toxics Rule."[3] The overdue requirement is to take into account the bioaccumulation of this contaminant as it magnifies throughout the food chain often causing reproductive failure, teratogenic effects and death. The terms and conditions of the California Toxics Rule also included USEPA's reevaluation and revision of selenium criteria for the protection of semi-aquatic wildlife.

The just released peer reviewed United States Geological Survey (USGS) Administrative Report, also part of the terms and conditions of the California Toxic Rule, models the fate and transport of selenium in the San Francisco Bay-Delta Estuary and as agreed, the report will serve as the basis for USEPA's revised

[1] See "Ecosystem-Scale Modeling in support of Fish and Wildlife Criteria Development for the San Francisco Bay-Delta Estuary, California." By Theresa S. Presser and Samuel N. Luoma, U.S. Geological Survey, Menlo Park, CA. Administrative Report, December 10, 2010, available with figures, tables and appendices at http://www.epa.gov/region9/water/ctr/, accessed 9/12/11.

[2] See http://www.c-win.org/webfm_send/186 and http://www.c-win.org/webfm_send/187, accessed 9/12/11.

[3] See "Selenium and the California Toxics Rule" on the C-WIN website at http://www.c-win.org/selenium-and-california-toxics-rule.html

selenium water quality criteria for the protection of fish and wildlife species for the Bay-Delta estuary. In order to comply with the California Toxics Rule Biological Opinion, another effort and report is still required to revise selenium criteria for the rest of California, which includes the San Joaquin River.

USEPA released the Administrative Report by the US Geological Survey in September 2011 documenting that the existing Bay-Delta selenium water quality standard of 5ppb is inadequate to protect Bay-Delta fish and wildlife. The USGS report provides the scientific basis for changing to a selenium water quality standard of less than 1 ppb, in some cases substantially less than 0.5 ppb. This change is needed to protect economic resources of the Delta Estuary and Bay including salmon, steelhead, sturgeon, and diving birds. While it does not include a selenium analysis of food webs and impacts to salmonids in the San Joaquin River, it raises significant questions about the adequacy of the existing 5 ppb selenium water quality objective for the San Joaquin River, which is identical to the Bay-Delta's 5 ppb selenium water quality objective. The same analysis USGS utilized for the Bay-Delta should also be performed for the San Joaquin River Restoration Program to determine selenium's impacts on efforts to restore spring and fall Chinook salmon to the San Joaquin River.

COAL-2b cont'd

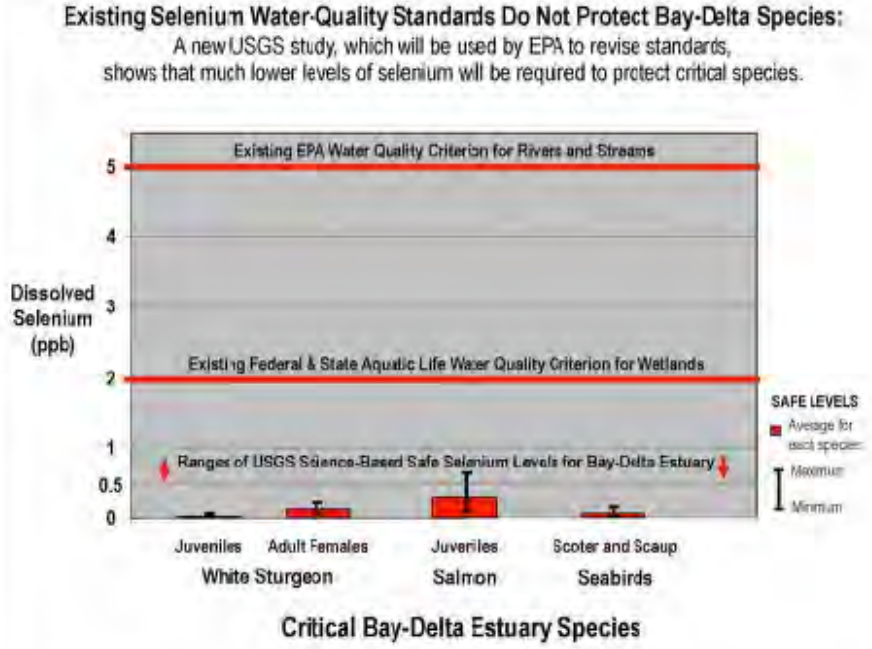
The USGS study evaluated a series of selenium exposure scenarios using a set of specific guidelines and modeling choices from the range of temporal hydrodynamic conditions, geographic locations, food webs, and allowable dissolved, particulate, and prey Se concentrations (which we have referred to as "safe levels"). According to the USGS, "The specificity of these scenarios demonstrates that enough is known about the biotransfer of Se and the interconnectedness of habitats and species to set a range of limits and establish an understanding of the conditions, biological responses, and ecological risks critical to management of the Bay-Delta".

The summary graphic below shows the results for critical Bay-Delta species, aggregated across all combinations of target tissues (e.g. Whole body, eggs, or diets) that have known levels of concerns, as summarized by the U.S. Fish and Wildlife Service. Results are also combined across all hydrologic conditions for each species.

The ranges of "allowable" or safe levels of dissolved selenium clearly show that, although EPA will need to specify exact safety levels, flow conditions, and species, new standards for the Bay-Delta will need to be substantially less than 0.5 parts per billion dissolved selenium in order to be protective. A similar analysis should be conducted for the San Joaquin River Restoration Program by USGS to determine if selenium contamination from the Grasslands Bypass Project and other sources is impacting efforts to restore Chinook salmon. The analysis could then be used to determine who is responsible for the pollution and what remedial action is necessary to ensure restoration success.

4

COAL-2b
cont'd

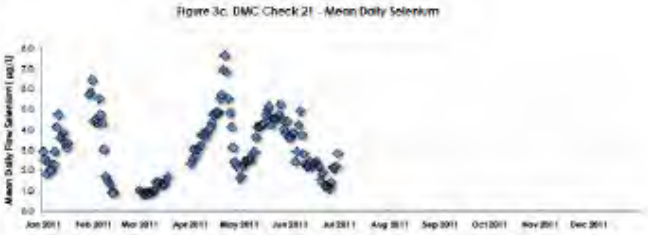


Delta-Mendota Canal Selenium Violations

Recently released Reclamation water quality monitoring reports for the Delta Mendota Canal adjacent to Mendota Pool on the San Joaquin River confirm selenium violations of the existing 5 ppb standard for five months out of the first six months of 2011. The Delta Mendota Canal at this location serves thousands of acres of wildlife refuges, duck clubs, and wetlands in the San Joaquin Valley, is upstream of the Delta, but most importantly is also located on the migration route of potentially restored San Joaquin River Chinook salmon runs. See Figures 3c and 3d below.

5

COAL-2b
cont'd



Selenium concentrations in the San Joaquin River at Hills Ferry have not only exceeded selenium aquatic life criterion regularly since 1997, they have sometimes exceeded USEPA's drinking water Maximum Contamination Level (MCL) for drinking water. See Figure 5 below.

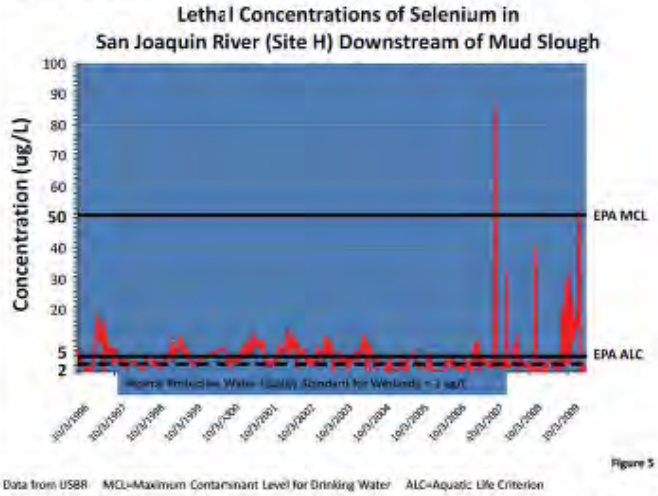
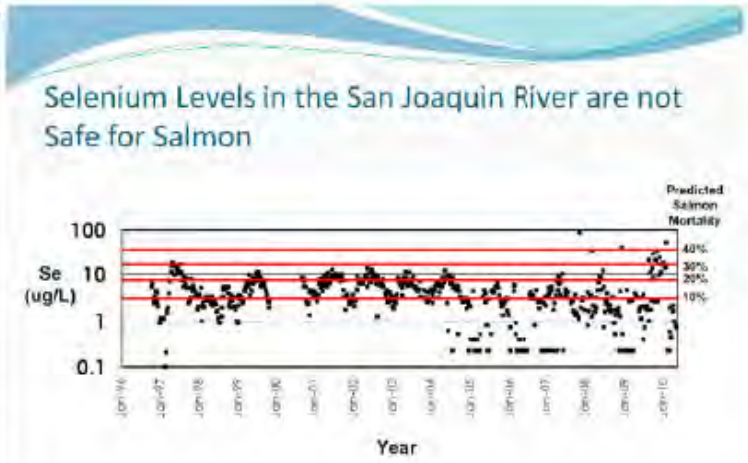


Figure 5

Data from USBR MCL=Maximum Contaminant Level for Drinking Water ALC=Aquatic Life Criterion

The selenium concentrations found in the San Joaquin River at Hills Ferry are clearly toxic to juvenile salmon and steelhead, even if Basin Plan selenium objectives were met, which they are not. See Figure 6 below.

COAL-2b cont'd



Selenium concentrations measured in the San Joaquin River at Hills Ferry (data from the U.S. Bureau of Reclamation)

Figure 6

We strongly oppose continued pollution of the Delta Mendota Canal, the San Joaquin River and refuge water supplies with selenium and other harmful contaminants which will impair restoration of Chinook salmon in the San Joaquin River. The parties responsible for this pollution should be held accountable and discharges should cease much sooner than 2020 in order to protect fish, wildlife and public health.

COAL-3

Failure to address this water pollution and determine the sources of selenium contamination in the Delta-Mendota Canal and the San Joaquin River has been ongoing for years. C-WIN, CSPA, AquAlliance, PCFFA, PCL and IFR believe that some of this selenium contamination of the San Joaquin River may be a result of San Joaquin River Exchange Contractor water transfers as well as groundwater pumping for water transfers into various canals and aqueducts, including, but not limited to the Delta-Mendota Canal. The PEIS/EIR should examine where the pollution is coming from.

COAL-4

There is no longer monitoring of selenium and other pollution in the San Joaquin River below Crows Landing, nor is this pollution being monitored as it travels to and through the Bay-Delta. The Department of Fish and Game is currently not monitoring for selenium in the Grasslands area because funding has not been provided by Reclamation. Most of the remaining selenium samples are weekly grab samples, except for Hills Ferry, which is now a monthly grab sample. The sporadic nature of the selenium sampling program masks spikes and understates the level of pollution. Since San Joaquin River salmon must run the gauntlet of contaminant levels from the Delta up through the San Joaquin River, the San Joaquin River

COAL-4 cont'd

Restoration Program EIS/EIR should identify and implement a comprehensive selenium monitoring program for the Bay-Delta estuary and the San Joaquin River with triggers to be implemented when water quality standards are being violated that would harm salmonids.

COAL-5

We submit to you as further evidence of selenium problems a letter from salmonid selenium biologist Dennis Lemly in which he states that selenium discharges from the Grasslands Bypass Project will result in the mortality of up to half of the juvenile salmonids in the San Joaquin River. The Draft EIS/EIR should fully analyze the impacts of existing selenium discharges into the San Joaquin River from the Grasslands Bypass Project, as well as the impacts of the various alternatives on the fate and distribution of selenium in the San Joaquin River and the Bay-Delta estuary.

COAL-6

For instance, will higher San Joaquin River flows from Friant Dam result in greater mobilization of selenium into the Bay-Delta? What level of dilution will the increased San Joaquin River flows provide in areas where selenium water quality objectives are regularly violated (Mendota Pool to Merced River)? How will these changes in San Joaquin River flow affect mobilization and bioaccumulation of selenium in the various river reaches and affected downstream ecosystems? The potential for increased mobilization of selenium into the Delta could be a negative impact (FSH-32) for some alternatives and was not adequately analyzed in the Draft EIS/EIR.

Cumulative Impacts

COAL-7

Delta Plan and SWRCB Delta Outflow Decision- The Cumulative Impacts chapter omits two extremely significant ongoing programs. One omission is the Delta Plan, which is required to be completed and approved by the Delta Stewardship Council by January 1, 2012 in order to meet the Delta's co-equal goals of water supply reliability and ecosystem restoration. The other program is the State Water Resources Control Board's Delta Outflow Criteria and its potential impact on the amount of water that the San Joaquin River basin will be required to provide for Delta outflows. Both of those programs/plans may ultimately result in San Joaquin River water right holders providing additional water for Delta outflows, including water from the Friant Division. Junior San Joaquin River water rights held by Reclamation in Friant Dam could be required to be released to the Delta and not recirculated in the state and federal pumps located there, but instead allowed to run to the Golden Gate as additional Delta outflow. This scenario should, at a minimum, be considered as a cumulative impact/benefit for the various issue areas being analyzed. How will use of Friant water affect the ability to meet downstream water quality objectives and standards if it made it all the way to the Golden Gate? How would such flows affect various resources and the ability to restore spring and fall Chinook in the San Joaquin River?

COAL-8

Page 26-21 (Grasslands Bypass Project)- The Cumulative Impacts chapter contains an inadequate description of the Grasslands Bypass project in both the

COAL-8 cont'd descriptions of the San Joaquin River Salinity Management Plan (SJRSMP) and the San Joaquin River Water Quality Improvement Project (SJRWQIP).

COAL-9 The SJRSMP description completely fails to disclose that highly seleniferous discharges that formerly went into the San Joaquin River via Salt Slough now discharge to the San Joaquin River through Mud Slough North, often exceeding Basin Plan water quality objectives for selenium, salt and boron. The description also fails to disclose that these discharges have been ongoing since 1995 and have been sanctioned by regulators until the end of 2019, nearly a quarter of a century of bureaucratically approved pollution. The impact of this ongoing pollution in violation of state and national water quality objectives for selenium needs to be fully analyzed, as described above under impact analysis.

COAL-10 The SJRWQIP description does not disclose that the toxic contamination the SJRWQIP cannot handle discharges directly into Mud Slough via the Grasslands Bypass Project. The description also fails to mention that a pilot treatment plant is to be constructed by 2014, but that there is inadequate funding and technology for large-scale treatment of this selenium contaminated pollution. As a result there is no solution on the table for this chronic problem and this Draft Program EIS/EIR has failed to identify and analyze the issue and how selenium may affect restoration.

Thank you for the opportunity to comment on this document. Please include C-WIN Water Policy Analyst Tom Stokely (tstokely@att.net) and us on your distribution list for responses to comments and the Final EIS/EIR.

Sincerely,

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W. F. 'Zeke' Grader, Jr.

Jonas Minton

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Attachment:
E-mail -Dennis Lemly to Tom Stokely

COAL-A

Tom Stokely

From: "Dennis Lemly" <dlemly@fs.fed.us>
To: "Tom Stokely" <tstokely@att.net>
Sent: Wednesday, December 09, 2009 6:18 AM
Attach: Lemly-TechnicalQualifications.doc
Subject: Re: Request for Review of Grasslands Bypass Project Selenium Effects on Salmonids

Hello Tom,

COAL-A-1 I have reviewed the information you sent, specifically, the US Fish and Wildlife Service technical analysis of selenium risks to Chinook salmon and steelhead associated with the Grasslands Bypass Project (GBP) by Beckon and Maurer, the US Fish and Wildlife Service comments to USBR on the Final EIS, and USBR's response to those comments.

After close inspection of these reports, comments, and responses, I can only conclude that the Proposed Action and the Alternative Action pose unacceptable risks to the health and well-being of extant and to-be-established populations of migratory fish.

COAL-A-2 The report by Beckon and Maurer clearly shows that there are/will be substantial negative effects (perhaps above 50% mortality) based on existing and anticipated waterborne selenium concentrations. This is a technically sound report. Although USBR casts doubt on one key study (Hamilton et al. 1980) due to mortality in controls, the results were identical for both field-source and experimental diets (which did not have those problems).

It is interesting that USBR essentially admits there are substantial risks in its response to USFWS comments (Appendix I, Public Comments and Responses, page I-65) "However, as discussed above, there is considerable uncertainty in this analysis due to lack of data on Se bioaccumulation and toxicity in salmonids as well as limited data on likely exposure periods. Due to this uncertainty, it was assumed in the Draft EIS/EIR that there could be potential negative impacts to Chinook salmon and steelhead under the Proposed Action and Alternative Action, independent of the SJRRP"

COAL-A-3 Curiously, despite this admission of uncertainty and potential for negative impacts, USBR goes on to conclude that "GBP is unlikely to have a significant impact on the fish reintroduced as part of the SJRRP. Because both projects would be expected to improve conditions for salmonids in the SJR and, therefore, they would not have a cumulatively significant impact".

Clearly, this latter statement is based on hopes and not facts.

USBR wants it both ways.....identify a problem but then say there is no problem.

Acknowledging that substantial uncertainty (and thus ecological risk) exists cannot logically be followed by concluding that there will be no problem.

This is a blatant contradiction and their is no credible scientific basis for USBR to claim there will be no cumulatively significant impact.

COAL-A-4 The correct conclusion is that available data and a reasonable interpretation of it clearly shows that significant risks of substantial selenium toxicity exist which will not be eliminated or substantially lessened by GBP or SJRRP.

I hope these brief comments adequately express my grave concerns about what USBR is proposing.

12/9/2009

Please let me know if I can be of further assistance.

I have attached a statement of my technical qualifications for your information.

Sincerely,
A. Dennis Lemly, Ph.D.

COAL-B

Technical Qualifications Satement
Dr. A. Dennis Lemly

I have spent over 30 years investigating the effects of selenium pollution in aquatic ecosystems. I have extensive experience conducting field and laboratory research on selenium toxicology, primarily involving aquatic cycling, bioaccumulation, and effects on fish. These studies include intensive investigations of the two most substantial cases of selenium pollution that have taken place in the USA; (1) Belews Lake, North Carolina, where 19 species of fish were eliminated, and (2) Kesterson Marsh, California, where thousands of aquatic birds were poisoned. My career began in the late 1970's with studies of the landmark pollution event at Belews Lake, which established the fundamental principles of selenium bioaccumulation and reproductive toxicity in fish. In the 1980's, I was a research project manager for the U.S. Fish and Wildlife Service, directing studies that determined impacts of selenium from agricultural irrigation on aquatic life at Kesterson and in 14 other western states. In the 1990's, the emphasis of my research shifted to the development of methods and guidelines for hazard assessment and water quality criteria for selenium, which led to the publication of a reference book (see item 42 below). This handbook contains the first comprehensive assessment tools for evaluating selenium pollution on an ecosystem scale. I have consulted on selenium contamination issues ranging from landfill leachate in Hong Kong to mountaintop removal coal mining in West Virginia. I provide the methods and technical guidance necessary to identify, evaluate, and correct aquatic selenium problems before they become significant toxic threats to fish and wildlife populations. I have devised and applied techniques for protecting aquatic life in habitats from the Arctic to the tropics, and from high mountain streams to coastal lagoons. I have Masters and Doctorate degrees in biology from Wake Forest University.

COAL-B-1

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5. Lemly, A.D. 1985. Toxicology of selenium in a freshwater reservoir: Implications for environmental hazard evaluation and safety. *Ecotoxicology and Environmental Safety* 10: 314-338.
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COAL-B-1
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7. Lemly, A.D., and G.J. Smith. 1987. *Aquatic Cycling of Selenium: Implications for Fish and Wildlife*. Fish and Wildlife Leaflet 12. U.S. Fish and Wildlife Service, Washington, DC. 10 pages.
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14. Lemly, A.D. 1993. Metabolic stress during winter increases the toxicity of selenium to fish. *Aquatic Toxicology* 27: 133-158.
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18. Lemly, A.D. 1996. Selenium in aquatic organisms. Chapter 19 (pages 427-445) in W.N. Beyer, G.H. Heinz, and A.W. Redmon-Norwood, editors. *Environmental Contaminants in Wildlife: Interpreting Tissue Concentrations*. Lewis Publishers, Boca Raton, FL.
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COAL-B-1 cont'd

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34. Lemly, A.D. 1999. Irrigation drainage. Pages 304-307 in M.A. Mares, editor. *Encyclopedia of Deserts*. University of Oklahoma Press, Norman, OK.
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COAL-B-1 cont'd

Environmental Pollution 93: 169-174.

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COAL-B-1 cont'd

Responses to Comments from California Water Impact Network, California Sportfishing Protection Alliance, AquAlliance, Pacific Coast Federation of Fishermen's Associations, Planning and Conservation League, Institute for Fisheries Resources

COAL-1: Comment noted. The rationale for selection and selection of the environmentally preferable/superior alternative are presented in Chapter 27.0, "Other NEPA and CEQA Considerations," of the Draft PEIS/R. NEPA and CEQA requirements to identify an environmentally preferable/superior alternative are not the same as NEPA requirements to identify a preferred alternative. The preferred alternative is identified in Section 1.5, "Preferred Alternative," of this Final PEIS/R. Text has not been revised.

COAL-2a: The lead agencies appreciate the statement of support from the California Water Impact Network, California Sportfishing Protection Alliance, AquAlliance, Pacific Coast Federation of Fishermen's Associations, Planning and Conservation League, and Institute for Fisheries Resources regarding the successful reintroduction of fall-run and spring-run Chinook salmon in the San Joaquin River. Chapter 5.0, "Biological Resources – Fisheries," of the Draft PEIS/R evaluates the potential impacts of implementing the Settlement on existing populations of Chinook salmon in the study area, including fall-run Chinook salmon in the San Joaquin River below the Merced River confluence, and all runs of Chinook salmon within the Delta. Chapter 14.0, "Hydrology – Surface Water Quality," of the Draft PEIS/R evaluates the potential impacts of implementing the Settlement on water quality, including selenium concentrations, within the study area. However, the PEIS/R does not evaluate the potential impacts of implementing the Settlement (or other projects such as the Grassland Bypass Project) on reintroduced spring-run and fall-run Chinook salmon because this is outside the scope of NEPA and CEQA and, therefore, outside the purpose of the PEIS/R. The Implementing Agencies would coordinate with other programs and projects within the study area, including the Grassland Bypass Project, to the extent feasible and when it supports the purpose, need, and objectives of the SJRRP.

Although the Draft PEIS/R does not address the potential impacts of implementing the Settlement or other projects, such as the Grassland Bypass Project, on reintroduced spring-run and fall-run Chinook salmon, all action alternatives include guidelines for observing and adjusting to changes in physical conditions within the Restoration Area through the Physical Monitoring and Management Plan (Appendix D of the Draft PEIS/R), as well as monitoring and management guidelines related to biological conditions for fish in Appendix F, "Fish Management Plan." Currently, water quality and bed sediment analyses are conducted as part of the SJRRP, including analysis of selenium concentrations in San Joaquin River water. Additional information is provided in the SJRRP 2011 Annual Technical Report (SJRRP 2012c).

Potential cumulative impacts of the action alternatives taken together with other past, present, and reasonably foreseeable probable future projects (including the Grassland Bypass Project as a component of the San Joaquin River Salinity Management Plan) are evaluated in Chapter 26.0, "Cumulative Impacts," of the Draft PEIS/R.

See also MCR-1, "Analysis of Program Feasibility, Potential to Achieve Restoration and Water Management Goals," in Chapter 2.0, "Master Comment Responses," of this Final PEIS/R for additional information relevant to assessing potential impacts of implementing the Settlement on reintroduced spring-run and fall-run Chinook salmon.

Text has not been revised.

COAL-2b: It is beyond the purpose of the PEIS/R (see discussion in Section 1.2, "Purpose and Uses of the PEIS/R," of the Draft PEIS/R) to require USGS to conduct an analysis of the potential impacts of continued selenium discharges on efforts to restore Chinook salmon to the Restoration Area, as suggested in the comment. The commenter also states that parties contributing to pollution, as identified in the comment, should be held responsible and discharges ceased to protect fish, wildlife, and public health. While these steps could contribute to the restoration of Chinook salmon in the Restoration Area, they would do so indirectly, and are beyond the SJRRP purpose of implementing the Settlement consistent with the Act. For these reasons, the PEIS/R has not been revised to include actions to identify and hold parties responsible for pollution to protect fish, wildlife, and public health.

The PEIS/R evaluates the potential impacts of implementing the Settlement on existing populations of Chinook salmon in the study area, including fall-run Chinook salmon in the San Joaquin River below the Merced River confluence, and all runs of Chinook salmon within the Delta. The PEIS/R also evaluates the potential impacts of implementing the Settlement on water quality, including selenium concentrations, within the study area. However, the PEIS/R does not evaluate the potential impacts of implementing the Settlement (or other projects such as the Grassland Bypass Project) on reintroduced spring-run and fall-run Chinook salmon because this is outside the scope of NEPA and CEQA and, therefore, outside the purpose of the PEIS/R. Although the Draft PEIS/R does not address the potential impacts of implementing the Settlement or other projects, such as the Grassland Bypass Project, on reintroduced spring-run and fall-run Chinook salmon, all action alternatives include guidelines for observing and adjusting to changes in physical conditions within the Restoration Area through the Physical Monitoring and Management Plan (Appendix D of the Draft PEIS/R), as well as monitoring and management guidelines related to biological conditions for fish in Appendix F, "Fish Management Plan." Additionally, the Implementing Agencies would coordinate with other programs and projects within the study area, including the Grassland Bypass Project, to the extent feasible and when it supports the purpose, need, and objectives of the SJRRP.

See also MCR-1, "Analysis of Program Feasibility, Potential to Achieve Restoration and Water Management Goals," in Chapter 2.0, "Master Comment Responses," of this Final PEIS/R for additional information relevant to assessing potential impacts of implementing the Settlement on reintroduced spring-run and fall-run Chinook salmon.

Text has not been revised.

COAL-3: Determining that the source of selenium in the San Joaquin River is outside the scope of the analysis in the PEIS/R; however, existing water quality issues of the San Joaquin River are addressed in the existing conditions section of Chapter 14.0, "Hydrology – Surface Water Quality," in the Draft PEIS/R. This comment is substantially similar to comments COAL-2a and COAL-2b. See also responses to comments COAL-2a and COAL-2b. Text has not been revised.

COAL-4: The purpose of the proposed action, as stated on page 1-13 of the Draft PEIS/R, is to implement the Settlement consistent with the Act. Nothing in the Settlement or the Act (see Appendix G, "Plan Formulation," of the Draft PEIS/R), suggests that a comprehensive selenium monitoring program for the Bay-Delta estuary and the San Joaquin River is needed to achieve the purpose of the proposed action. The Draft PEIS/R identifies guidelines for observing and adjusting to changes in physical conditions within the Restoration Area through the Physical Monitoring and Management Plan (Appendix D of the Draft PEIS/R), as well as monitoring and management guidelines related to biological conditions for fish in the Fisheries Management Plan (Appendix E of the Draft PEIS/R). Currently, water quality and bed sediment analyses are conducted as part of the SJRRP, including analysis of selenium concentrations in San Joaquin River water. Additional information is provided in the SJRRP 2011 Annual Technical Report (SJRRP 2012c).

The Conservation Strategy, described in Section 2.4.4 of the Draft PEIS/R, includes measures to avoid impacts to water quality and to monitor water quality to support conservation of listed and sensitive species and habitats. A comprehensive selenium monitoring program for the Bay-Delta estuary and the San Joaquin River, with triggers to be implemented when water quality standards are being violated, is outside the scope of the SJRRP and is not included in the PEIS/R. However, the Draft PEIS/R does contain an adaptive approach to water quality monitoring, including selenium. Appendix E, "Fisheries Management Plan," of the Draft PEIS/R describes the framework for addressing specific actions related to fisheries, and lays out a structured approach to adaptively manage the reintroduction of Chinook salmon and reestablishment of other fishes. The Fisheries Management Plan describes monitoring as a critical component of the adaptive management process and necessary to assess the performance of the SJRRP. Water quality monitoring is specified in Section 7.2, "Habitat Objectives Monitoring," and actions to improve degraded water quality, if necessary, are described in Section 5.2.7, "Degraded Water Quality," of the Fisheries Management Plan. Active monitoring throughout implementation of Settlement actions will ensure that if water quality becomes a problem, it can be identified and addressed appropriately. See also MCR-1, "Analysis of Program Feasibility, Potential to Achieve Restoration and Water Management Goals," in Chapter 2.0, "Master Comment Responses," of this Final PEIS/R for additional information relevant to assessing potential impacts of implementing the Settlement on reintroduced spring- and fall-run Chinook salmon.

Text has not been revised.

COAL-5: The commenter mentions an enclosure from biologist Dennis Lemly. The comments in that enclosure are numbered COAL-A-1 through COAL-A-4. See responses to those comments at the end of this section.

The PEIS/R evaluates the potential impacts of implementing the Settlement on existing populations of Chinook salmon in the study area, including existing fall-run Chinook salmon in the San Joaquin River below the Merced River confluence, and all runs of Chinook salmon within the Delta. The PEIS/R also evaluates the potential impacts of implementing the Settlement on water quality, including selenium concentrations, within the study area. However, the PEIS/R does not evaluate the potential impacts of implementing the Settlement (or other projects such as the Grassland Bypass Project) on reintroduced spring-run and fall-run Chinook salmon because this is outside the scope of NEPA and CEQA and, therefore, outside the purpose and need of the PEIS/R.

Although the Draft PEIS/R does not address the potential impacts of implementing the Settlement or other projects, such as the Grassland Bypass Project, on reintroduced spring-run and fall-run Chinook salmon, all action alternatives evaluated in the Draft PEIS/R include guidelines for observing and adjusting to changes in physical conditions within the Restoration Area through the Physical Monitoring and Management Plan (Appendix D of the Draft PEIS/R), as well as monitoring and management guidelines related to biological conditions for fish in Appendix E, "Fisheries Management Plan." Currently, water quality and bed sediment analyses are conducted as part of the SJRRP, including analysis of selenium concentrations in San Joaquin River water. Additional information is provided in the SJRRP 2011 Annual Technical Report (SJRRP 2012c).

The potential cumulative impacts of the action alternatives taken together with other past, present, and reasonably foreseeable probable future projects (including the Grassland Bypass Project as a component of the San Joaquin River Salinity Management Plan) are evaluated in Chapter 26.0, "Cumulative Impacts," of the Draft PEIS/R.

See MCR-1, "Analysis of Program Feasibility, Potential to Achieve Restoration and Water Management Goals," in Chapter 2.0, "Master Comment Responses," of this Final PEIS/R for additional information relevant to assessing potential impacts of implementing the Settlement on reintroduced spring-run and fall-run Chinook salmon. See also responses to comments COAL-2a, COAL-4, and COAL-A-1 through COAL-A-4.

Text has not been revised.

COAL-6: Text on page 5-100, lines 13-16, of the Draft PEIS/R has been revised to reflect potential for short-term surface water quality impacts associated with mobilization of constituents, including pollutants associated with agricultural practices in the region, and long-term improvement in San Joaquin River water quality conditions due to increased flow and decreased concentrations of constituents. Text has been revised to be consistent with discussion of these potential impacts, on pages 14-24 through 14-27 of the Draft PEIS/R. See Chapter 4.0, "Errata," of this Final PEIS/R. The inclusion of this discussion does not change the analysis or conclusions of the Draft PEIS/R.

COAL-7: The criteria used to determine whether a project or action was evaluated in the cumulative effects analysis presented in Chapter 26.0, "Cumulative Impacts," of the Draft PEIS/R, are described in that chapter. The projects the commenter suggests for inclusion in the analysis do not meet these criteria because they are not considered "reasonable foreseeable probably future actions," because they are not "currently under construction, approved for construction, or in final stages of formal planning" (see page 26-3, lines 27 through 29, of the Draft PEIS/R). Potential impacts on Delta flows, water quality, fisheries, and other resources under the cited programs are outside the scope of the SJRRP and beyond the purpose of the PEIS/R (see discussion in Section 1.2, "Purpose and Uses of the PEIS/R," of the Draft PEIS/R). Text has not been revised.

COAL-8: This comment introduces the overarching theme of comments COAL-9 and COAL-10, which describe the commenter's concerns in greater specificity. The Grassland Bypass Project is described as part of the San Joaquin River Salinity Management Plan in Chapter 26.0, "Cumulative Impacts," of the Draft PEIS/R. The descriptions of the San Joaquin River Salinity Management Plan and the San Joaquin River Water Quality Improvement Project are sufficient for the purposes of the cumulative impacts analysis for which they are presented. Existing discharges into the San Joaquin River from Mud Slough via the Grassland Bypass Project are not part of the SJRRP. Therefore, an analysis of the impacts of these existing discharges into the San Joaquin River is outside the scope of the PEIS/R. Text has not been revised.

COAL-9: The description of the San Joaquin River Salinity Management Plan is sufficient for the purposes of the cumulative impacts analysis for which it is presented. Like other project and action descriptions presented in Chapter 26.0, "Cumulative Impacts," of the Draft PEIS/R, the descriptions of the San Joaquin River Salinity Management Plan and the San Joaquin River Water Quality Improvement Project (presented on page 26-21, lines 12 through 35) briefly explain the plan or project, and then summarize the effects of its actions on the most relevant resource topics. In the case of the San Joaquin River Salinity Management Plan, discussion of impacts focuses on water quality. This allows evaluation of the potential cumulative impacts of the San Joaquin River Salinity Management Plan, the San Joaquin River Water Quality Improvement Project, and other past, present, and reasonably foreseeable probable future projects and the SJRRP to be analyzed in Section 26.6.1, "Air Quality," through Section 26.6.21, "Visual Resources," as appropriate.

It is assumed that the commenter is referring to the Grassland Bypass Project Extension in the statement that discharges of water with high selenium content "…have been sanctioned by regulators until the end of 2019…" The impacts of the Grassland Bypass Extension Project were analyzed in compliance with NEPA and CEQA in the *Grassland Bypass Project, 2010 – 2019: Final Environmental Impact Statement and Environmental Impact Report* (Reclamation and SLDMWA 2009; State Clearinghouse Number 2007121110) before implementation of that project. The impacts analyzed in that document are not reassessed or described in detail in the Draft PEIS/R. As stated in Table 2-3 on page 2-12 of the Draft PEIS/R, the Grassland Bypass Project Extension is assumed to be in place as part of the No-Action Alternative. Analysis of the potential impacts of the No-Action and action alternatives on water quality is provided in Chapter

14.0, “Hydrology – Surface Water Quality,” of the Draft PEIS/R. Potential cumulative impacts of the action alternatives taken together with other past, present, and reasonably foreseeable probable future projects (including the Grassland Bypass Project as a component of the San Joaquin River Salinity Management Plan) are evaluated in Chapter 26.0, “Cumulative Impacts,” of the Draft PEIS/R.

Text has not been revised.

COAL-10: The description of the San Joaquin River Water Quality Improvement Project is sufficient for the purposes of the cumulative impacts analysis for which it is presented. Analysis of the potential impacts of the action alternatives on water quality is provided in Chapter 14.0, “Hydrology – Surface Water Quality,” of the Draft PEIS/R. Existing discharges into the San Joaquin River from Mud Slough via the Grassland Bypass Project are not part of the SJRRP. Therefore, an analysis of the impacts of these existing discharges into the San Joaquin River is outside the scope of the PEIS/R; however, the existing water quality issues of the San Joaquin River are addressed in the existing conditions section of Chapter 14.0, “Hydrology – Surface Water Quality,” in the Draft PEIS/R.

It is beyond the purpose of the PEIS/R and requirements of NEPA and CEQA to address funding or technological issues associated with the treatment plant identified in the comment. The potential impacts of the San Joaquin River Water Quality Improvement Project have been analyzed in compliance with CEQA and were found to be less than significant, according to the Notice of Determination issued by Panoche Water District in 2007 (Panoche Water District 2007; State Clearinghouse Number 2007041100).

Text has not been revised.

COAL-A-1: The comment is part of a letter from biologist Dennis Lemly reviewing a report developed by USFWS presenting a technical analysis of selenium risks to Chinook salmon and steelhead associated with the Grassland Bypass Project, and USFWS comments and Reclamation responses to those comments, presumably related to the Grassland Bypass Project EIS/EIR. Responses to comments on the Grassland Bypass Project Draft EIS/EIR were published in the Grassland Bypass Project Final EIS/EIR and are publicly available at http://www.usbr.gov/mp/nepa/nepa_projdetails.cfm?Project_ID=3513. The letter from Dennis Lemly is submitted as part of an attachment to the COAL letter containing comments COAL-1 though COAL-10, specifically in support of comments COAL-2a through COAL-5.

Chapter 5.0, “Biological Resources – Fisheries,” of the Draft PEIS/R evaluates the potential impacts of implementing the Settlement on existing populations of Chinook salmon in the study area, including fall-run Chinook salmon in the San Joaquin River below the Merced River confluence, and all runs of Chinook salmon within the Delta. Chapter 14.0, “Hydrology – Surface Water Quality,” of the Draft PEIS/R evaluates the potential impacts of implementing the Settlement on water quality, including selenium concentrations, within the study area. However, the PEIS/R does not evaluate the

potential impacts of implementing the Settlement (or other projects such as the Grassland Bypass Project) on reintroduced spring-run and fall-run Chinook salmon because this is outside the scope of NEPA and CEQA and, therefore, outside the purpose of the PEIS/R. The Implementing Agencies would coordinate with other programs and projects within the study area, including the Grassland Bypass Project, to the extent feasible and when it supports the purpose, need, and objectives of the SJRRP.

See responses to comments COAL-2a through COAL-5 for additional information relevant to this comment.

COAL-A-2: See responses to comments COAL-2a through COAL-5 for additional information relevant to this comment.

COAL-A-3: See responses to comments COAL-2a through COAL-5 for additional information relevant to this comment.

COAL-A-4: See responses to comments COAL-2a through COAL-5 for additional information relevant to this comment.

COAL-B-1: Comment noted. This is a technical qualifications statement attached to the first attachment to the letter containing comments COAL-1 through COAL-10.

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3.9.3 Fresno Fly Fishers for Conservation

FFFC

FLY FISHERS
FOR CONSERVATION, INC.
100 E. Sierra, PMB 3310 Fresno, CA 93710

September 13, 2011

Ms. Alicia Forsythe
SJRRP Program Manager
Bureau of Reclamation
2800 Cottage Way
MP-170
Sacramento, CA. 95825

Re: Comments on San Joaquin River Restoration

Dear Ms. Forsythe,

The San Joaquin River restoration has a goal of reintroducing salmon to that river. The salmon of choice is the spring run Chinook, an endangered species.

There are many considerations to introducing any species to a newly restored river, particularly an endangered species of salmon. One of those considerations is protecting the newly reintroduced fish from poaching.

FFFC-1

Patrolling several miles of newly restored river will require law enforcement resources that the Department of Fish and Game does not have. Local areas already have too few officers to prevent poaching on existing rivers. In the case of the nearby Kings River, for example, the Kings River Conservancy has found it necessary to raise funds for additional warden time to help curb the poaching that plagues the restoration of a trout fishery on that river.

Unless resources for law enforcement are included in the San Joaquin River restoration project, and funded by that project, there will not only be inadequate enforcement on the San Joaquin, but sorely needed resources will be taken from other local rivers.

It is the hope of the Fresno Fly Fishers for Conservation that this issue will be addressed in the plan for the San Joaquin so that the salmon can be protected without taking needed resources from the Kings and other areas.

Thank you for considering our comments,

Jeffrey A. Trafican

Jeffrey A. Trafican
President, Fly Fishers for Conservation, Fresno

Jeff Trafican
6654 N Hayston Ave
Fresno, CA 93710

Response to Comment from Fresno Fly Fishers for Conservation

FFFC-1: The action to reintroduce fall-run and spring-run Chinook salmon is addressed at the program-level in the PEIS/R because the specific details of this action are not known at this time. As this action is developed further, additional NEPA and/or CEQA documentation would be prepared, as required, for fish reintroduction actions. The Implementing Agencies recognize the need for additional law enforcement resources to address poaching. However, the specific need for additional law enforcement resources, including the number of officers and similar resources, is not known at this time given that specific fish reintroduction actions are still under development. Additional law enforcement resources would be considered during subsequent site-specific studies specific for spring-run Chinook salmon reintroduction.

3.9.4 Mill Creek Conservancy

MILL

Banonis, Michelle

From: Banonis, Michelle
Sent: Wednesday, May 25, 2011 7:57 AM
To: 'Kerry Burke'; Gidding, Margaret A
Cc: Judd Hanna; burtbundy@sbcglobal.net; Doug Latimer; Elif Fehm-Sullivan; 'Reed, Rhonda'; Forsythe, Alicia E
Subject: RE: San Joaquin River Restoration

Dear Ms. Burke,

Thank you for your e-mail in response to the San Joaquin River Restoration Program.

The public meetings that are scheduled to occur this week are in relation to the San Joaquin River Restoration Program (SJRRP) Environmental Impact Statement/Environmental Impact Report (PEIS/R). This document includes environmental impact analysis for the area upstream of Friant Dan, between Friant Dam and the Merced River, the area from the Merced River to the Delta, the Delta, and the Central Valley Project and State Water Project Service Area.

This document outlines on a project-level, or detailed analysis, the environmental impacts of Interim and Restoration Flow releases from Friant Dam into the San Joaquin River and the recapture of flows to achieve the Water Management Goal of the San Joaquin River Settlement (*NRDC et al, v. Rodgers et al*). On a Program- level, long-term actions such construction of channel restoration projects, recirculation of recaptured water to the Friant Division, and salmon reintroduction are discussed on a broad, less- detailed level. Program-level actions are outlined in the document as future actions that will required additional environmental analysis when further information is available and can be shared with the public and stakeholders to gather input on potential environmental impacts through the National Environmental Policy Act (NEPA) and/or California Environmental Quality Act process. Because spring-run Chinook are a threatened species, the specific details of the spring-run Chinook salmon reintroduction process, including genetics and stock selection, must be permitted through NMFS. These actions will be analyzed in detail in the future by the National Marine Fisheries Service through their own NEPA process for the reintroduction of spring-run Chinook salmon to the San Joaquin River. This will include further future outreach and coordination with stakeholders and the public who could be impacted by the stock selection process.

The SJRRP PEIS/R evaluates salmon reintroduction on a program level, which does not discuss specific details related to stock selection. This detailed approach to stock selection and public outreach to interested parties will occur in the future by NMFS. The PEIS/R hearings this week are located within the Restoration Area and study area, as defined in the document.

Thank you again for your e-mail. Your comments will be included in the public record for the SJRRP PEIS/R.

Michelle Banonis
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U.S. Bureau of Reclamation
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SAN JOAQUIN RIVER RESTORATION PROGRAM

MILL-1 **From:** Kerry Burke [mailto:burkelanduse@gmail.com]
Sent: Tuesday, May 03, 2011 2:32 PM

To: Gidding, Margaret A
Cc: Judd Hanna; burtbundy@sbcglobal.net; Doug Latimer; Banonis, Michelle; Elif Fehm-Sullivan
Subject: Re: San Joaquin River Restoration

Ms. Gidding and Fehm-Sullivan,

On March 7, 2011, the Mill Creek Conservancy submitted a detailed and comprehensive letter outlining our concerns about the impacts of this proposed project on Mill Creek's wild spring-run Chinook Salmon. We also had numerous concerned citizens speak at your public workshop in Chico. We are very disappointed not to have any agency response to the issues raised in our March 7, 2011 letter.

MILL-1 cont'd

In addition, apparently you did not hear us when we asked to be included in the Environmental Review process. Given the amount of testimony and letters that have been generated by Mill Creek folks on this important issue, it only seems fitting that you would schedule public hearings in the northern portion potential project area. This is a fundamental flaw in your public outreach and does not demonstrate good will from your organizations. This lack of outreach is unsatisfactory and I am requesting that you add a public meeting in Chico. Your approach on the processing of the public hearings for the Draft PEIS/R is clearly contrary to the Mission Statements included in the report that you are to "manage, develop, and protect water and related resources in an environmentally and economically sound manner in the interest of the American public." Mill Creek is an interested and impacted population of the American public. We deserve adequate opportunity to comment on this project.

Respectfully yours,
Kerry Burke

On Tue, May 3, 2011 at 10:07 AM, Gidding, Margaret A <MGidding@usbr.gov> wrote:

Hello Mr. Hanna,

Thank you for your email. I'm glad you received the copies. As for my earlier reply, I was gently reminded by our Natural Resources Specialist after I replied to you as to the meeting locations we selected. So, please let me clarify. The meetings for the Draft PEIS/R are set in the Program restoration area, and the Sacramento meeting is to accommodate many of the agency people involved. We know that the National Marine Fisheries Service is keenly aware of the Northern issues and concerns with the salmon reintroduction, and they are focusing their outreach to your areas as well as they work through the processes for the reintroduction. And they will continue to do so. I have included Elif Sullivan from NMFS who was involved in the meeting you reference and in this process if you have further questions on the reintroduction process.

Sincerely,

Margaret A. Gidding

Outreach Coordinator

San Joaquin River Restoration Program

2800 Cottage Way, MP-170

916-978-5461

mgidding@usbr.gov

From: Judd Hanna [mailto:juddhanna@gmail.com]
Sent: Tuesday, May 03, 2011 5:45 AM
To: Gidding, Margaret A

Cc: Kerry; burtbundy@sbcglobal.net; Doug Latimer
Subject: Re: San Joaquin River Restoration

Thanks. Two copies arrived today. However, your assumption that the Sacramento meeting would be sufficient for the "northern" interests is wide of reality. Sacramento is a three hour drive from Mill Creek. My take is that your reception in Chico a few months ago was less than welcoming and you want to avoid any repeat. If you are using Mill Creek's or Deer Creek's spring run salmon for your experiment, you should have the courage to explain your scheme to the locals and not make your meetings remote and unattendable.

On Thu, Apr 28, 2011 at 3:23 PM, Gidding, Margaret A <MGidding@usbr.gov> wrote:

Hello Mr. Hanna,

I will get two more Executive Summaries in the mail to the address below, as you request. We were hoping that the Sacramento meeting would accommodate some of the northern interests. Please let me know if I can be of further assistance.

Thank you,

Margaret A. Gidding

Outreach Coordinator

San Joaquin River Restoration Program

2800 Cottage Way, MP-170

916-978-5461

3

mgidding@usbr.gov

From: Judd Hanna [mailto:juddhanna@gmail.com]
Sent: Thursday, April 28, 2011 7:34 AM
To: peisrcomments@restoresjr.net; fschulte@water.ca.gov
Cc: Kerry; burtbundy@sbcglobal.net; Doug Latimer
Subject: San Joaquin River Restoration

Would you please send two more copies of the Draft EIS and EIR to the address below, care of the Mill Creek Conservancy. Thank you. Also, I noticed no further public hearings in the North State where affected streams originate and home to the wild Spring Run Salmon. Any reason for that? (And note my new email address) Thank you. Judd

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Response to Comment from Mill Creek Conservancy

MILL-1: A response to this comment was provided on May 25, 2011, clarifying that the public meetings referenced in the comment were held in relation to release of the Draft PEIS/R, which includes environmental impact analysis for the area upstream from Friant Dam, between Friant Dam and the Merced River, the area from the Merced River to the Delta, the Delta, and the CVP and SWP water service areas, and does not necessitate a public hearing outside the study area, as requested in the comment. Because spring-run Chinook are a threatened species, specific details of the spring-run Chinook salmon reintroduction process, including genetics and stock selection, must be permitted through NMFS. The action to reintroduce spring-run Chinook salmon is analyzed at the program level in the PEIS/R and will be analyzed in project-level detail in the future by NMFS through its own NEPA process for the reintroduction of spring-run Chinook salmon to the San Joaquin River. The NEPA process will include further future outreach and coordination with stakeholders and members of the public who could be impacted by the stock selection process.

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3.9.5 Natural Resources Defense Council and The Bay Institute

NRDC

September 21, 2011

Alicia Forsythe
SJRRP Program Manager
U.S. Bureau of Reclamation
2800 Cottage Way, MP– 170
Sacramento, CA 95825

Sent via email to: PEISRComments@restoresjr.net

RE: Comments on the San Joaquin River Restoration Program Draft Programmatic Environmental Impact Statement and Environmental Impact Report

Dear Mrs. Forsythe:

On behalf of the Natural Resources Defense Council and The Bay Institute, we are providing these comments on the draft Programmatic Environmental Impact Statement ("PEIS/PEIR") for the San Joaquin River Restoration Program ("SJRRP"). Both of our organizations are party to, and have made substantial efforts to implement, the Stipulation of Settlement in *NRDC et al. v. Kirk Rodgers et al* ("Settlement"). We greatly appreciate the substantial efforts that have been made by the Bureau of Reclamation, U.S. Fish and Wildlife Service, National Marine Fisheries Service, Friant Water Authority, and the State of California to prepare this PEIS/PEIR and to implement the Settlement to date.

As the PEIS/PEIR appropriately concludes, implementation of the SJRRP will result in many long-term benefits to the environment and local communities. Through implementation of the Recovered Water Account, other actions to implement the water management goal of the Settlement and additional mitigation measures, the PEIS/PEIR documents how implementation of the SJRRP will result in beneficial or less than significant impacts in almost all respects.

However, as discussed on the pages that follow, we respectfully request that the Bureau clarify certain issues in the PEIS/PEIR, in order to be consistent with the Settlement and Settlement Act. Please feel free to contact us at your convenience if you have any questions about the comments on the pages that follow, or request additional information. Thank you for consideration of our views. We look forward to continuing to work with the state and federal agencies and other parties to fully implement the Settlement and Act.

Sincerely,

/s
Doug Obegi
Natural Resources Defense Council

/s
Peter Vorster
The Bay Institute

NRDC-TBI Comments on SJRRP draft PEIS/PEIR
September 21, 2011

Clarification of Programmatic Analysis of Paragraph 13(i) actions:

NRDC-1 As the PEIS/PEIR acknowledges, Paragraph 13(i) of the Settlement requires that beginning January 1, 2014, the Secretary shall bank, store, exchange or sell any Restoration Flows that are not released downstream, in consultation with the Restoration Administrator. This requirement is already discussed in the PEIS, including on pages 2-21 and 2-36, where it is appropriately identified as being analyzed at the program level. However, the tables and text in the executive summary, including Tables ES-1, ES-5, and accompanying text, should be revised to explicitly include Paragraph 13(i) actions among the activities that are analyzed in the PEIS/PEIR at the programmatic level. Because the PEIS/PEIR analyzes the effects of the release of up to full Restoration Flows, with potentially no recapture or recirculation measures, these Paragraph 13(i) actions should not result in any environmental impacts.

Flood and Seepage Management:

NRDC-2a The PEIS/PEIR adopts a very conservative approach to management of potential flood and seepage impacts from implementation of the SJRRP. It is critically important that solutions to these challenges are developed and implemented in a timely manner, and we look forward to working with the Bureau of Reclamation, State of California, Friant Water Authority, and other interested parties to develop and implement solutions to these challenges, utilizing the processes identified in the PEIS/PEIR.

NRDC-2b With respect to flood management, the PEIS/PEIR relies on the U.S. Army Corps of Engineers recommended Factor of Safety of 1.4 or greater for levees under a "steady state of saturation for a prolonged time." *See* PEIS/PEIR at 2-23 to 2-26. As one potential tool, the text on page 2-25 should be revised to include a brief discussion of the potential for avoiding prolonged high flow conditions through higher volume, shorter duration flow releases that do not result in steady saturation for a prolonged time, and the SJRRP's consideration of this tool as part of the process outlined in this section of PEIS/PEIR for determining appropriate flow levels that do not exceed channel capacities.

NRDC-3 In addition, the PEIS/PEIR should better acknowledge the benefits of the SJRRP in reducing the frequency and magnitude of flood control releases from Friant Dam and attendant downstream impacts. These benefits should be discussed in more detail in the PEIS/PEIR. It is also important that other entities maintain and implement their responsibilities regarding flood control along the San Joaquin River, and we recommend that the discussion of legal authorities in Chapter 11 (levee maintenance and flood liability) should be revised to include a discussion of the Lower San Joaquin Levee District Act, California Water Code Appendix Chapter 75.

NRDC-4 With respect to seepage management, Chapter 16.2.1 should be revised to include a discussion of the provisions of the San Joaquin River Restoration Settlement Act pertaining to seepage management (e.g., Section 10004). The discussion of state law requirements in Chapter 16 should be revised to include reference to the State Lands Commission's authority over the beds of navigable waterways and related statutory authorities that are applicable to the effects analyzed in Chapter 16.

NRDC-5 In addition, some lands in the Restoration Area have historically experienced seepage impacts in flood years, which have occurred as frequently as 2 of every 5 years. *See* PEIS/PEIR at 16-41. The PEIS/PEIR recognizes that most of the impacts from implementation of the SJRRP would be comparable to the effects of these periodic flood flows. *Id.* The PEIS/PEIR should clarify that any seepage impacts resulting from flood flows are not attributable to the SJRRP, that the SJRRP reduces the frequency and extent of flood flows (resulting in less seepage impacts), and that potential seepage management measures may provide substantial seepage management benefits to lands that have historically been impacted in flood years.

Floodplain Restoration:

NRDC-6 Restoration of floodplains in Reach 2B is an important restoration action that has been shown to provide substantial benefits to salmonids (*see, e.g.*, Sommer 2001). Page 2-39 of the PEIS/PEIR should be revised to clarify that some floodplain restoration will result in more than 3700 foot distance between levees (even though the average will be 500-3700 feet), and that there is substantial scientific evidence that floodplain restoration benefits salmonids (citing, e.g., Sommer 2001[1]).

NRDC-7 In addition, as stated elsewhere in the PEIS/PEIR, historically the San Joaquin River overflowed its banks in the spring months, creating vast wetlands. The San Luis National Wildlife Refuge boarders the San Joaquin River and is some of the only remaining wetland habitat that was once supported by the river's flows. The refuge could once again provide significant amounts of floodplain habitat to support the restoration goal while also benefitting the refuge and reducing the need to construct floodplain habitats elsewhere. Page 2-39 of the PEIS/PEIR should be revised to clarify how the SJRRP considering alternatives for hydraulically reconnecting the river with refuge lands using Restoration Flows, where appropriate.

Consistency with Paragraph 16(a)(1)

NRDC-8 In certain parts of the text, including page 2-84 of the PEIS/PEIR, the document fails to explicitly acknowledge the requirements of paragraph 16(a)(1) of the Settlement, which states that water management activities, including recirculation, recapture, reuse, exchange, or transfer of interim or restoration flows "shall have no adverse impact on the Restoration Goal, downstream water quality or fisheries." The text on pages ES-26, 2-31, and 2-36 appropriately describes the limitations on recirculation within the Project Area

NRDC-9 under Paragraph 16(a)(1). In addition, the discussion of recapture and other water supply actions under Alternatives B(1) and (2) and C(1) and (2) should be revised to, at a minimum, state the explicit requirements of paragraph 16(a)(1) of the Settlement as to such water supply actions.

Discussion of SJRRP Effects on CVP/SWP Pumping in the Delta:

NRDC-10 Under the existing regulatory regime, implementation of the SJRRP results in increased inflows in the lower San Joaquin River, and therefore potentially increases allowable CVP/SWP export pumping in the Delta (which can be recaptured and recirculated). On

[1] *Sommer et al* 2001. *Floodplain rearing of juvenile Chinook salmon: evidence of enhanced growth and survival.* Canadian Journal of Fisheries and Aquatic Sciences, 58:(2) 325-333.

NRDC-10 cont'd

pages ES-73 and ES-74 the PEIS/PEIR appropriately concludes that these effects on delta inflows and pumping rates in the Delta are less than significant and beneficial, and in Table ES-7 the PEIS/PEIR identifies a potential for increase delta exports (which may be able to be recaptured and recirculated). However, the text on pages 1-2 of Appendix I is unclear, and it should be clarified to be consistent with these conclusions that that increased inflows result in beneficial and/or less than significant effects, including the potential for increased CVP/SWP pumping in the Delta.

NRDC-11

Environmental Impacts on Groundwater Levels

The PEIS/PEIR concludes that implementation of the SJRRP may result in potentially significant and unavoidable impacts on groundwater levels, but it also concludes that the no action alternative will result in potentially significant and unavoidable impacts on groundwater levels. *See* PEIS/PEIR at ES-84. This conclusion stems in part from the fact that there has been long term overdrafting of groundwater supplies in the basin (*see* PEIS/PEIR at 12-8 to 12-12), which is anticipated to continue into the future, and in part because the PEIS/PEIR assumes that "changes in annual surface water deliveries were assumed to be offset by an increase in groundwater pumping" at a 1:1 ratio. *See* PEIS/PEIR at 12-61 to 12-62. However, the PEIS/PEIR should more clearly acknowledge the potential benefits from the 60,000 acre feet per year or more of groundwater recharge from the San Joaquin River, particularly in reaches 1 and 2A, which are in areas of declining groundwater levels. The flow schedule identified in Exhibit B to the Settlement assumes 60,000 to 77,000 acre feet of losses in reach 2, most of which recharge groundwater levels, and additional recharge also occurs in reach 1.

NRDC-12

Table ES-7 shows that implementation of the SJRRP, including the Paragraph 16(a) and 16(b) water management goal actions, will result in an average long term (2030) reduction in deliveries of 42,000-101,000 acre feet or approximately 3.2-7.6%. However, Table ES-7 and Chapter 12 do not to account for groundwater recharge from the San Joaquin River in Reaches 1 and 2, resulting from the release of interim and restoration flows. This groundwater recharge would benefit aquifers in Friant districts in Madera and Fresno County, including City of Fresno, Fresno Irrigation District, Madera Irrigation District, and Gravelly Ford Irrigation District. Table ES-7 and Chapter 12 should be revised to account for this groundwater recharge, which could further reduce impacts on groundwater levels and may result in less than significant effects, at least for some districts.

NRDC-13a

The PEIS/PEIR should more clearly acknowledge that water districts and individual farmers, not the agencies and parties implementing the SJRRP, control groundwater pumping decisions, and that neither the state nor federal agencies manage or regulate groundwater pumping in the project area. Moreover, as the PEIS/PEIR notes on page 12-61, actions taken by individual farmers, including improvements in agricultural water use efficiency, crop changes, and water transfers could reduce demand for groundwater pumping.

NRDC-13b

Finally, it is clear from the analysis in the PEIS/PEIR that implementation of the requirements of paragraph 16 of the Settlement, including the Recovered Water Account, new and expanded groundwater recharge facilities, the use of flood flows to meet restoration flow requirements, and recapture and recirculation of flow releases, should

NRDC-13b (con't) significantly reduce or avoid water supply impacts to Friant, including resulting impacts from potentially increased groundwater pumping.

Changes in Agricultural Land Uses

NRDC-14 The PEIS/PEIR concludes that the CVPM estimates that reductions in surface water deliveries as a result of the SJRRP are likely to reduce irrigated acreage by less than 1,000 acres, and the SJRRP may reduce irrigated acreage by more than 1,000 acres. PEIS/PEIR at 16-45. However, the PEIS/PEIR also recognizes that there are hundreds of thousands of acres of agricultural lands in the Friant service area, PEIS/PEIR at 16-14 to 16-15, and thus the SJRRP would result in significantly less than a 1% reduction in irrigated acreage. Moreover, the PEIS/PEIR assumes that groundwater pumping offsets all surface water deliveries on a 1:1 ratio. Thus, it is not clear how a less than 1% reduction in irrigated acreage exceeds the thresholds of significance identified on page 16-29 to 16-30, and it appears that LUP-8 should result in a less than significant impact.

Minor Additions and Clarifications:

The PEIS would benefit from the following additions and clarifications:

NRDC-15 1. Table ES-7: the derivation of the numbers in this table, particularly the releases for Interim and Restoration flow, should be explained or referenced to the appropriate section of the main document or technical appendix.

NRDC-16 2. Chapter 12, Table 12-22, P. 12-95: The table shows a 1 TAF or 36% increase in average annual groundwater pumping for Gravelly Ford Irrigation District. Does the 36% increase mean that the total average annual groundwater pumping in the District is around 3 TAF; the latter number seems low for a district with 8,000 irrigated acres and only a Class 2 supply.

NRDC-17 3. Chapter 13, P. 13-3: The description of inflow hydrology into Millerton Reservoir should discuss how hydropower reservoir operations and recreational requirements impacts runoff. Recommend plotting monthly or daily hydrographs in the different year types showing unimpaired runoff at Friant Dam, calculated inflow to Friant, historical release, and SJRRP program release.

NRDC-18 4. Chapter 13, P. 13-54: Central Valley Project Friant Division Water Service Area- This section should include a description of the sources of supply for Friant Division users in addition to the San Joaquin River, including a quantitative estimate of the agricultural water demand in these districts. That information is contained in Chapter 4 of the 2002 Water Supply Study.

NRDC-19 5. Chapter 13, Table 13-69, P. 13-98: Table 13-69, average simulated flow at head of Reach 1, does not correspond with what would be expected in November 1-11 period when a pulse flow of 700 cfs is supposed to be released in 95% of the years. The table should explain if the source of the numbers is a daily model interpolated from monthly output.

NRDC-20 6. Chapter 19 Power and Energy or Chapter 26, cumulative impacts: These chapters should note that a new facility is being designed to expand the river outlet hydropower generation from Friant Dam, which could offset some or all of the reduced generation through the hydropower facilities on the canals.

NRDC-21 7. Appendices that provide model outputs (Appendix H and I) should include output for river releases for the range of alternatives including no-action.

NRDC-TBI Comments on SJRRP draft PEIS/PEIR
September 21, 2011

The following typographical errors were noted:

NRDC-22 1. Table 12 -20's – footnote describes high when the title says it is for low.

NRDC-23 2. Figure 13-30 – Incorrect representation of Class 2 allocation in the wetter years from 1998 to 2007 (1998, 2000, 2005, 2006); does not support statement on P. 13-56 that "As shown, annual allocation of Class 1 and Class 2 water varies widely in response to hydrologic conditions". Only shows the residual allocation after uncontrolled season in those wetter years and not the total allocation. Could note that in the wetter years only the residual allocation is given or compile the Class 2 deliveries for that year from SCCAO data and provide the correct total allocation.

NRDC-24 3. Tables 13-63 to 13-68- footnote 3 in each table incorrectly states that amounts of reach 1 holding contract deliveries are from the 1922-2004 period.

Responses to Comments from Natural Resources Defense Council and The Bay Institute

NRDC-1: As stated on page 2-36 of the Draft PEIS/R, any mutual agreements to facilitate the actions under Paragraph 13(i) would be negotiated so as not to increase water supply reductions to Friant Division long-term contractors beyond what would have been caused by releases in accordance with the hydrograph releases in Exhibit B of the Settlement. Such agreements may require additional environmental documentation. Listing these actions explicitly in the locations mentioned would go beyond the level of detail appropriate for the identified tables and text and would require undue speculation; thus, the text has not been revised.

NRDC-2a: The commenter provides no specific documentation of the concern raised nor does the commenter provide the basis for their comment regarding the "conservative approach to management of potential flood and seepage impacts from implementing the SJRRP." The approach to minimizing potential increases in flood risk and seepage impacts due to the release of Interim and Restoration flows involves implementing specific measures presented in the project description (see Chapter 2.0, "Description of Alternatives," of the Draft PEIS/R) with any action alternative. Collectively, implementing these measures will minimize flood and seepage impacts due to Interim and Restoration flows and, thus, will maintain impacts at a less than significant level so that mitigation measures would not be required. Text has not been revised.

NRDC-2b: The PEIS/R evaluates flow provisions of the Settlement consistent with the schedule in Exhibit B. The PEIS/R also includes flow modifications that could be implemented based on recommendations from the RA, consistent with the Settlement. The RA is responsible for making recommendations to the Secretary on the release of Interim and Restoration flows. The RA's recommendations would be taken into consideration by the Secretary in making decisions or taking specific actions to be implemented under the Settlement. The action alternatives, as described, do not prohibit flexibility in the release of Interim and Restoration flows, as constrained by then-existing channel capacities. The USACE factor of safety criteria provide the best available criteria for determining channel capacity in such a way as to minimize increases in flood risk. Text has not been revised.

NRDC-3: Page 11-44, lines 19 through 23, of the Draft PEIS/R acknowledge that release of Interim and Restoration flows could create additional space in Millerton Lake during early spring months, thereby reducing, delaying, or avoiding peak snowmelt releases and reducing levee stability risks during these events. In particular, and as shown in Figure 11-18 of the Draft PEIS/R, if Exhibit B flow releases precede flood releases in the spring, additional flood storage space may be created in Millerton Lake, reducing or delaying flood releases.

Text on page 11-23, lines 11 through 16, of the Draft PEIS/R has been revised in response to this and other comments to expand the description of LSJLD responsibilities, facilities, and operations. See Chapter 4.0, "Errata," of this Final PEIS/R.

NRDC-4: Compliance with the Act is identified in the statement of purpose set forth in Chapter 1.0, "Introduction," of the Draft PEIS/R. The Act is thoroughly described in Chapter 28.0, "Consultation, Coordination, and Compliance," of the Draft PEIS/R, including how sections of the Act relate to the content of the Draft PEIS/R; therefore, these descriptions are not repeated in Chapter 16.0, "Land Use Planning and Agricultural Resources," of the Draft PEIS/R.

In addition to the State regulations listed in Chapter 16.0, Chapter 28.0 discusses compliance with 16 other State laws, rules, and regulations for implementing the alternatives. Included is a description of the California State Lands Commission's authority and jurisdiction. As stated on page 28-30, the San Joaquin River is defined as "navigable in fact" from its mouth upstream to approximately 8 miles downstream from SR 99, and is therefore subject to the jurisdiction of the California State Lands Commission. The State Lands Commission is a CEQA Responsible Agency for implementing the SJRRP. Program-level actions that require work on the San Joaquin River would require a lease from the State Lands Commission. Implementing the project-level actions would not cause substantial adverse effects to natural and cultural resources on lands subject to the jurisdiction of the State Lands Commission. The inclusion of this discussion does not change the analysis or conclusions of the Draft PEIS/R. Text has not been revised.

NRDC-5: Comment noted. Page 11-44, lines 19 through 23, of the Draft PEIS/R acknowledge that release of Interim and Restoration flows could create additional space in Millerton Lake during early spring months, thereby reducing, delaying, or avoiding peak snowmelt releases and reducing levee stability risks during these events. In particular, and as shown in Figure 11-18 of the Draft PEIS/R, if Exhibit B flow releases precede flood releases in the spring, additional flood storage space may be created in Millerton Lake, reducing or delaying flood releases. However, the argument that seepage impacts are reduced by providing continuous Restoration Flows and thereby reducing flood flows was not evaluated and should not be concluded. Seepage impacts would be reduced through implementing the Seepage Management Plan (Attachment to Appendix D, "Physical Monitoring and Management Plan," of the Draft PEIS/R).

Text on page 16-41, lines 34 through 36, of the Draft PEIS/R has been revised in response to the comment to reflect that the seepage monitoring and management plan would avoid or reduce inundation and soil saturation effects to agricultural land resulting from implementing the Settlement. See Chapter 4.0, "Errata," of this Final PEIS/R.

NRDC-6: As described in Chapter 2.0, "Description of Alternatives," of the Draft PEIS/R, on page 2-39, new levees would be constructed, potentially along either or both sides of Reach 2B, to create an average floodplain width of between 500 feet and 3,700 feet, and an associated levee system width of between 700 feet and 3,900 feet. Future site-specific project-level documentation for the actions analyzed at a program-level in the PEIS/R will determine floodplain width for site-specific projects. Potential benefits of implementing program-level actions, including floodplain habitat modifications, are described in Chapters 4.0 through Chapter 26.0 of the Draft PEIS/R. Text has not been revised.

NRDC-7: The description of potential modifications in Reach 2B presented in Chapter 2.0, "Description of Alternatives," of the Draft PEIS/R does not preclude the use of adjacent habitat to implement the Settlement. However, description of specific areas where this could potentially occur is beyond the level of detail necessary for the program-level description and analysis of this action presented in the PEIS/R. Text has not been revised.

NRDC-8: Page 2-84 of the Draft PEIS/R explicitly acknowledges the requirements of Paragraph 16(a)(1). Lines 5 through 13 on page 2-84 state "Paragraph 16(a)(1) of the Settlement provides that recapture and recirculation of Interim and Restoration Flows 'shall have no adverse impact on the Restoration Goal, downstream water quality or fisheries.' Because recapture within the Restoration Area could interfere with the ability to achieve the flow targets, recapture within the Restoration Area would occur only if necessary to avoid interfering with in-channel construction activities associated with the Restoration Goal, or to avoid potential material adverse impacts from groundwater seepage (as described in Appendix D, "Physical Monitoring and Management Plan") or for other emergency actions to avoid immediate adverse impacts." On pages 2-31 and 2-36, the Draft PEIS/R also reiterates the requirements of Paragraph 16(a).

Generally, the PEIS/R reiterates the requirements of the Settlement where it enhances the description or analysis. However it does not attempt to reiterate all parts of the Settlement. Text has not been revised.

NRDC-9: Discussion of recapture actions under Alternative B1 explicitly acknowledge the requirements of Paragraph 16(a)(1); lines 13 through 15 on page 2-84 of the Draft PEIR state "Recapture of Interim or Restoration flows at existing facilities would occur only if doing so would not adversely affect downstream water quality or fisheries, consistent with the requirements of Paragraph 16(a)(1) of the Settlement." The discussion of recapture actions under Alternative C1, page 2-86, line 33, has been revised to include a similar statement; see Chapter 4.0, "Errata," of this Final PEIS/R. The description of Alternatives A2, B2, and C2 do not include this language, because these alternatives do not add actions related to the recapture of Interim and Restoration flows beyond those described under Alternatives A1, B1, and C1, respectively. Rather than reiterate the actions these alternatives have in common with preceding descriptions of other alternatives, the discussion under Alternatives A2, B2, and C2 simply state that project-level actions in Alternative A2 are identical to project-level actions in Alternative A1, and that program-level actions in Alternatives A2, B2, and C2 include all of the program-level actions described in Alternatives A1, B1, or C1, accordingly.

NRDC-10: The supplemental analyses pertaining to Delta pumping restrictions described in Appendix I, "Supplemental Hydrologic and Operations Analyses," of the Draft PEIS/R are superseded by the sensitivity analyses presented in Appendix C, "CVP/SWP Long-Term Operations Sensitivity Analyses," of this Final PEIS/R. As described in Appendix C of this Final PEIS/R, the significance conclusions referenced in the comment remain unchanged from the Draft PEIS/R, and the sensitivity analyses conclude that effects associated with changes in Delta inflows and diversions resulting from implementing the Settlement would remain less than significant and beneficial. Text has not been revised.

NRDC-11: Chapter 12.0, "Hydrology - Groundwater," of the Draft PEIS/R states that natural recharge along the San Joaquin River could result in reduced groundwater decline in areas in the vicinity of the San Joaquin River, a benefit to declining groundwater levels in this region. Although implementing the action alternatives would lead to some natural recharge along the San Joaquin River, groundwater levels near the San Joaquin River are not anticipated to have a significant effect on regional groundwater levels in the surrounding CVP/SWP water service areas. Raising groundwater levels along the river would be unlikely to result in a regional groundwater-level increase across all Friant Division long-term contractor district areas because of numerous factors such as heterogeneity of the aquifer system (i.e., interfingering of clays, silts, and sands) that could limit connectivity of units along the river to the regional aquifer system and increased pumping of private and municipal wells. Text has not been revised.

NRDC-12: Surface water supply and groundwater are identified and analyzed as separate resources in the PEIS/R consistent with the CEQA Regulations and State CEQA Guidelines. The evaluation of potential impacts to each resource area addressed in the PEIS/R includes consideration of the combined effects of potential changes in related resource areas. Chapter 26.0, “Cumulative Impacts,” of the Draft PEIS/R provides an analysis of overall cumulative effects of the action alternatives taken together with other past, present, and reasonably foreseeable probable future projects (or actions).

Page 12-121 of the Draft PEIS/R states that natural recharge along the San Joaquin River could result in reduced groundwater decline in areas in the vicinity of the San Joaquin River, a benefit to declining groundwater levels in this region. Although implementing the action alternatives would lead to some natural recharge along the San Joaquin River, groundwater levels near the San Joaquin River are not anticipated to have a significant effect on regional groundwater levels in the surrounding CVP/SWP water service areas. Raising groundwater levels along the river would be unlikely to result in a regional groundwater-level increase across all Friant Division long-term contractor district areas because of numerous factors such as heterogeneity of the aquifer system (i.e., interfingering of clays, silts, and sands) that could limit connectivity of units along the river to the regional aquifer system and increased pumping of private and municipal wells.

Table ES-7 of the Draft PEIS/R presents the range of simulated reduction in long-term average annual water supply deliveries to Friant Division long-term contractors under the No-Action and action alternatives. While recharge along the San Joaquin River could benefit groundwater supplies in a small portion of the Friant Division, this recharge is not considered a water supply delivery, and is therefore not reflected in Table ES-7.

Text has not been revised.

NRDC-13a: The lead agencies agree that water districts and individual farmers control groundwater pumping decisions within the San Joaquin River basin, and that neither Federal nor State agencies manage or regulate groundwater pumping in the study area. Currently, land along the San Joaquin River does not overlay adjudicated groundwater subbasins; thus, the overlying landowners may extract percolating groundwater for

beneficial use without seeking approval from SWRCB. Text on page 12-121, line 14, of the Draft PEIS/R has been revised in response to the comment to clarify that the potential for accelerated overdraft under the action alternatives could lead to private well owners abandoning or deepening groundwater wells sooner than would be necessary under the No-Action Alternative if groundwater levels are drawn below existing well screens. Costs for deepening groundwater wells, lowering pumps in the wells, constructing new groundwater wells, or abandoning wells would be the responsibility of private well owners. As noted on page 12-113, a discussion of the potential cost implications of deepening groundwater wells, lowering pumps, constructing new wells, or abandoning wells is provided in Chapter 22.0, "Socioeconomics," of the Draft PEIS/R. If groundwater wells are abandoned, it would also be the responsibility of private well owners to decommission the wells properly in accordance with standards developed by DWR pursuant to Section 13800 of the California Code and adopted by SWRCB or local agencies in accordance with Section 13801 of the California Water Code. See revision in Chapter 4.0, "Errata," of this Final PEIS/R.

NRDC-13b: Comment noted. The lead agencies agree with the commenter that the requirements of Paragraph 16 of the Settlement should reduce the potential surface water supply impacts to the Friant Division. The effects of those factors noted by the commenter (the RWA, new and expanded groundwater recharge facilities, the potential for flood flow releases to meet Restoration Flow targets, recapture, and recirculation) on changes in surface water supply deliveries to the Friant Division are included in the analyses presented in the Draft PEIS/R, as summarized below.

All action alternatives include implementing Paragraph 16 actions, and the net effect of changes in water supply is used as the basis for evaluating impacts. As described in Chapter 13.0, "Hydrology – Surface Water Supply Facilities and Operations," of the Draft PEIS/R, changes in surface water supply deliveries to Friant Division long-term contractors are presented in two scenarios to account for uncertainty in the specific formulation of the final Recapture and Recirculation Plan. One scenario would recirculate all recaptured water, estimated using the approach described above, to the Friant Division, using supplies available after all other south-of-Delta contractual obligations are fulfilled (representing a lower bound of surface water supply impacts to Friant Division long-term contractors). A second scenario would recirculate no recaptured water to the Friant Division (representing an upper bound of surface water supply impacts to Friant Division long-term contractors). Results of these scenarios are summarized on page 13-187 of the Draft PEIS/R. The results of these scenarios were post-processed to provide information to support quantitative analyses of impacts to groundwater, power and energy, and socioeconomics in the Draft PEIS/R. Under the first scenario, the amount of groundwater pumping that could potentially take place to replace surface water supplies would be less than under the second scenario. Groundwater pumping under the first scenario is referred to as "relatively low," because this scenario would result in a lower impact relative to groundwater pumping that could take place under the second scenario (in which groundwater pumping would be expected to be "relatively high"). This terminology is used consistently throughout Chapter 12.0, "Hydrology – Groundwater," of the Draft PEIS/R to distinguish between the maximum and minimum of the range of potential impacts.

Chapter 12.0, "Hydrology - Groundwater," of the Draft PEIS/R states that natural recharge along the San Joaquin River could result in reduced groundwater decline in areas in the vicinity of the San Joaquin River, a benefit to declining groundwater levels in this region. Although implementing the action alternatives would lead to some natural recharge along the San Joaquin River, groundwater levels near the San Joaquin River are not anticipated to have a significant effect on regional groundwater levels in the surrounding CVP/SWP water service areas. Raising groundwater levels along the river would be unlikely to result in a regional groundwater-level increase across all Friant Division long-term contractor district areas because of numerous factors such as heterogeneity of the aquifer system (i.e., interfingering of clays, silts, and sands) that could limit connectivity of units along the river to the regional aquifer system and increased pumping of private and municipal wells.

Water supply impacts to Friant Division long-term contractors are based on simulated Friant Dam operations that account for the RWA, new and expanded groundwater recharge facilities, and flood releases that contribute to meeting Restoration Flow targets. While delivery of water supplies to the Friant Division pursuant to Paragraph 16 would reduce potential water supply impacts to the Friant Division, as shown in Table ES-7 of the Draft PEIS/R, the analyses indicate that the overall impact to groundwater would remain potentially significant and unavoidable, as described on page 12-121 of the Draft PEIS/R. The process used to simulate distribution of Paragraph 16 water to different Friant Division long-term contractors to support the analyses presented in the Draft PEIS/R is described in Appendix H, “Modeling,” of the Draft PEIS/R.

As described on page 2-29 of the Draft PEIS/R, consistent with Paragraph 16(b) of the Settlement, Reclamation would identify delivery reductions to Friant Division long-term contractors associated with the release of Interim and Restoration flows, as part of the RWA stipulated for implementation under Paragraph 16(b). Paragraph 16(b) also provides for delivery of water during wet hydrologic conditions to Friant Division long-term contractors at a cost of $10 per acre-foot. Implementing Paragraph 16(b) actions could affect the amount of water that is released to the San Joaquin River in excess of Restoration Flow requirements during wet periods.

The CalSim II surface water operational modeling conducted in support of the analyses presented in the Draft PEIS/R captures the effects of Paragraph 16 requirements, as described beginning on page 3-18 of Appendix H, “Modeling,” of the Draft PEIS/R. As described on page 3-19 of Appendix H, Paragraph 16(b) of the Settlement allows for delivery of surplus water to Friant Division long-term contractors for $10 per acre-foot. Typically, when surplus water is available, demand for water in the Friant Division is low. Therefore, development of a system of groundwater banks serviceable from the Friant- Kern and Madera canals was assumed to allow for greater capture of available surplus, as described in the Paragraph 16(b) Actions Considered in Program Alternatives Attachment to Appendix G, “Plan Formulation,” of the Draft PEIS/R.

For the purposes of quantifying reductions in water supply deliveries to the Friant Division, flood flow releases from Millerton Lake could meet or contribute to meeting Restoration Flow targets. As shown in Table ES-7 and Tables 13-63 through 13-68, the

potential for flood flow releases to contribute to Restoration Flow targets would offset water supply impacts to the Friant Division in some years.

Text has not been revised.

NRDC-14: Because of the amount of land cultivated by the Friant Division long-term contractors (approximately 854,000 acres, as described in Appendix H, "Modeling," of the Draft PEIS/R, Table 6-9), even a roughly 1 percent reduction in irrigated acreage would be a substantial amount of land and, thus, would be a significant effect on agricultural resources.

As described in Chapter 16.0, "Land Use Planning and Agricultural Resources," of the Draft PEIS/R, the analysis of Impact LUP-8, Substantial Diminishment of Agricultural Land Resource Quality and Importance Because of Altered Water Deliveries, does not "assume that groundwater pumping will be used to make up for all of the water reductions." Rather, it concludes that even with additional groundwater pumping, reduced water deliveries would cause a substantial effect on agricultural land resource quality and importance.

This conclusion is based in part on the integrated modeling of changes in agricultural production, regional socioeconomics, groundwater levels, and deliveries of surface water that is described in Appendix H, "Modeling," of the Draft PEIS/R. As part of this integrated modeling, simulations using CVPM were conducted to assess the effects on agricultural crop production. In these simulations, if the cost of accessing groundwater was too large to generate positive net returns to crop production, agricultural land was idled (see Appendix H, pages 6-2 through 6-15). Thus, agricultural production could be impacted by a reduction in deliveries of surface water, despite the potential availability of groundwater. Furthermore, the discussion of Impact LUP-8 notes that these CVPM simulations do not address all issues affecting the replacement of some water deliveries with additional groundwater pumping, including limited access to adequate quality groundwater. It also notes that these issues could affect agricultural productivity, and that irrigated acreages could be reduced by more than 1,000 acres. In part for this reason, the Draft PEIS/R concludes that this impact would be significant and unavoidable.

NRDC-15: Table ES-7 in the Executive Summary of the Draft PEIS/R, has been revised in response to this comment to provide greater detail and clarity. See Chapter 4.0, "Errata," of this Final PEIS/R.

NRDC-16: Table 12-22 on page 12-96 of the Draft PEIS/R has been revised to clarify that the percent increases reported in Table 12-22 are increases in surface water deliveries, not increases in groundwater pumping. Although the analyses provide output categorized by district, it should not be construed as a precise forecast of conditions that would occur at the district level. Instead, the analyses provide an estimate of trends in groundwater conditions in the region, at a level of detail sufficient for evaluating and comparing alternatives. See Chapter 4.0, "Errata," of this Final PEIS/R.

NRDC-17: The text referenced in the comment states that operation of reservoirs upstream from Millerton Lake affects inflow to Millerton Lake. In the interest of managing the size of the PEIS/R, unnecessary detail is not presented. Further discussion of the effects of policies and facilities upstream from Millerton Lake is beyond the level of detail appropriate for the PEIS/R. Millerton Lake storage and flows in Reach 1 are compared in graphs and tables beginning on page 13-87 of the Draft PEIS/R for informational purposes. Text has not been revised.

NRDC-18: The information recommended for inclusion in the PEIS/R is beyond the level of detail necessary to support the analyses and conclusions presented in the PEIS/R; therefore, the text has not been revised.

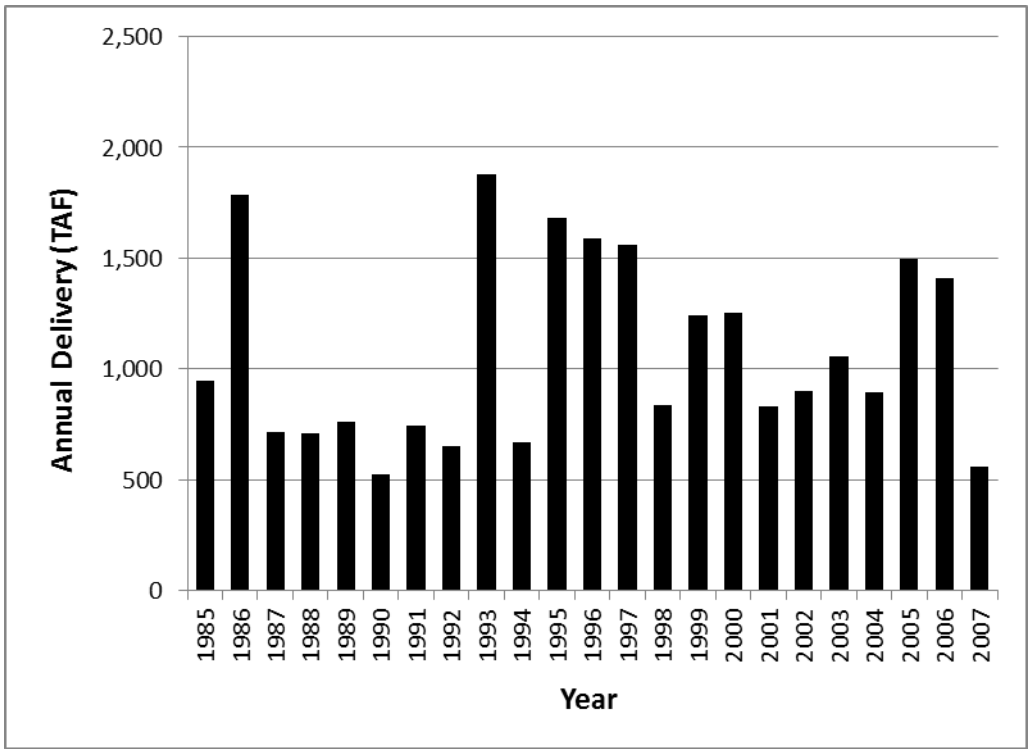
NRDC-19: The table referenced lists the source of information at the bottom of the table as "[s]ummarized from SJR5Q flow and temperature model." As the commenter correctly notes, the sub-monthly flow information presented in this table is disaggregated from the monthly water supply model CalSim II. The use of both SJR5Q and CalSim-II is described in Appendix H, "Modeling," of the Draft PEIS/R. Text has not been revised.

NRDC-20: The potential project by Orange Cove ID, in partnership with the Friant Power Authority, to construct a new powerhouse at Friant Dam is described on page 19-6, lines 1 through 10, and page 26-29, lines 21 through 31, of the Draft PEIS/R. Generation of hydropower through this project could offset some of the reduction in generation at Friant-Kern and Madera canals anticipated to occur as a result of implementing the Settlement. Text has not been revised.

NRDC-21: The requested content is provided in several locations in the Draft PEIS/R. See Chapter 13.0, "Hydrology – Surface Water Supplies and Facilities Operations," of the Draft PEIS/R, Tables 13-69 and 13-70, and the Temperature Modeling Output – SJR5Q Attachment to Appendix H, "Modeling," of the Draft PEIS/R, including Tables 1 through 5 and pages 73 through 80. Text has not been revised.

NRDC-22: Text on pages 12-92 through 12-98, in notes of Tables 12-20 through 12-23 of the Draft PEIS/R, has been revised in response to the comment. See Chapter 4.0, "Errata," of this Final PEIS/R.

NRDC-23: Text on page 13-57, in notes of Figure 13-30 of the Draft PEIS/R, has been revised to clarify that Figure 13-30 shows the historical declared allocation of water to Friant Division contractors. See revision in Chapter 4.0, "Errata," of this Final PEIS/R. Actual historical delivery of Class 2 water supplies may be less than, but do not exceed, declared allocations. Total deliveries beginning in 1985 are made publicly available by Reclamation's Central Valley Operations office at www.usbr.gov/mp/cvo/deliv.html. Historical water deliveries to Friant Division long-term contractors from 1985 through 2007 are shown for comparison in Figure 3.9-1.



Source: Reclamation 2012.

Figure 3.9-1.
Historical Deliveries to Friant Division Long-Term Contractors

NRDC-24: Text on pages 13-92 through 13-98, in notes of Tables 13-63 through 13-68 of the Draft PEIS/R, has been revised to clarify that the amounts in the table are approximate based on recent historical deliveries during water years 1922 through 2004 (October 1921 through September 2003). See Chapter 4.0, "Errata," of this Final PEIS/R.

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3.9.6 PRBO Conservation Science

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21 September 2011

Alicia Forsythe
SJRRP Program Manager
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2800 Cottage Way, MP-170
Sacramento, CA 95825

Dear Ms. Forsythe,

On behalf of PRBO Conservation Science, we respectfully submit this letter which provides comments on the San Joaquin River Restoration Draft Programmatic EIS/EIR. PRBO Conservation Science (formerly the Point Reyes Bird Observatory) is a non-profit organization with a mission to conserve birds, other wildlife, and ecosystems through innovative scientific research and outreach. PRBO's highest priority is to develop and promote conservation practices that address the challenges of rapid environmental change. PRBO Conservation Science has collected data on songbird use of riparian habitats throughout the Central Valley since 1993. Our comments herein are focused primarily on those portions of the Draft EIS/EIR that relate to bird use of riparian habitats, monitoring response to restoration, and climate change.

PRBO Conservation Science supports the implementation of the Settlement, and encourages Reclamation and its partners to look beyond simply restoring channel capacity and side habitat as necessary to support target fish populations, and aim to generate a more ecologically valuable restoration project. The anticipated net increase in riparian and wetland habitat represents a phenomenal opportunity to expand the benefits of this project to other wildlife, increase the overall ecological resilience of the system, and provide increased River use and value to Valley residents and visitors.

With the loss of over 95 percent of California's riparian habitat, it is essential that riparian restoration projects broaden their scope beyond the needs of individual species and take an ecosystem-based approach. In particular, PRBO recommends including specific restoration objectives for taxa beyond fish and to include objectives that could increase ecological resilience.

GENERAL COMMENTS:

PRBO-1

The conclusion of Chapter 6 is that the impacts of the Restoration Alternatives on most elements of vegetation and wildlife within the Restoration Area will be less than significant or beneficial (as summarized in Table 6-5). The report does however acknowledge that there will be impacts to riparian vegetation and associated wildlife. On Page 6-56 the Draft EIS/EIR states:

> "To summarize, some actions under Alternatives A1 and B1, such as creation and enhancement of floodplain habitat, would result in potentially beneficial effects and overall direct and indirect impacts on riparian habitat, emergent wetland, and other sensitive natural communities in the Restoration Area would be less than significant with implementation of the riparian habitat and sensitive natural communities conservation measures (as described in Chapter 2.0, "Description of Alternatives").

While we agree that the net effects will likely be beneficial, this paragraph does point out the importance of the implementation of the conservation measures described in Chapter 2.0. These conservation measures (RHSNC-1 and RHSNC-2, page 2-74) will help ensure that the net effect of the restoration project for riparian vegetation and wildlife is positive. These two conservation measures appear to focus only on monitoring physical habitat. We strongly encourage the consideration of wildlife monitoring, to help determine whether the needs of the entire system are being met. Specifically we suggest incorporating songbird monitoring in these conservation measures to ensure that the net effects of the restoration are positive. Additionally, assessing the bird response to restoration activities will help inform the population targets identified by the Central Valley Joint Venture[1].

Birds are excellent indicators of ecosystem function[2,3] and songbird monitoring can be used to evaluate the success of this restoration for organisms other than fish, thus transforming a single-species focused restoration project into a multi-species community-based effort that will generate a more ecologically valuable restoration project. This approach has been successfully implemented in another salmonid-focused riparian restoration project in California, that of

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[1] Central Valley Joint Venture. 2006. Central Valley Joint Venture Implementation Plan – Conserving Bird Habitat. U.S. Fish and Wildlife Service, Sacramento, CA. http://www.centralvalleyjointventure.org/assets/pdf/CVJV_fnl.pdf

[2] Carigan, V., and M.-A. Villard. 2002. Selecting indicator species to monitor ecological integrity: a review. Environmental Monitoring and Assessment 78:45-61.

[3] Chase, M.K., and G.R. Geupel. 2005. The Use of Avian Focal Species for Conservation Planning in California. In Bird Conservation Implementation and Integration in the Americas: Proceedings of the Third International Partners in Flight Conference 2002 (C.J. Ralph and T.D. Rich, eds.). U.S.D.A. Forest Service, General Technical Report PSW-GTR-191.

Clear Creek, in Shasta County[4]. One benefit of this approach is that birds are likely to respond rapidly and positively to riparian restoration, as has been the case in the Sacramento Valley[5], thereby providing an efficient means to assess success and communicate to the public. Monitoring recommendations for birds and related vegetation and a long-term monitoring plan to evaluate bird communities along the San Joaquin River have previously been reported to the Bureau of Reclamation[6].

PRBO-1 cont'd

In summary, the Conservation Strategy could be strengthened by including wildlife monitoring that could be used in an adaptive management framework to ensure this dramatic restoration effort is as effective as it possibly can be.

PRBO-2

Chapter 7 reviews the potential impacts of the program and project alternatives in terms of greenhouse gas emissions and carbon sequestration and finds that the alternatives in terms of ongoing project operational impacts: (1) do not have the potential to conflict or be inconsistent with plans to reduce or mitigate GHG's, (2) could result in GHG emissions that would be large in comparison to the amount of emissions for major facilities that are required to report GHG emissions, and (3) would have limited potential to contribute to a lower carbon future. Additionally, program level construction-related GHG emissions are projected to be "potentially significant and unavoidable." We see no reason to dispute these findings, but feel the chapter is difficult to understand, largely due to how it is organized.

Additionally, we have several specific comments that will hopefully improve this report.

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[4] Burnett, R.D., T. Gardali, and G.R. Geupel. 2005. Using Songbird Monitoring to Guide and Evaluate Riparian Restoration in Salmonid-Focused Stream Rehabilitation Projects. In Bird Conservation Implementation and Integration in the Americas: Proceedings of the Third International Partners in Flight Conference 2002 (C.J. Ralph and T.D. Rich, eds.). U.S.D.A. Forest Service, General Technical Report PSW-GTR-191.

[5] Gardali, T., A.L. Holmes, S.L. Small, N. Nur, G.R. Geupel, and G.H. Golet. 2006. Abundance patterns of songbirds in restored and remnant riparian forests on the Sacramento River, California, USA. Restoration Ecology 14:391-403.

[6] Cormier, R.L., J. K. Wood, C.A. Howell, T. Gardali, M. Herzog, and G.R. Geupel. 2006. Bird Inventory and Monitoring Along the San Joaquin River: 2003 – 2005 Comprehensive Report. Submitted To San Joaquin River Riparian Habitat Restoration Program, SJRRHRP Program Manager, U.S. Dept. of the Interior, Bureau of Reclamation.

SPECIFIC COMMENTS:

PRBO-3 On Page 2-52, lines 19-22, the draft EIS/EIR states:

> "Long-term management actions for channel capacity may include, but would not be limited to, providing a larger floodplain between levees through the acquisition of land and construction of setback levees, regrading of land between levees, construction of sediment traps, construction of grade control structures, or channel grading."

If the Bureau of Reclamation and its partners, through implementation of this Settlement, aim to establish riparian vegetation for the long term, management actions 'must' include, and not be limited to, those items mentioned. Also channel grading should include natural meander. Straight, deep channels are not good for flood events, maintaining structural diversity of vegetation, or supporting diverse songbird populations.

PRBO-4 On Page 2-52, 23-25, we suggest adding 'planting of native vegetation – horticultural restoration may be required' as well as ongoing control of non-native invasive plants, to ensure establishment and structural diversity of the riparian forests.

PRBO-5 Beginning on Page 2-52, Section 2.4.4 "Conservation Strategy" mentions the conservation of special status species, but this section should also address the monitoring and maintenance of focal bird species, as described by the Riparian Habitat Joint Venture[7], which serve as indicators of a functioning riparian system.

PRBO-6 On Page 6-1, Lines 19-24: The two sentences found on lines 16-18 are repeated three times on lines 19-24.

PRBO-7 On page 6-2, Lines 16-20, the Draft EIS/EIR states:

> "[The San Joaquin River] flowed through a flat, homogeneous topography and supported a limited riparian forest. The flat valley floor surrounding the riparian forest often took the form of extensive wetlands, dominated by tule marsh. Riparian forest zones were present along the margins of the primary river channel and were not very extensive (The Bay Institute 1998)."

The terms "limited riparian forest" and "not very extensive" are vague and open to interpretation. We encourage the authors to consider giving a range of the possible width of the riparian zone – is "not very extensive" 1-2 km, or 100-200 km? Also, for context, is it possible to compare the historic width to current riparian acreage or zone width?

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[7] Riparian Habitat Joint Venture. 2004. The Riparian Bird Conservation Plan: A strategy for reversing the decline of riparian associated birds in California. http://www.prbo.org/calpif/pdfs/riparian_v-2.pdf

PRBO-8

On Page 6-3, lines 6-8, the Draft EIS/EIR states:

> "The preserves furnish important native habitats, including valley oak and mixed riparian forests and seasonal and permanent wetlands, to support and benefit wildlife species, particularly those of special concern."

Given that California has a "Species of Special Concern" program which doesn't include species that are State threatened or endangered, (http://www.dfg.ca.gov/wildlife/nongame/ssc/), it might be better to use a different term at the end of this sentence to avoid confusion. Perhaps "special status species" would be a better phrase.

PRBO-9

On Page 6-6, lines 40-41, the Draft EIS/EIR states:

> "Information on special-status plant and wildlife species was compiled through a review of the following sources:"

We note that the California DFG Species of Special Concern documents are not included in this list of sources. Though we are aware that these lists were considered in compiling the lists of special status species, they may provide much additional information that would be useful to the EIS/EIR authors – the California Bird Species of Special Concern document[8], for example, provides detailed species accounts.

PRBO-10

Page 6-8, line 33 through Page 6-9, line 4: This paragraph does a decent job of capturing some of the bird species that use mature riparian areas, but this is by no means a complete list. It is unclear why these particular species were chosen to be highlighted here; if the authors' intent was to fully describe the migratory and resident bird species that nest and forage in riparian areas, a table that lists the full complement of species seems more appropriate.

PRBO-11

On Page 6-28, lines 21-22, the Draft EIS/EIR states:

> "A total of 63 special-status wildlife species have been recorded historically in the region, and are known or have potential to occur in the Restoration Area."

This statement is contradictory to an earlier one in this same chapter. The Draft EIS/EIR defines special-status wildlife species on Page 6-27, line 29 through Page 6-28, line 7, as follows:

> "For the purpose of this document, special-status species are … Birds that receive protection under … the Migratory Bird Treaty Act (MBTA) (All birds except European

[8] Shuford, W. D., and Gardali, T., editors. 2008. California Bird Species of Special Concern: A ranked assessment of species, subspecies, and distinct populations of birds of immediate conservation concernin California. Studies of Western Birds 1. Western Field Ornithologists, Camarillo, California, and California Department of Fish and Game, Sacramento. http://www.dfg.ca.gov/wildlife/nongame/ssc/birds.html.

starlings, English house sparrows, rock doves (pigeons), and nonmigratory game birds such as quail, pheasant, and grouse are protected under the MBTA.)"

PRBO-11 cont'd

If in fact this list of special-status wildlife includes all birds that received protection under the Migratory Bird Treaty Act, then 63 is inaccurate. For example, in the stretch from the Friant Dam to Merced River, 128 bird species were recorded during breeding season surveys conducted in 2003, 2004, and 2005[9]. When bird species that occur only during migration or winter are included, this number would be even higher.

On Page 6-32, line 26, the Draft EIS/EIR states:

"No special-status plants or animals are identified in Reach 1B".

PRBO-12

Again, the authors are unclear as to the definition of "special-status species". If special-status includes all birds protected under the MBTA, then certainly there must be a number of species that use Reach 1B.

On Page 6-33, lines 4-8, the Draft EIS/EIR states:

PRBO-13

"Western yellow-billed cuckoo (*Coccyzus americanus occidentalis*) has been documented in the riparian and willow scrub habitats around the Mendota Pool in the 1950s (DFG 2011a). Bank swallows (*Riparia riparia*), which use habitats along banks or bluffs usually adjacent to water, have been documented in the vicinity of the Mendota Pool."

And on page 6-33, lines 12-13, the Draft EIS/EIR states:

"Giant garter snake, western pond turtle, and western yellow-billed cuckoo are documented as occurring in suitable habitats in Reach 3."

PRBO-14

Since our monitoring efforts in the Central Valley began in 1993, PRBO has not detected Yellow-billed Cuckoos anywhere on the San Joaquin River (http://data.prbo.org), and to our knowledge they do not breed in the San Joaquin Valley. For improved clarity, we recommend the authors amend these paragraphs to specify that, while Western yellow-billed cuckoo and bank swallow have been historically documented along the San Joaquin River, they are currently extirpated from the Restoration Area.

[9] Cormier, R.L., J. K. Wood, C.A. Howell, T. Gardali, M. Herzog, and G.R. Geupel. 2006. Bird Inventory and Monitoring Along the San Joaquin River: 2003 – 2005 Comprehensive Report. Submitted To San Joaquin River Riparian Habitat Restoration Program, SJRRHRP Program Manager, U.S. Dept. of the Interior, Bureau of Reclamation.

PRBO-15 On Page 6-34, line 29, the Draft EIS/EIR mentions the presence of Northern Harrier only under Reach 4; however, this species could potentially occur in all Restoration Area reaches where suitable habitat is present.

PRBO-16 On Page 6-36, lines 7-14, the Draft EIS/EIR states:

> "The California condor (*Gymnogyps californianus*), lightfooted clapper rail (*Rallus longirostris levipes*), … Belding's Savannah sparrow (*Passerculus sandwichensis beldingi*), … are examples of species that have been listed as threatened or endangered under the ESA and that could occur within the CVP/SWP water service areas."

To the best of our knowledge, the Belding's savannah sparrow is not currently listed as threatened or endangered under the Endangered Species Act[10].

PRBO-17 On Page 6-66, Table 6, the Draft EIS/EIR states:

> "Yellow warbler and yellow-breasted chat currently are not known to nest within the San Joaquin Valley. Although these species are not known to currently nest in the Restoration Area, potentially suitable habitat may be present."

Yellow warblers do indeed nest in the San Joaquin Valley – there is a small population on the San Joaquin River National Wildlife Refuge[11], and hence likely other areas with suitable habitat along the San Joaquin River[12].

Chapter 7

PRBO-18 To help with readability and clarity, all the background materials in 7.1 and 7.2 (pages 7-1 to 7-14) could be moved to an Appendix and/or be substantially reduced, particularly since relevant CEQA guidelines (for example) are substantially referenced in the main text anyway. It is not clear that this much background information is required, since it is all available from other

[10] http://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=B088

[11] Howell, C.A., and M.D. Dettling. 2009. Least Bell's Vireo Monitoring, Nest Predation Threat Assessment, and Cowbird Parasitism Threat Assessment at the San Joaquin River National Wildlife Refuge 2008 Field Season Final Report. Submitted to U.S. Fish and Wildlife Service & U.S. Bureau of Reclamation.

[12] Heath, S.K. 2008. Yellow Warbler species account. In Shuford, W. D., and Gardali, T., editors. 2008. California Bird Species of Special Concern: A ranked assessment of species, subspecies, and distinct populations of birds of immediate conservation concern in California. Studies of Western Birds 1. Western Field Ornithologists, Camarillo, California, and California Department of Fish and Game, Sacramento. http://www.dfg.ca.gov/wildlife/nongame/ssc/birds.html.

PRBO-18 cont'd sources and is mostly not specifically relevant to the project area. It would be more useful to focus more concisely on how these factors impact or pertain to the program.

PRBO-19 To better understand the future and long term cumulative GHG emissions related to the project alternatives (as summarized in Table 7-4) it would be useful to include a summary of the information in the attachment to Appendix I ("Potential implications of projected regional climate change and sea level rise") and how it relates to the information presented here. It is not clear to what extent this information was consulted in producing the projections listed in Table 7-4.

PRBO-20 It would be useful to summarize the specific potential mitigation measures (rather than just the general strategies listed in Table 7-6) in a table, along with the assumptions/projections of effectiveness (including those in Table 7-6). In its present form it is difficult to understand the purpose of Table 7-6 – it would be more useful if put in the context of potential scenarios – i.e., give examples of how many renewable energy generation projects, or how much carbon offset purchasing might be feasible.

PRBO-21 It seems possible to also include the range of potential sequestration values by types of vegetation cover that might be produced from various project/program activities, rather than just fallow agricultural or riparian. Is there potential for enhanced grassland production as well? How do the various agricultural practices compare to natural cover types in terms of carbon sequestration potential?

Chapter 21

PRBO-22 On Page 11, lines 3 – 7, the Draft EIS/EIR states:

> "Wildlife viewing and nature observation occur throughout the Restoration Area, although mainly in Reaches 1, 4, and 5, where public access to the river and adjacent lands exists. There are many opportunities to see wildlife and appreciate nature, from viewing fish at the San Joaquin Hatchery to observing sandhill cranes in the San Luis NWR."

PRBO-23 It would be useful to mention, in addition, the year-round bird watching opportunities in the Restoration Area; San Luis NWR and many of the parks along the San Joaquin River provide excellent opportunities to observe breeding, wintering, and migrating birds.

Appendix L

PRBO-24 On Table 2, page L-14, the Draft EIS/EIR states: "Western Yellow-billed Cuckoo (nesting) – known to nest in suitable habitat in restoration area". Since our monitoring efforts in the Central Valley began in 1993, PRBO has not detected this species anywhere on the San Joaquin River (http://data.prbo.org). The current breeding range of Yellow-billed cuckoos in California is

PRBO-24 cont'd

generally restricted to the Sacramento Valley, the Kern River, and the lower Colorado River[13]. For improved clarity, the wording herein should be changed to "potential to nest", to match the species account description in Appendix L, page 3-38, lines 6-11 of the Draft EIS/EIR, which states that: "no cuckoos have been observed in recent years…this species has the potential to nest in suitable habitats in the Restoration Area."

PRBO-25

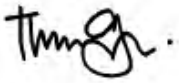
On Table 2, page L-14, the Draft EIS/EIR states that Bank Swallow are "known to nest in suitable habitat near Mendota Pool". PRBO has only detected one Bank Swallow in the San Joaquin Valley since 1993 (http://data.prbo.org), and to our knowledge they do not breed in the San Joaquin Valley. For improved clarity, it would be useful to amend this section to state that Bank Swallows were historic nesters but are currently extirpated from the Restoration Area.

PRBO-26

On Appendix L, page 3-47, lines 9-10, the Draft EIS/EIR states that Yellow-breasted Chat currently "breeds in only a small portion of the Sacramento Valley, and very few locations in the San Joaquin Valley". To our knowledge this species does not breed in the San Joaquin Valley, although there have been occasional observations of individuals[14].

Thank you for your consideration of these comments.

Respectfully submitted,



Thomas Gardali
Director, Pacific Coast and Central Valley Group
PRBO Conservation Science

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[13] Dettling, M.D. and C.A. Howell. 2011. Status of the Yellow-billed Cuckoo along the Sacramento River in 2010. Submitted to California Department of Fish and Game.

[14] Comrack, L.A. 2008. Yellow-breasted Chat species account. In Shuford, W. D., and Gardali, T., editors. 2008. California Bird Species of Special Concern: A ranked assessment of species, subspecies, and distinct populations of birds of immediate conservation concern in California. Studies of Western Birds 1. Western Field Ornithologists, Camarillo, California, and California Department of Fish and Game, Sacramento. http://www.dfg.ca.gov/wildlife/nongame/ssc/birds.html.e

Responses to Comments from PRBO Conservation Science

PRBO-1: As noted in the comment, the conservation measures included in the Conservation Strategy (beginning on page 2-52 of the Draft PEIS/R), and in particular measures RHSNC-1 and RHSNC-2, would help ensure that the net effects of the action alternatives are beneficial and that impacts to sensitive biological resources (including wildlife) are minimized or avoided. To those ends, Conservation Measure RHSNC-2 (on page 2-74 of the Draft PEIS/R) would require development and implementation, in coordination with DFG, of a Riparian Habitat Mitigation and Monitoring Plan for the SJRRP. The Riparian Habitat Mitigation and Monitoring Plan would monitor changes in acreage and/or ecological functions of riparian and wetland habitats resulting from implementing Settlement actions. As an ecological function, wildlife habitat monitoring would be considered as part of the Riparian Habitat Mitigation and Monitoring Plan. The monitoring component of the plan would be developed in coordination with DFG, and within the context of meeting regulatory requirements and constraints, such as access limitations.

Wildlife monitoring for specific species or for specific actions, such as construction activities, is specified within the Conservation Strategy. Wildlife monitoring beyond the measures identified in the Conservation Strategy is not currently envisioned as necessary to the purposes of the PEIS/R. While it is not currently included, the action alternatives presented in the PEIS/R do not preclude incorporation of wildlife monitoring in the future. Text has not been revised.

PRBO-2: Comment noted. Chapter 7.0, "Climate Change and Greenhouse Gas Emissions," of the Draft PEIS/R is organized in the same way as all other resource chapters (Chapters 4.0 through 26.0). Each resource chapter describes the environmental and regulatory setting for the resources and the environmental impact analysis and proposed mitigation measures for impacts that are not less than significant. This comment does not raise issues or concerns specific to the environmental analysis presented in the Draft PEIS/R. Text has not been revised.

PRBO-3: Comment noted. The need for implementing the long-term management actions referred to in this comment, and details of those actions, would be determined through the processes described in Appendix D, "Physical Monitoring and Management Plan," of the Draft PEIS/R. The comment does not raise issues or concerns specific to the environmental analysis presented in the Draft PEIS/R. Text has not been revised.

PRBO-4: The section referenced in this comment includes active planting and irrigation; in the interest of managing the size of the PEIS/R, additional detail is not presented. Control of invasive species is addressed through the Conservation Strategy, described in Chapter 2.0, "Description of Alternatives," of the Draft PEIS/R. Text has not been revised.

PRBO-5: The Conservation Strategy, beginning on page 2-52 of the Draft PEIS/R, includes measures related to bird species subject to the Migratory Bird Treaty Act, as well as measures related to riparian and critical habitat. These include CH-1, CH-2, EAGLE-1, SWH-1, SWH-2, RAPTOR-1, RAPTOR-2, MBTA-1, RHSNC-1, and

RHSNC-2, as described in Table 2-2, beginning on page 2-55 of the Draft PEIS/R. Text has not been revised.

PRBO-6: The redundant text identified in the comment, on page 6-1, lines 19 through 24, of the Draft PEIS/R, has been removed. See Chapter 4.0, "Errata," of this Final PEIS/R.

PRBO-7: The commenter is referred to the document cited in the quoted text from page 6-2 of the Draft PEIS/R, *From the Sierra to the Sea: The Ecological History of the San Francisco Bay-Delta Watershed* (The Bay Institute 1998). This reference includes full-color maps illustrating historical and current riparian habitat extents along the San Joaquin River. The document is available online at http://www.bay.org/display.aspx?pageid=164.

PRBO-8: Text on page 6-8, lines 6 through 8, of the Draft PEIS/R has been revised in response to the comment. See Chapter 4.0, "Errata," of this Final PEIS/R.

PRBO-9: The comment notes that the DFG Species of Special Concern documents are not included in the list of sources on page 6-6, and states that these documents contain much additional and useful information. Numerous other sources have been reviewed, as summarized in Appendix L of the Draft PEIS/R, "Biological Resources – Vegetation and Wildlife," cited in the environmental setting provided in Chapter 6.0, "Biological Resources – Vegetation and Wildlife," (Section 6.1), incorporated into the analysis, and listed in Chapter 29.0, "References," of the Draft PEIS/R. These other sources are cited where used. Please note that Appendix L, Attachment 5, Species Accounts, incorporates information from and cites *Mammalian Species of Special Concern in California* (Williams 1986) and *Amphibian and Reptile Species of Special Concern in California* (Jennings and Hayes 1994), and accounts for 15 species from *California Bird Species of Special Concern* (Shuford and Gardali 2008), including yellow-breasted chat (*Icteria virens*) (Comrack 2008), redhead (*Aythya americana*) (Beedy and Deul 2008), tricolored blackbird *(Agelaius tricolor)* (Beedy and Hamilton 2008), northern harrier (*Circus cyaneus*) (Davis and Niemela 2008), burrowing owl (*Athene cunicularia*) (Gervais, Rosenberg, and Comrack 2008), yellow warbler (*Dendroica petechia*) (Heath 2008), loggerhead shrike (*Lanius ludovicianus*) (mainland populations) (Humple 2008), mountain plover (*Charadrius montanus*) (Hunting and Edson 2008), yellow-headed blackbird (*Xanthocephalus xanthocephalus*) (Jamarillo 2008), lesser sandhill crane (*Grus Canadensis canadensis*) (Littlefield 2008), short-eared owl (*Asio flammeus*) (Roberson 2008), American white pelican (*Pelicanus erythrorhynchos*) (Shuford 2008a), black tern (*Childonias niger*) (Shuford 2008b), least bittern (*Ixobrychus exilis*) (Sterling 2008), and grasshopper sparrow (*Ammodramus savannarum*) (Unitt 2008). Text has not been revised.

PRBO-10: The lists of bird species mentioned in Chapter 6.0, "Biological Resources – Vegetation and Wildlife," of the Draft PEIS/R, page 6-8, line 33, through page 6-9, line 4 are intended to represent larger sets of species and are not meant to be complete listings. Text has not been revised.

PRBO-11: Text on page 6-8, lines 21 through 23, of the Draft PEIS/R has been revised in response to this comment. See Chapter 4.0, "Errata," of this Final PEIS/R.

PRBO-12: Text on page 6-32, lines 26 through 28, of the Draft PEIS/R has been revised in response to this comment. See Chapter 4.0, "Errata," of this Final PEIS/R.

PRBO-13: Text on page 6-33, lines 4 through 8, of the Draft PEIS/R has been revised in response to this comment. See Chapter 4.0, "Errata," of this Final PEIS/R.

PRBO-14: Text on page 6-33, lines 12 and 13, of the Draft PEIS/R has been revised in response to this comment. See Chapter 4.0, "Errata," of this Final PEIS/R.

PRBO-15: Statements regarding the distribution of northern harrier are made in Appendix L, "Biological Resources – Vegetation and Wildlife," of the Draft PEIS/R, in Table 2 and in the species account for northern harrier, and also in the environmental consequences section of Chapter 6.0, "Biological Resources – Vegetation and Wildlife," of the Draft PEIS/R, in Table 6-6. These statements characterize northern harrier as being potentially distributed in suitable habitat throughout the Restoration Area, which is consistent with the distribution stated in the comment. As referenced by the comment, the presence of northern harrier along Reach 4 is also noted on page 6-33, line 29. This section summarizes the California Natural Diversity Database and other references providing comparable documentation of the occurrence of sensitive species at specific locations. The reviewed references did not provide such documentation of northern harrier occurrences in other portions of the Restoration Area. Hence, the species was only noted under Reach 4 in this section of the Draft PEIS/R. Text has not been revised.

PRBO-16: Text on page 6-36, lines 7 through 14, of the Draft PEIS/R has been revised in response to this comment. See Chapter 4.0, "Errata," of this Final PEIS/R.

PRBO-17: Text on pages 6-64 through 6-68, Table 6-6, of the Draft PEIS/R has been revised in response to this comment. See Chapter 4.0, "Errata," of this Final PEIS/R.

PRBO-18: Comment noted. Much information included in the environmental and regulatory settings in Chapter 7.0, "Climate Change and Greenhouse Gas Emissions," of the Draft PEIS/R is available from other sources and/or is not specific to the Restoration Area. However, this content in Chapter 7.0 was developed to provide adequate background for reviewers who may not be familiar with the relatively new concepts in the field of climate change, and to provide all reviewers with an adequate basis of understanding before presenting an assessment of impacts based on the information presented in Sections 7.1 and 7.2. Text has not been revised.

PRBO-19: Chapter 7.0, "Climate Change and Greenhouse Gas Emissions," of the Draft PEIS/R describes the environmental and regulatory settings for climate change and greenhouse gas (GHG) emissions, as well as the potential environmental consequences of program alternatives and mitigation measures, when appropriate. Potential implications of projected regional climate change and sea level rise for future CVP/SWP operations are described separately in an attachment to Appendix I, "Supplemental Hydrologic and

Water Operations Analyses." The information presented in the attachment to Appendix I is provided for informational purposes only.

Table 7-4, mentioned in the comment, presents GHG emissions from energy consumption under the program alternatives. As noted below Table 7-4, quantities of net CVP/SWP operational GHG emissions are based on energy consumption, as described in Chapter 19.0, "Power and Energy, " and quantities of net Friant Division GHG emissions for groundwater pumping are based on "High" groundwater pumping, as described in Chapter 12.0, "Hydrology – Groundwater." The GHG emissions presented in Table 7-4 are for CVP/SWP and Friant Division operations and were not determined with data from the Sensitivity of Future Central Valley Project and State Water Project Operations to Potential Climate Change and Associated Sea Level Rise Attachment to Appendix I, "Supplemental Hydrologic and Water Operations Analyses," of the Draft PEIS/R. The attachment to Appendix I is provided for informational purposes. Text has not been revised.

PRBO-20: Because of the multiple sources of uncertainty in the estimates and assumptions used to identify maximum potential effects, and in the potential magnitude of ultimate GHG emissions (depending on many factors, including water recapture and recirculation actions and riparian habitat development), specific potential mitigation measures and the assumptions/projections of effectiveness cannot be identified at this time. Text has not been revised.

PRBO-21: The type of vegetation cover most anticipated to increase as a result of implementing any of the action alternatives is riparian forest. As described in Chapter 7.0 of the Draft PEIS/R, "Climate Change and Greenhouse Gas Emissions," operation of Friant Dam to release Interim and Restoration flows could potentially result in nearly 1,700 acres of additional riparian forest (see simulated increases presented in Appendix N, "Geomorphology, Sediment Transport, and Vegetation Assessment," of the Draft PEIS/R, and existing acreages in Chapter 6.0, "Biological Resources – Vegetation and Wildlife"). Because riparian forest sequesters an estimated 53 megatons of carbon dioxide per year ($mtCO_2e$/year) per acre over a 10-year period (COLE Development Group 2011), riparian restoration could offset more than 9,129 $mtCO_2e$/year in the study area during the first decade following operation of Friant Dam to release Interim and Restoration flows. However, because ongoing levee maintenance and other management activities may conflict with development of much of this riparian forest, it is difficult to estimate exactly how much riparian forest would be developed. Thus, conservatively, no net increase in riparian carbon sequestration is assumed.

Because other types of vegetation cover would be likely to increase as much as riparian forest, including a range of potential sequestration values by types of vegetation cover that might be produced from various project/program activities is beyond the level of detail necessary to support the analysis. Similarly, comparisons of agricultural practices to natural cover types in terms of carbon sequestration potential are beyond the scope of the PEIS/R. Text has not been revised.

PRBO-22: Text on page 21-11, line 7, of the Draft PEIS/R has been revised in response to the comment. See Chapter 4.0, "Errata," of this Final PEIS/R.

PRBO-23: Text on page 21-11, line 7, of the Draft PEIS/R has been revised in response to the comment. See Chapter 4.0, "Errata," of this Final PEIS/R.

PRBO-24: Text in Appendix L, "Special Status Species Tables Attachment," on page 8-18, Table 2, has been revised in response to this comment. See Chapter 4.0, "Errata," of this Final PEIS/R.

PRBO-25: Text in Appendix L, "Special Status Species Tables Attachment," on page 8-18, Table 2, has been revised in response to this comment. See Chapter 4.0, "Errata," of this Final PEIS/R.

PRBO-26: Text in Appendix L, "Special Status Species Tables Attachment," on page 8-18, Table 2, has been revised in response to this comment. See Chapter 4.0, "Errata," of this Final PEIS/R.

3.9.7 River Partners

RIV

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September 21, 2011

Mrs. Alicia Forsythe
Program Manager
San Joaquin River Restoration Program
US Bureau of Reclamation
2800 Cottage Way, MP 170
Sacramento, California 95825

Re: San Joaquin River Restoration Program Programmatic Environmental Impact Report comments

Dear Mrs. Forsythe;

On behalf of River Partners I am writing to express our support for your agency's efforts to implement the historic program to restore the San Joaquin River. The San Joaquin River Restoration Program (SJRRP) is an incredibly important opportunity to improve the quality of life for all residents of California, and has already shown immeasurable success in research and planning to restore life to the degraded San Joaquin River. We wholeheartedly support the efforts of your talented team and those of all of the implementing agencies to continue building on these successes to restore self-sustaining salmon and other native fish populations to the river in a fashion that is cost-effective, sustainable, and science-based.

We understand that the SJRRP has a great deal of work ahead to accomplish both the water management and restoration goals described in the authorizing legislation. Our organization has a long history of partnership and collaboration with state and federal agencies to plan, fund and implement multi-benefit river restoration efforts throughout California, and we thank you for your continued openness to our inquiries, suggestions, and comments. We have reviewed the Draft Programmatic EIR for the SJRRP and prepared the following comments. These comments are based on our experiences in river restoration targeting threatened and endangered wildlife in the Central Valley, while also enhancing job growth, recreational opportunities, flood protection, water supply, and the sustainability of the stunningly successful agricultural economy that is supported by the Sacramento and San Joaquin River systems and their associated water projects.

RIV-1 We have learned that long-lasting river restoration is born of a recognition and appreciation for the services our rivers provide to people including water supply, flood conveyance, recreation opportunities, and public health. We strongly urge the SJRRP to actively seek out restoration opportunities that serve many purposes in addition to restoration of fish populations. Such projects can be cost-shared with existing programs to provide taxpayers and stakeholders greater benefits at smaller costs. Such projects usually also enjoy support from several user groups which promotes their maintenance and relevance to the region over time.

RIV-1 cont'd

Such multi-benefit projects can be undertaken through actively promoting partnerships amongst agency programs and local and regional efforts of various stakeholders. To support the SJRRP in this regard, we have partnered with ten other non-profit organizations to form the San Joaquin River Partnership. This exciting partnership works together to accomplish broad-scale restoration actions that can assist the SJRRP in accomplishing its goals while strategically providing ancillary benefits to the residents of this region such as:

- developing the vision of a San Joaquin River Blueway and working to promote this vision with other agencies and organizations in the region;
- working collaboratively to map and manage weeds along the river corridor, while creating jobs for the local workforce;
- reaching out to community members and agency personnel to share ideas and develop a shared vision of a restored river; and
- providing informational materials at fairs, festivals, and workshops that reach thousands of valley residents.

We encourage the SJRRP to continue to actively partner with this group to provide broad ecosystem and community improvements to the region as the SJRRP moves forward.

RIV-2a

Additionally, River Partners actively participates in planning efforts and partnership projects at the local and state level promoting the importance of multi-benefit project implementation and adaptive management. Our flagship project, the restoration of over 2,500 acres of floodplain habitat at the San Joaquin River National Wildlife Refuge is a testament to the success and efficiency of this approach. As you are aware, the first ten years of this effort have brought together dozens of agencies and technical experts as well as non-profits and community groups to develop and implement measured successes in species recovery under the guidance of the USFWS San Luis National Wildlife Refuge's talented and energetic staff. This effort has leveraged investments in funding, expertise, and time from dozens partners to:

- Establish a new population of endangered riparian brush rabbits – a species on the brink of extinction due to riparian habitat loss and flow regulation;
- Create resilient floodplain habitat for riparian songbirds, waterfowl, fish and other riparian-obligate species that is sustainable under current and future water management scenarios;
- Develop a 4-mile hiking path and day use area that serves the Stanislaus County area with recreational and educational opportunities;
- Host dozens of volunteer days linking school groups and interested citizens to the science of river restoration;
- Employ hundreds of laborers, scientists, managers, students and other San Joaquin Valley residents in active, engaging, safe and enjoyable jobs;
- Provide water quality benefits to downstream water users;
- Provide non-structural flood protection for downstream communities; and
- Participate in dozens of educational and outreach events that highlight the important services the San Joaquin River provides to area residents, and what they can do to help restore their river.

We encourage the SJRRP to look to this project as a model for restoration projects yet to be developed, and to use this project as a proving ground for future research into the link between fish populations, vegetation management, and floodplain processes.

RIV-2b

Specifically, we would like to suggest that the PEIR be revised to incorporate additional language supporting the following topics:

1. the relationship between restoration flows and riparian and floodplain vegetation;
2. minimizing long-term operations and management costs for Program and project level actions;
3. the importance of long-term biological monitoring and adaptive management;
4. ensuring incorporation of the local job force, local academic research capacities, local non-governmental organizations, and local community groups in the restoration Program and projects;
5. incorporation of SJRRP actions with other ongoing river and flood management programs; and
6. alternative project funding mechanisms that do not rely upon traditional design/build approaches.

RIV-3a

1. Riparian and Floodplain Habitat

Riparian habitat is a required habitat component for healthy aquatic ecosystems which support Chinook salmon, providing shade, food resources, and in-stream habitat during low and moderate flows. The timing and duration of river flows play a very important role not only in stimulating germination and establishment of riparian vegetation, but also in maintaining native riparian vegetative cover and promoting succession and long-term sustainability of dynamic riparian plant communities through scouring, erosion, deposition, inundation, transport of vegetative material, and interaction with wildlife populations (such as voles and beavers).

Riparian habitat along the San Joaquin River has been degraded not only by reduction in flows during the spring snowmelt (a condition which will be rectified by SJRRP restoration flows), but also by increased or prolonged flows in the late summer and fall, reduction in the frequency and extent of overbank flooding, increase in the duration of overbank flood events, and introduction of invasive plants and wildlife which may be better able to exploit this altered hydrology than native species. This situation is not unique to the San Joaquin River. Three decades of riparian habitat restoration in the Central Valley has shown that successful riparian habitat establishment is possible when and if restoration designers consider altered year-round flow quantities and altered flooding regimes that sustain agricultural deliveries and flood protection for downstream communities, as well as the phenology and water needs of native plants.

At your request, we can provide dozens of project reports for these efforts which illustrate the response of riparian vegetation to the altered hydrologic conditions of the major Central Valley Rivers. Additionally, at your request, we can provide project monitoring reports and presentations which illustrate the wildlife recovery results that result from successful riparian and floodplain habitat restoration.

RIV-3b

We suggest that the SJRRP develop biological monitoring protocols to track the effects of restoration flows on riparian and floodplain vegetation dynamics (changes in coverage and extent; shifts in species composition; effects of stressors such as drought, flood, weeds or herbivores; etc.), and adopt adaptive management protocols that ensure the results of such biological monitoring are considered in future iterations, years, or projects as applicable. This could be inserted in the PEIR through description of an adaptive management strategy for riparian and floodplain vegetation dynamics throughout the SJRRP reaches.

RIV-3c The science is well developed describing floodplain foraging habitats as vitally important to the maintenance of sustainable salmonid fisheries. Outmigrating juveniles that have had the opportunity to forage on biologically rich floodplains are generally larger than juveniles without access to the abundant food resources of an active floodplain, thus are more likely to survive the predation pressures they will face within and downstream of the Program reaches. The lack of suitable foraging habitat along the San Joaquin River has been suggested as a major limitation to the success of the anadromous fishery here.

RIV-4 The Fisheries Management Plan suggests that restoration of nearly 8,000 acres of floodplain foraging habitat will likely be required to sustain a Chinook salmon fishery in the mainstem of the San Joaquin River per the requirements of the Settlement. We suggest that the PEIR be revised to explicitly include

RIV-5 this target within all Program and project descriptions for all alternatives. Additionally, we suggest the SJRRP investigate the potential to quantify the importance of floodplain foraging habitat for juvenile salmonids at the San Joaquin River National Wildlife Refuge, a model site for floodplain restoration.

2. Minimize Long-term Operations and Maintenance Costs

RIV-6 The SJRRP represents a large investment from both the public funds that have been and will be expended in the implementation of the major project elements, but also in the user fees that will be paid by regional stakeholders for decades to come. It is critically important that Program and project-level actions be considered not only with regard to their short-term costs of implementation, but also in their long-term costs of operations and maintenance. We have observed that large public investment in water management infrastructure often yields large disappointments in long-term performance due to unanticipated or underestimated operations and maintenance costs. We suggest that the PEIR be revised to include explicit consideration of substantiated short and long-term costs to the SJRRP as well as to other stakeholders in the evaluation of Program alternatives and current and future project-level actions.

3. Long-term Biological Monitoring

RIV-7 Long-term biological monitoring (also called post-project monitoring) is a critical component of the success and sustainability of the SJRRP. Following project implementation and performance period monitoring, it will be important to continue monitoring the success of restoration flows in maintaining fish populations as well as the conditions which support fish populations (water quality, riparian habitat, floodplain habitat) in order to evaluate Program actions and adaptively manage restoration flows. We suggest the PEIR be revised to include a thorough description of the SJRRP's approach to long-term biological monitoring of fish populations, riparian habitat, floodplain habitat, and other factors as it supports adaptive management of restoration flows.

RIV-8 We also suggest that the PEIR be revised to include a detailed description of actions that will be undertaken by the SJRRP to provide time-relevant biological monitoring data to stakeholders and the public, and to illicit feedback on monitoring protocols and approach on an annual basis to ensure complimentarity with other Programs and efforts in the region, and with the current science of river restoration and monitoring. Specifically, we suggest the SJRRP host an annual technical meeting focused on biological monitoring to present SJRRP monitoring actions and to illicit response from interested parties. As possible, we would appreciate commitments from the SJRRP that the Program will be implemented in a transparent and collaborative way, minimizing opportunities for wasted resources through lack of communication and cooperation with the larger restoration community.

4. Optimize Incorporation of Local Resources

RIV-9a The San Joaquin Valley hosts several of the nation's most impoverished municipalities, boasting record unemployment and home foreclosure rates, consistently impaired air and water quality, and deplorable child and public health statistics. While river restoration cannot fix the enormous socio-economic and political circumstances which drive these problems, it can contribute meaningfully to the communities most heavily impacted by prior environmental degradation through commitments to employment, communication, and transparency in the restoration process. Community involvement also bolsters the sustainability of river restoration efforts by providing opportunities for community investment in project and Program success.

RIV-9b The San Joaquin Valley hosts several research institutions that should be actively courted by SJRRP managers to host river-related research projects. It also boasts a workforce trained in effective management of vegetation and water (i.e. agriculture) that has been and should continue to be actively engaged by SJRRP managers to participate in the restoration planning and implementation process. The San Joaquin Valley hosts several community-based non-profit organizations which have strong ties to local schools and community groups, businesses and community leaders. These non-profit organizations should be recognized as primary partners in river restoration to allow the SJRRP to tap existing communication networks and effective models in outreach and education for this region. We suggest the PEIR be revised to include specific recognition of the value of local partnerships, and a specific commitment to optimize the use of the local labor force in restoration design and implementation.

5. Integration with Complimentary Programs

RIV-10 The San Joaquin River is the second largest river in California. As such, it is the subject of numerous other programs related to water management, flood management, habitat improvement, and recreational enhancement. We suggest that the PEIR be revised to include explicit measures that will ensure SJRRP actions are reviewed for collaboration with other complimentary programs.

6. Design/Build Project Approach

RIV-11a In the last 12 years, River Partners has completed over 50 large-scale floodplain and riparian habitat restoration projects from Redding to Bakersfield, many of which were funded by or through the state or federal government as cost-reimbursable grants, or as competitive contracts. In this process, we have witnessed the effectiveness of different approaches to project design and management. The traditional design/build approach which is common to the competitive bid process (a consultant team designs the project, project specifications are put out to bid, project implementation is awarded to the lowest qualified bidder) has proven to be the most rigid and least effective of all project implementation methods available for ecological restoration projects. Design/build generally promotes low quality habitat restoration work and inflated project costs by 1) rewarding contractors to take short cuts in implementation, 2) requiring project designers to specify all project aspects in painstaking detail prior to bid which can often create incorrect or illogical project components, 3) allowing no or very little flexibility in project implementation decisions, and 4) stunting adaptive management by divorcing the implementation team from the design and monitoring team.

RIV-11b River Partners has built a preferred project approach which integrates the project design team with the on-the-ground implementation team to preserve a project-wide vision of success, and promote efficiency in implementation which can save hundreds of thousands of dollars per project. We suggest that the SJRRP revise their project implementation strategy to provide for alternative project

implementation approaches which will provide greater efficiency and larger successes than the traditional design/build approach. At your request, we can share additional details of cost savings provided by different habitat restoration implementation approaches.

Thank you for the incredible work you have completed already on this historic effort.

Best regards,

Julie Rentner
San Joaquin Regional Director
River Partners

Responses to Comments from River Partners

RIV-1: Comment noted. The lead agencies recognize and appreciate the careful consideration of the SJRRP and future of the San Joaquin River, as well as the valuable knowledge of the Restoration Area offered by River Partners, the San Joaquin River Partnership, and other nonprofit organizations active along the San Joaquin River. Reclamation and DWR welcome the invitation to work with these entities to provide ecosystem and community improvements while accomplishing the goals of the SJRRP. The Implementing Agencies have conducted and will continue to conduct extensive public and stakeholder outreach activities to engage and inform interested parties of SJRRP activities early in the scoping process, throughout development of the PEIS/R, and into the future as SJRRP actions are implemented and monitored. The recommendations provided by River Partners will be considered during implementation of the Settlement. See also response to comment SJRC-1 in Section 3.7 of this appendix, "State Agency Comments and Responses." Text has not been revised.

RIV-2a: Comment noted. The need for habitat conservation or enhancement as mitigation for subsequent site-specific actions would be addressed in future project-level environmental analysis and during the design efforts for each project. Recommendations provided by River Partners for subsequent site-specific actions will be considered during planning, design, and implementation of those actions. Text has not been revised. See also response to comment RIV-1.

RIV-2b: This comment introduces and summarizes the main points in comments RIV-1 and RIV-3a through RIV-11b. When appropriate, the listed topics are described at an appropriate level of detail in the Draft PEIS/R. The topics are also addressed briefly here, and in the more detailed responses to comments RIV-1, and RIV-3a through RIV-11b.

The relationship between restoration flows and riparian and floodplain vegetation is noted in Appendix E, "Fisheries Management Plan," of the Draft PEIS/R, which includes actions related to floodplain and riparian habitat to help guide Settlement implementation. Appendix D, "Physical Monitoring and Management Plan," of the Draft PEIS/R (summarized beginning on page 2-49 of the Draft PEIS/R) is included under all action alternatives and contain monitoring and management actions to establish and maintain native riparian vegetation.

The amount and timing of funding available for implementing the Settlement is limited and may vary considerably on a year-to-year basis. Because of this variability, the Implementing Agencies coordinate activities and budgets closely to minimize or avoid delays in implementation.

As described in Chapter 2.0, "Description of Alternatives," of the Draft PEIS/R, the Implementing Agencies recognize the need for a robust monitoring program to collect information on physical and ecological responses to actions to guide site-specific project requirements. The Physical Monitoring and Management Plan (Appendix D of the Draft PEIS/R) provides guidelines for observing and adjusting to changes in physical conditions within the Restoration Area during implementation of the Settlement. Additional detail on current monitoring activities and results, and upcoming monitoring

activities, is given in SJRRP annual reporting and planning documents, including the Annual Technical Report and the Monitoring and Analysis Plan. These documents, available at http://www.restoresjr.net, help link monitoring and analysis efforts to the decision making processes they are designed to support, forming the scientific basis for San Joaquin River operations downstream from Friant Dam.

The lead agencies recognize and appreciate the careful consideration of the SJRRP and future of the San Joaquin River, as well as the valuable knowledge of the Restoration Area, offered by River Partners, the San Joaquin River Partnership, and other nonprofit organizations active along the San Joaquin River. Reclamation and DWR welcome the invitation to work with these entities to provide ecosystem and community improvements while accomplishing the goals of the SJRRP. As described in Chapter 22.0, "Socioeconomics," and Chapter 27.0, "Other NEPA and CEQA Considerations," of the Draft PEIS/R, the local labor force is anticipated to fill many of the employment opportunities that would be created as a result of implementing the action alternatives. As described in Chapter 28.0, "Consultation, Coordination and Compliance," of the Draft PEIS/R, engagement of local governments, nongovernmental organizations, and individuals, as well as coordination between the SJRRP and agencies, will continue to be facilitated through SJRRP work groups.

Reclamation and DWR recognize the importance of coordination and communication in planning and implementing projects that affect the flood control system including SJRRP and FloodSAFE to prevent impacts to flood management. DWR, as an Implementing Agency, can assist in planning, designing, and constructing the physical improvements identified in the Settlement, including projects related to flood protection, levee relocation, and modifications to and maintenance of channel facilities.

A contracting approach for implementing SJRRP actions is not required or included in the PEIS/R, and the action alternatives would not preclude the implementation approach the commenter references. Both the project- and program-level actions described in the Draft PEIS/R provide a broad direction for a wide range of possible future actions while allowing the opportunity for flexibility to respond to changing needs and conditions. Text has not been revised.

RIV-3a: Comment noted. Text has not been revised.

RIV-3b: As described in Chapter 2.0, "Description of Alternatives," of the Draft PEIS/R, the Implementing Agencies recognize the need for a robust monitoring program to collect information on physical and ecological responses to actions to guide site-specific project requirements. In recognition of data limitations, and reliance on future monitoring data, the action alternatives are defined broadly and include provisions for flexibility when implemented. Two key components of the action alternatives, the Physical Monitoring and Management Plan (Appendix D of the Draft PEIS/R and summarized beginning on page 2-49 of the Draft PEIS/R) and the Conservation Strategy (beginning on page 2-52 of the Draft PEIS/R), incorporate both project- and program-level actions intended to guide implementation of the Settlement. These components address the relationship between SJRRP activities and biological resources within the Restoration Area.

The Conservation Strategy includes measures to minimize and avoid potential impacts to sensitive species and habitats, including a number of riparian and floodplain species. Such measures require the conduct of specific protocol-level surveys before construction and other ground-disturbing activities per agency and program requirements. For example, as shown in Table 2-7, beginning on page 2-55 of the Draft PEIS/R, this includes habitat surveys for special-status plants (Conservation Measure PLANTS-1); surveys for bald and golden eagle nests in areas with suitable nesting habitat and important eagle roost sites and foraging areas (Conservation Measure EAGLE-1); surveys of potential Fresno kangaroo rat burrows (Conservation Measure FKR-1); surveys to identify potential San Joaquin kit fox dens (Conservation Measure SJKF-1); surveys to identify the presence of the Pacific lamprey (Conservation Measure PL-1); and, if determined to be necessary, surveys for the blunt-nosed leopard lizard in areas where suitable habitat exists (Conservation Measure BNLL-1).

The Physical Monitoring and Management Plan, included under all action alternatives, provides guidelines for observing and adjusting to changes in physical conditions within the Restoration Area during implementation of the Settlement, and includes monitoring and management actions to establish and maintain native riparian vegetation. See also Appendix E, "Fisheries Management Plan," of the Draft PEIS/R which describes the framework for addressing specific actions related to fisheries and evaluates their merits (including uncertainty) in an action routing process. Text has not been revised.

RIV-3c: Comment noted. The comment does not raise issues or concerns specific to the environmental analysis presented in the Draft PEIS/R. As discussed in detail in MCR-1, "Analysis of Program Feasibility, Potential to Achieve Restoration and Water Management Goals," in Chapter 2.0, "Master Comment Responses," of this Final PEIS/R, the Settlement does not require, and the Act does not direct, the Secretary to evaluate the feasibility or effectiveness of actions to achieve the Restoration Goal. Two of the site-specific projects (Reach 4B, Eastside Bypass, and Mariposa Bypass Channel and Structural Improvements Project, and Mendota Pool Bypass and Reach 2B Improvements Project) evaluate the need for and incorporate habitat. Reintroduction is evaluated at the program level in the PEIS/R.

The lead agencies agree that some restoration, modification, or creation of new floodplain habitat is likely needed to support juvenile reintroduced Chinook salmon. The Draft PEIS/R acknowledges the importance of floodplain foraging habitats in many locations, including in Section 5.2.14 of Appendix E, "Fisheries Management Plan," of the Draft PEIS/R, which states that floodplain and riparian habitat availability are limiting factors for reintroducing Chinook salmon, and provide many important ecological benefits (e.g., Chinook salmon juvenile rearing habitat, predator and flow refuge, food resources, sediment control). Pages 5-50 through 5-54 of Appendix E, "Fisheries Management Plan," of the Draft PEIS/R include the following actions related to floodplain and riparian habitat to help guide Settlement implementation: Action Q1, "Implement Settlement flow schedule"; Action Q2, "Implement hydrograph flexibility, buffer flows, and use of additional purchased water, as necessary"; Action Q3, "Restore floodplain habitat"; Action Q4, "Create off-channel Chinook salmon rearing areas"; Action Q5, "Simultaneously fill gravel pits and create floodplain salmon rearing habitat"; and Action

Q6, "Create structural elements to provide floodplain rearing habitat." See MCR-1 in Chapter 2.0 of this Final PEIS/R for further information relevant to this comment. Text has not been revised.

RIV-4: The suggested floodplain acreage described in Appendix E, "Fisheries Management Plan," of the Draft PEIS/R is part of several preliminary recommendations provided in the appendix. As described on page ES-2 of Appendix E, the Fisheries Management Plan provides a roadmap to adaptively manage efforts to restore and maintain naturally reproducing and self-sustaining populations of Chinook salmon and other fish in the San Joaquin River between Friant Dam and the river's confluence with the Merced River (Restoration Area). The Fisheries Management Plan will be revised as needed, reflecting changes in implementation strategy. The PEIS/R therefore does not evaluate the specific quantity of floodplain acreage identified in the Fisheries Management Plan, or identify locations for such modifications; these site-specific details will be further developed and refined as part of subsequent project-level evaluations. The lead agencies are currently assessing the need for various quantities and types of floodplain modifications in Reaches 2B and 4B1 as part of the Mendota Pool Bypass and Reach 2B Improvements Project and the Reach 4B, Eastside Bypass, and Mariposa Bypass Channel and Structural Improvements Project, respectively. Text has not been revised.

RIV-5: The comment suggests a study to quantify the importance of floodplain foraging habitat for juvenile salmonids at the San Joaquin River National Wildlife Refuge. While such a study could provide information useful to the Implementing Agencies, it would not contribute directly to achieving the purpose and need and is therefore not described in the PEIS/R. However, as described in the 2012 SJRRP *Monitoring and Analysis Plan* (available at www.restoresjr.net) (SJRRP 2011h), studies planned for 2012 will provide direct measures of fish survival, assess the juvenile salmon habitat supply in the San Joaquin River, and inform the SJRRP on juvenile salmon needs. An ongoing juvenile migration and salmon study led by USFWS will use acoustic tags to track juvenile fish survival as they emigrate downriver. Text has not been revised.

RIV-6: Long-term operations and maintenance costs related to the SJRRP are generally associated with the program-level actions, such as the Phase 1 projects and fish reintroduction actions. Many of these specific actions are not known at this time and, therefore, these costs are also not known at this time. However, the need for long-term operations and maintenance and the costs of such actions would be addressed in future project-level planning, environmental compliance, and design activities once additional information is known. Text has not been revised.

RIV-7: The SJRRP approach to long-term monitoring is described in the Draft PEIS/R at the level of detail appropriate for the purposes of the document. Monitoring activities will continue to evolve to meet the needs of the SJRRP, as described in Appendix D, "Physical Monitoring and Management Plan," of the Draft PEIS/R. Additional detail on current monitoring activities and results, and upcoming monitoring activities are given in SJRRP annual reporting and planning documents, including the Annual Technical Report and the Monitoring and Analysis Plan. These documents, available at

http://www.restoresjr.net, help link monitoring and analysis efforts to the decision making processes they are designed to support, forming the scientific basis for San Joaquin River operations downstream from Friant Dam. The Annual Technical Report tracks long-term strategies for SJRRP implementation in problem statements and identifies information needs as uncertainties to be resolved to implement the Settlement. The Implementing Agencies are integrally involved in physical and biological monitoring. Text has not been revised.

RIV-8: Comment noted. The comment does not raise issues or concerns specific to the environmental analysis presented in the Draft PEIS/R. Holding an annual technical meeting focused on biological monitoring, as recommended by the commenter, is not proposed at this time. However, the Implementing Agencies present information and collect feedback on past and future SJRRP activities through publication of annual reporting and planning documents, and through a range of outreach activities, including public meetings of technical feedback work groups focused on issues such as fisheries management, seepage and conveyance, Restoration Goal, and water management.

As noted in the response to comment RIV-7, SJRRP annual reporting and planning documents, including the Annual Technical Report and the Monitoring and Analysis Plan, present data collected during the previous year of SJRRP implementation. These documents, available at http://www.restoresjr.net, help link monitoring and analysis efforts to the decision making processes they are designed to support, forming the scientific basis for San Joaquin River operations downstream from Friant Dam. The Annual Technical Report tracks long-term strategies for SJRRP implementation in problem statements and identifies information needs as uncertainties to be resolved to implement the Settlement. The Annual Technical Report allows the Implementing Agencies to present to stakeholders the status and results of technical work to address SJRRP needs and solicit feedback.

As described in Chapter 28.0, “Consultation, Coordination, and Compliance,” of the Draft PEIS/R, engagement of local governments, nongovernmental organizations, and individuals, as well as coordination between the SJRRP and agencies, has been and continues to be facilitated through SJRRP work groups. Continuation of scheduled meetings and open sharing of information are evidence of this commitment. Memoranda of Understanding are prepared, as required, for cooperating agencies under NEPA, and continued collaboration with responsible agencies, especially those with a trust responsibility, is a goal and commitment of the SJRRP. Continued involvement and open sharing of information through the SJRRP Web site (http://www.restoresjr.net) show that the comments raised regarding public outreach are recognized. The need to balance open sharing of information with adherence to agency responsibilities will continue to be a goal. Text has not been revised.

RIV-9a: Comment noted. The comment does not raise issues or concerns specific to the environmental analysis presented in the Draft PEIS/R. As described in Chapter 22.0, “Socioeconomics,” and Chapter 27.0, “Other NEPA and CEQA Considerations,” of the Draft PEIS/R, the local labor force is anticipated to fill many of the employment opportunities that would be created as a result of implementing the action alternatives. As

described in Chapter 9.0, "Environmental Justice," of the Draft PEIS/R, program alternatives could have disproportionately high and adverse effects on low-income, minority, or Native American populations and, therefore, mitigation measures are proposed for each of those potentially significant or significant impacts within the respective chapter for each resource area. As described in Chapter 28.0, "Consultation, Coordination, and Compliance," of the Draft PEIS/R, engagement of local governments, nongovernmental organizations, and individuals, as well as coordination between the SJRRP and agencies, has been and continues to be facilitated through SJRRP work groups. Continuing scheduled meetings and open sharing of information are evidence of this commitment. Text has not been revised.

RIV-9b: Comment noted. The comment does not raise issues or concerns specific to the environmental analysis presented in the Draft PEIS/R. As described in Chapter 22.0, "Socioeconomics," and Chapter 27.0, "Other NEPA and CEQA Considerations," of the Draft PEIS/R, the local labor force is anticipated to fill many of the employment opportunities that would be created as a result of implementing the action alternatives. As described in Chapter 28.0, "Consultation, Coordination, and Compliance," of the Draft PEIS/R, engagement of local governments, nongovernmental organizations, and individuals, as well as coordination between the SJRRP and agencies, has been and continues to be facilitated through SJRRP work groups. Continuing scheduled meetings and open sharing of information are evidence of this commitment. The Implementing Agencies present information and collect feedback on past and future SJRRP activities through outreach activities, including public meetings of technical feedback work groups focused on technical issues such as fisheries management, seepage and conveyance, and water management. These activities inform development of the Monitoring and Analysis Plan. The Monitoring and Analysis Plan presents studies, monitoring network changes, and development of analytical tools scheduled for the following year. The Monitoring and Analysis Plan provides a framework for the Implementing Agencies to prioritize and consolidate monitoring and analysis proposals into a coordinated program that best meets SJRRP needs within funding limits and other constraints. Text has not been revised.

RIV-10: Comment noted. In the respective chapter for each resource area as well as in Chapter 26.0, "Cumulative Effects," the Draft PEIS/R evaluates the potential for implementing the program alternatives to conflict with provisions of local plans and policies for resource management. In particular, Chapter 16.0, "Land Use Planning and Agricultural Resources," evaluates the potential for implementing program alternatives to conflict with adopted Habitat Conservation Plans, Natural Community Conservation Plans, and other approved local, regional, or State conservation plans in the Restoration Area.

As described in Chapter 28.0, "Consultation, Coordination, and Compliance," of the Draft PEIS/R, engagement of local governments, nongovernmental organizations, and individuals, as well as coordination between the SJRRP and agencies, has been and continues to be facilitated through SJRRP work groups. Continuing scheduled meetings and open sharing of information are evidence of this commitment. Memoranda of Understanding are prepared, as required, for cooperating agencies under NEPA, and continued collaboration with responsible agencies, especially those with a trust

responsibility, is a goal and commitment of the SJRRP. Continued involvement and open sharing of information through the SJRRP Web site (http://www.restoresjr.net) show that the comments raised regarding public outreach are recognized. The need to balance open sharing of information with adherence to agency responsibilities will continue to be a goal.

The Implementing Agencies present information and collect feedback on past and future SJRRP activities through outreach activities, including public meetings of technical feedback work groups focused on technical issues such as fisheries management, seepage and conveyance, and water management. These activities inform development of the Monitoring and Analysis Plan. The Monitoring and Analysis Plan presents studies, monitoring network changes, and development of analytical tools scheduled for the following year. The Monitoring and Analysis Plan provides a framework for the Implementing Agencies to prioritize and consolidate monitoring and analysis proposals into a coordinated program that best meets SJRRP needs, within funding limits and other constraints. See also response to comment RIV-8.Text has not been revised.

RIV-11a: Comment noted. A contracting approach for implementing SJRRP actions is not required or included in the PEIS/R; however, the action alternatives would not preclude the implementation approach described in the comment. Both the program- and project-level actions described in the Draft PEIS/R provide a broad direction for a wide range of possible future actions while allowing the opportunity for flexibility to respond to changing needs and conditions. The comment does not raise issues or concerns specific to the environmental analysis presented in the Draft PEIS/R. Text has not been revised.

RIV-11b: Comment noted. A contracting approach for implementing SJRRP actions is not required or included in the PEIS/R, and the action alternatives would not preclude the implementation approach described in the comment. Both the program- and project-level actions described in the Draft PEIS/R provide a broad direction for a wide range of possible future actions while allowing the opportunity for flexibility to respond to changing needs and conditions.

Because of the length of time and investments that have been made by agencies and stakeholders in developing the Act and achieving the Settlement, the Implementing Agencies have determined that alternatives that do not comply with the Act and the Settlement are neither reasonable nor feasible. Therefore, the PEIS/R evaluates alternative approaches to implement the provisions of the Settlement, but does not evaluate alternatives to the Settlement other than the required No-Action Alternative. This is proper under both NEPA and CEQA because alternatives that failed to achieve the provisions of the Settlement would be neither legal nor feasible. See also MCR-5, “Adequacy of Purpose and Need, and Range of Alternatives, Under NEPA/CEQA,” in Chapter 2.0, “Master Comment Responses,” of this Final PEIS/R for further information relevant to this comment.

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3.9.8 San Joaquin River Partnership

SAN JOAQUIN RIVER PARTNERSHIP

Audubon California
Defenders of Wildlife
Ducks Unlimited
Natural Resources Defense Council
Revive the San Joaquin
River Partners
Sierra Foothill Conservancy
San Joaquin River Parkway and Conservation Trust
The Bay Institute
The Nature Conservancy
The Trust for Public Land
Tuolumne River Trust
Cleve Kleiner Consulting (on behalf of)

September 19, 2011
Sent via U.S. Mail and email

Alicia Forsythe, Program Manager
San Joaquin River Restoration Program
Bureau of Reclamation
2800 Cottage Way, MP-170
Sacramento, CA 95825
e-mail at PEISRComments@restoresjr.net

Subject: Comments on the San Joaquin River Restoration Program Draft Program Environmental Impact Statement/Environmental Impact Report (PEIS/R)

Dear Ms Forsythe:

The San Joaquin River Restoration Program (SJRRP) provides an unprecedented opportunity to enhance the San Joaquin River now and in perpetuity--for the benefit of families and individuals living in the San Joaquin Valley as well as for Californians from throughout the state. This investment in natural capital will provide ecosystem services to bring tangible benefits that have both economic and intrinsic value. Through accomplishing SJRRP's Restoration and Water Management Goals, communities will benefit from greater flood protection, improved water quality, jobs generated by restoration activities, new recreation opportunities, and a scenic river corridor rich in wildlife and agricultural heritage.

The San Joaquin River Partnership (Partnership) was formed in 2009 and today is a collaborative of thirteen non-profit conservation organizations committed to enhancing the San Joaquin River from its headwaters to the Delta. Our mission is to restore a working river, maximizing the environmental, social, and economic benefits that such a vital public resource brings to the people of California. We support the full implementation of the San Joaquin River Settlement Act and implementation of the SJRRP.

The Partnership appreciates everything that the SJRRP has accomplished thus far. The following are our comments and recommended revisions to the SJRRP PEIS/R:

Floodplain Integration

SJRP-1 The science is well developed describing the relationship between the availability of floodplain foraging habitat and the size and survivorship of juvenile

SJRP-1 cont'd

salmonids[1]. In the Central Valley, juvenile fish that forage on shallowly flooded areas have been documented to grow substantially larger when provided floodplain foraging habitat than when left to rear in channel[2]. It has been documented that predation of juvenile salmonids within the Sacramento/San Joaquin Delta is a limiting factor for salmonid populations in the entire San Joaquin River system[3]. Outmigrating juveniles that have had the opportunity to forage on suitably vegetated floodplains are generally larger than juveniles without access to the rich food resources of an active floodplain, thus are more likely to survive the predation pressures they may face within and downstream of the Program reaches. We suggest that the Program remove from the PEIR/S all commentary that the relationship is uncertain between juvenile salmonids and floodplain foraging habitat value, particularly comments on page 2-39, Appendix E Section 5.2.14, and others.

SJRP-2

The lack of suitable foraging habitat along the San Joaquin River has been suggested as a major limitation to the success of the anadromous fishery here[4]. Since the construction of Friant Dam, land conversion and flow restrictions have reduced suitable floodplain habitat within the Program reaches almost entirely. The Fisheries Management Plan presented in Appendix E of the PEIR/S suggests that restoration of 7,800 acres of floodplain foraging habitat will be required to meet the long term fish population goals for the spring and fall run and other native fish, and clearly outlines an adaptive management approach for floodplain restoration within the Program reaches. Clearly the studies supporting this PEIR/S have determined that the restoration of floodplain habitats for juvenile salmonids within the restoration reaches is an action that must be undertaken to meet the long term fish population goals of the Restoration Program. The restoration of floodplain and side channel habitat is an important component of the Restoration Program to the Partnership as it also provides ancillary benefits to migratory birds and other riparian-obligate wildlife. The PEIR/S and the monitoring presented in Appendix D (Physical Monitoring and Management Plan) should be amended to provide more description of monitoring that may be undertaken to evaluate the success of floodplain restoration efforts with respect to biological factors such as fish survival and size, invertebrate production, etc.

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[1] Sommer, T., M. L. Nobriga, B. Harrell, W. Batham, & W. J. Kimmerer. 2001. Floodplain rearing of juvenile chinook salmon: evidence of enhanced growth and survival. Canadian Journal of Fisheries and Aquatic Sciences 58:325-333.

[2] Jeffres, C., J. Opperman, & P. Moyle. 2008. Ephemeral floodplain habitats provide best growth conditions for juvenile Chinook salmon in a California river. Environ Biol. Fish 83:449-458.

[3] Vogel, D.A. 2010. Evaluation of acoustic-tagged juvenile Chinook salmon movements in the Sacramento – San Joaquin Delta during the 2009 Vernalis Adaptive Management Program. Final Report. Natural Resource Scientists, Inc. March 2010. 63 p.

[4] Feyrer, F., T. Sommer, and W. Harrell. 2006. Importance of flood dynamics versus intrinsic physical habitat in structuring fish communities: evidence from two adjacent engineered floodplains on the Sacramento River, California. North American Journal of Fisheries Management 26:408-417.
Junk, W. J., P. B. Bayley, and R. E. Sparks. 1989. The flood pulse concept in river–floodplain systems. Canadian Special Publication of Fisheries and Aquatic Sciences 106:110–127.

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San Joaquin River Partnership

SJRP-2 cont'd: We suggest that the PEIR/S (especially and specifically Chapter 2) be revised to include language explicitly including floodplain habitat restoration as a common restoration action within all project reaches and all Program alternatives.

Biological Resources—Vegetation and Wildlife

SJRP-3a: In addition to integrating floodplain habitat restoration with other Program Action Alternatives throughout the PEIR/S to support the long-term population goals for spring run and fall run Chinook salmon and other native fish, the Program should not overlook opportunities to partner with complimentary efforts currently being undertaken within the Program reaches. Appendix L of the PEIR/S includes well over one hundred listed species and species of special concern in the San Joaquin River Valley. Many of these species, and associated habitats, are conservation targets for a variety of state, local, federal, private, and non-profit agencies and organizations. With the loss of over 95 percent of the San Joaquin's riparian habitat, as well as loss of vast expanses of the wetlands and uplands, it is essential that the San Joaquin River Restoration is broad in scope to take an ecosystem-based approach, and acknowledge those targets and goals where they are of mutual benefit, including restoring riparian and wetlands for migratory birds and other wildlife, in conjunction with achieving targets for spring run and fall run salmon and other native fish.

SJRP-3b: Specifically, Chapter 6.1.1 of the PEIS/R recognizes state and federal agency investments in conserving, protecting, and enhancing migratory bird habitat and native ecological communities in the San Joaquin Valley, and states that these protected areas furnish important native habitats, mixed riparian forests, and wetlands to support and benefit wildlife species, particularly those of special concern. As noted, many other agencies and entities in the San Joaquin Valley, local, state, federal, private, and non-profit, have target species goals and mitigation plans aligned with restoring habitats for those species, and we encourage the Restoration Program, in the scope of the restoration process, to work collaboratively with those respective agencies to achieve multi-benefit goals along the San Joaquin River. We support a restoration program that looks toward restoring channel capacity and side habitat as necessary to support target fish populations, provides riparian restoration as a cost-effective and efficient solution to meeting programmatic goals, and generates a more ecologically valuable restoration project for a host of migratory birds and other native wildlife, in addition to salmon targets.

SJRP-3c: Complimentary agency and NGO efforts within the Program reaches may serve the dual purpose of assisting the Program in meeting its goals, and broadening the habitat and other public benefits of restoration actions to positively influence other wildlife, industries, people, and water quality. Multi-benefit projects that link flood protection, wildlife habitat improvement, public access, and overall

environmental quality have been the hallmark of successful river restoration efforts in the Central Valley, being supported and promoted through substantial investment at the state and federal levels, and providing greater public benefit than single-use projects or actions.

SJRP-3c cont'd

Specifically, the California Department of Water Resources' FloodSAFE initiative is required to link flood management and ecosystem stewardship across the Central Valley, and benefits of habitat restoration for salmonids may be identified as a primary goals for partnership projects, helping the Program accomplish its goals faster and more collaboratively. Additionally, the US Fish and Wildlife Service, California Department of Fish and Game, and California State Parks control riverside lands within Reaches 4B and 5, and adjacent to or near Reaches 2B and 3. All of these agencies undertake specific habitat restoration and floodplain management actions which should be coordinated with Restoration Program actions to provide broader habitat benefits to riparian-obligate wildlife in addition to salmonids.

SJRP-3d

Finally, the Program reaches are immediately adjacent to the largest managed wetland complex in the Pacific Flyway, the Grasslands Ecological Area (GEA). The GEA is recognized as a wetland of international significance under the RAMSAR convention[5]. The GEA is one of the critical links in the chain of the Pacific Flyway for migratory birds, providing critical wintering habitat for some of the Central Valley's more than six million wintering migratory ducks, geese, and migrant shorebirds, while supporting a vibrant hunting and outdoor recreation industry. Water management actions undertaken within the Program reaches should be coordinated to promote the ecological values of this important wetland area, and project alternatives should consider impacts (direct or indirect) to the GEA. Further, the GEA is within the SJR watershed and stray salmon are found with this wetland complex occasionally. In order to avoid take of listed spring run salmon that may migrate past instream barriers, the entire GEA should be designated within the umbrella of the SJRP for take purposes.

Socio-Economic Benefits to Local Communities from Restoration

SJRP-4

Public investment in river restoration contributes to economic output across many sectors. Modeling in the SJRRP PEIS/R Chapter 22 (Table 22-29) indicates that the SJRRP restoration projects will on average generate 12.4 jobs per $1 million invested. This number is reasonable yet probably very conservative. In 2010, The University of Oregon studied[6] the economic impact results of its state's

[5] Convention on Wetlands of International Importance Especially as Waterfowl Habitat, Ramsar (Iran), 2 February 1971. UN Treaty Series No. 14583. As amended by the Paris Protocol, 3 December 1982, and Regina Amendments, 28 May 1987.

[6] Nielsen-Pincus, M and C Moseley, 2010. Economic and Employment Impacts of Forest and Watershed Restoration. Ecosystem Workforce Program. Working Paper No. 24. http://ewp.uoregon.edu/sites/ewp.uoregon.edu/files/downloads/WP24.pdf.

investment in the Oregon for Salmon and Watersheds initiative, a restoration program in place since 1997 and concluded,

> "On average, we found every $1 million of public investment in forest and watershed restoration projects supports 16.7 jobs in Oregon, ranging from 14.7 to 23.1 jobs per $1 million for in-stream and riparian projects, respectively. We also find that every dollar of public investment in forest and watershed restoration is multiplied in economic activity between 1.7 and 2.6 times as it cycles through Oregon's economy."

SJRP-4 cont'd

This study further suggests that restoration projects have a similar impact on employment and the economy as other public investments in infrastructure.

Chapter 22 of the PEIS/R identifies that jobs and economic activity will be generated from restoration "during construction". However, it's important to note that the San Joaquin River Settlement Act provides a public investment in river restoration, creating economic output beyond the construction period. The source of funding is dedication of Friant Water Surcharge Fees in perpetuity, which we estimate to be about $10 million annually. This dedicated funding source, along with regional benefits accruing from additional recreational use and the long term commitment of agencies and nonprofits to undertake riparian restoration projects, will generate jobs and economic activity well into the future. A discussion on this aspect of SJRRP's contribution to the economy should be noted with a revision to Chapter 22.

SJRP-5

In order to maximize the beneficial economic impacts restoration jobs will have, first source hiring practices should be stipulated in SJRRP project agreements. Agreements should place a clear priority for the SJRRP's new jobs to come from the San Joaquin Valley, ensuring associated economic benefits significantly accrue to local communities. Implementing first source hiring practices will tie public investment to local communities; increase employment both long and short-term; and, result in a multiplying factor of public investment dollars being spent in the Valley and then cycling through local economies.

SJRP-6

The benefits of utilizing local youth service corps in SJRRP projects can be particularly effective[7] for the Valley and their use should be also be prioritized. Most youth corps members come from educational or economic disadvantage families. Providing employment opportunities to them will lead to positive outcomes for local communities in a number of areas. Youth service corps are well suited for restoration activities, they provide a structured and trained labor force that contributes important and valuable services. Further, the work

[7] Jastrzab, J., et al. 1997. Youth Corps: Promising Strategies for Young People and Their Communities. http://www.abtassoc.com/reports/Youth-Corps.pdf

SJPP-6 cont'd

experience and training that corps members receive prepares them to perform better in both education and workforce settings.

River Access and Recreation

The San Joaquin River is an important recreation asset to the people of California. Chapter 21.1 describes that "The study area contains a number of parks and public lands offering diverse recreation opportunities" and goes on to identify a number of recreation opportunities that the SJRRP will provide. This description is appropriate and underscores the capacity of river recreation to enhance quality of life for families and individuals living in the San Joaquin Valley.

SJRP-7a

Anticipated recreational use of the Restoration Area is very high as outlined in Chapter 21.1.5. The anticipated use is highlighted by information in the California State Parks Central Valley Vision Implementation Plan, which outlines a growing demand for recreation on Central Valley rivers and notes that residents currently travel an average of 50 minutes to reach favorite recreation areas.[8] Further, recommendations for the use of rivers for recreation is a specific recommendation of the America's Great Outdoors (AGO) Initiative.[9] PEIS/R Chapter 21.2.1 and 21.2.2 should be revised to include a description of the AGO Initiative, the Central Valley Vision Implementation Plan, and their emphasis on rivers and blueways.

SJRP-7b

Chapter 21 also outlines the lack of river access in the Restoration Area, particularly the lack of access and challenges in the SJR from Reaches 1B to the Merced River. The PEIS/R documents that these lower reaches have a marked contrast of enhanced recreation opportunities with a high latent demand for use, but little or no river access. The higher anticipated use makes sense: given the river's resources and the fact that the San Joaquin River is designated as a public waterway by the State of California.

SJRP-8a

We recommend additional mitigation be provided for all of the Action Alternatives at the Program and Project levels. For example, Chapter 21.3.3, Impact REC-12, Effects on Boating Opportunities from Increased Flow in the Restoration Area, identifies that the Action Alternatives will provide boatable flows in Reaches 1B and lower and states that:

> "it is reasonable to expect that the increased flows would result in the desire of boaters to continue their boat outings beyond the most downstream takeout at Skaggs Bridge Park or to launch from

[8] California State Parks. 2009. Central Valley Vision Implementation Plan. http://www.parks.ca.gov/centralvalleyvision.
[9] U.S. Department of Interior. 2011. America's Great Outdoors: A Promise to Future Generations. Policies 9.1 and 9.2. http://ofiles.org/files/pdf/AmGreatOutdoorsReport2011.pdf

SJRP-8a cont'd

that location and boat down Reach 2A beyond Gravelly Ford, possibly to the Chowchilla Bypass Bifurcation Structure, at the end of Reach 2A. However, no public access to retrieve boats from the water is available beyond Skaggs Bridge Park on Reach 1B or anywhere on Reach 2A."

SJRP-8b

The PEIS/R also documents a high latent demand to recreate in these reaches. Boaters will want to boat there not just for the pleasure of boating, but to also enjoy the enhanced recreation opportunities SJRRP will offer such as fishing, wildlife viewing, swimming, and picnicking.

Yet the PEIS/R does not come to the conclusion that SJRRP provide for additional river access in the lower reaches. Rather, it unreasonably off-loads this responsibility to State Parks, local agencies, and non-profits with the expectation that these financially strapped organizations rely on the "...existence of plans and mechanisms for recreational facility funding and development..."

SJRP-9

To ensure that Recreation impacts are mitigated to a less than significant level, Chapter 21 should be revised to include a mitigation measure to develop a River Access and Recreation Plan for the Restoration Area at the Program and Project levels for the Action Alternatives. The River Access and Recreation Plan should have a particular focus on the area downstream of the San Joaquin River Parkway, from Highway 99 (Reach 1B) to the Merced River. Development of the Plan should include input from landowners, stakeholders, agencies, and non-governmental organizations with the goal of connecting communities to the river and include planning elements such as:

- river access locations provided at reasonable intervals to provide for safe travel of non-motorized boaters
- address overall safety, emergency access, maintenance, and adjacent private property concerns
- identify portage locations and protocols
- identify and make recommendations for future recreation and access sites; taking advantage of existing road crossings and identifying opportunities presented by restoration construction projects, land or easement acquisitions, and floodplain restoration
- identify near-term deliverable actions and long term future goals
- protection of natural resources and interpretive opportunities

SJRP-10

Fishing represents an important recreation resource and opportunity to connect diverse communities to the river. The PEIS/R notes potential impacts to fishing opportunities and mitigation measures. We recommend that the additional fishing opportunities be provided on the San Joaquin River such as working with the San Joaquin River Conservancy in Reach 1A to provide opportunities for anglers on existing ponds on public lands.

Benefits to Health, Air Quality, and Addressing Climate Change

SJRP-11 Chapter 20, Public Health, should be revised to include a discussion on the physical and mental health benefits that will be provided by the additional recreation opportunities of SJRRP. Opportunities to access to open space are an important part of a solution to the alarming health crisis of rising obesity, diabetes, and heart disease--especially among young people[10]. The San Joaquin Valley has experienced a dramatic rise in these diseases and additional outdoor recreation opportunities in the Restoration Area could be part of an important solution to the region's problem.

SJRP-12 Chapter 4, Air Quality, should be revised to include a discussion on protecting and enhancing riparian vegetation as a key strategy to reducing the San Joaquin Valley's urban heat island effect.[12]

SJRP-13 Chapter 7, Climate Change, should be revised to include a discussion on the contribution the SJRRP will make toward the adaptation to climate change. As outlined in a recent study,[13] the authors highlight that, "Riparian ecosystems are naturally resilient, provide linear habitat connectivity, link aquatic and terrestrial ecosystems, and create thermal refugia for wildlife: all characteristics that can contribute to ecological adaptation to climate change."

Conclusion

Thank you for the opportunity to provide these comments and recommendations. Again, the Partnership commends SJRRP for its progress in these early stages of the San Joaquin River Restoration Program. By incorporating our recommended revisions into the PEIS/R, the SJRRP can ensure that impacts are properly analyzed, and that restoration will enhance this vital public resource for the benefit of all Californians.

Very truly yours,

Dave Koehler
Coordinator, San Joaquin River Partnership

[11] Trust for Public Lands. 2007. The Health Benefits of Parks. http://www.castshorepark.org/HealthBenefitsReport_FINAL_0103(7.pdf.
[12] Healthy Air Living. 2011. Guidance and Resources for Valley Businesses, Local Governments, and Residents. http://www.valleyair.org/programs/FastTrack/2011/Urban%20Heat%20Island%20Mitigation.pdf.
[13] Seavey, N. et al. 2009. Why Climate Change Makes Riparian Restoration More Important than Ever. Journal of Ecological Restoration, v23n3:330-338. http://er.uwpress.org/content/27/3/330.full.pdf+html

Responses to Comments from San Joaquin River Partnership

SJRP-1: The commenter cites text on page 2-39 and in Section 5.2.14 of Appendix E, "Fisheries Management Plan," of the Draft PEIS/R as examples of PEIS/R statements "that the relationship is uncertain between juvenile salmonids and floodplain foraging habitat value." It is assumed that the reference to page 2-39 refers to lines 42 through 43, as well as the continuation of that discussion on page 2-40, which states: "[b]ecause of uncertainty regarding the life history behavior of introduced salmon, modifications to Reach 2B may or may not emphasize floodplain habitat for rearing juvenile Chinook salmon, and any modifications 1 would be determined from results of subsequent site-specific studies." This statement refers to the fact that at this time, insufficient information is available to determine where outmigrating juvenile Chinook salmon would use floodplain foraging habitat. The potential need for floodplain foraging habitat in Reach 2B, and the quantities and locations for floodplain modifications to provide foraging habitat, are site-specific details that the lead agencies are currently studying as part of the Mendota Pool Bypass and Reach 2B Improvements Project. Because modifications to provide floodplain foraging habitat are described and evaluated at a program level of detail in the Draft PEIS/R, the Draft PEIS/R does not characterize the need for such modifications, or identify quantities or locations for such modifications.

It is unclear where in Section 5.2.14 of Appendix E of the Draft PEIS/R the commenter finds statements "that the relationship is uncertain between juvenile salmonids and floodplain foraging habitat value." Section 5.2.14 states that floodplain and riparian habitat availability are limiting factors for reintroducing Chinook salmon, and provide many important ecological benefits (e.g., Chinook salmon juvenile rearing habitat, predator and flow refuge, food resources, sediment control). Accordingly, Section 5.2.14 presents actions to provide a suitable quantity and quality of floodplain and riparian habitat to support habitat and food resources for Chinook salmon and other fishes. The section does state that the value of restoring floodplain habitat is uncertain because it is unknown where restoring floodplains would provide the greatest benefits for Chinook salmon; as with the text on page 2-39 of the Draft PEIS/R discussed above, this statement refers to the fact that at this time, insufficient information is available to determine where outmigrating juvenile Chinook salmon would use floodplain foraging habitat. The PEIS/R does not evaluate the need for floodplain habitat modifications, or identify quantities or locations for such modifications; these site-specific details will be developed as part of subsequent project-level evaluations. The lead agencies are currently assessing the need for various quantities and types of floodplain modifications in Reaches 2B and 4B1 as part of the Mendota Pool Bypass and Reach 2B Improvements Project and the Reach 4B, Eastside Bypass, and Mariposa Bypass Channel and Structural Improvements Project, respectively. Text has not been revised.

SJRP-2: The lead agencies agree that some restoration, modification, or creation of new floodplain habitat is likely needed to support juvenile reintroduced Chinook salmon. Accordingly, actions to modify floodplain and side-channel habitat are included under all action alternatives and are described at a program level of detail in the Draft PEIS/R. This includes descriptions of potential modifications in Reach 2B on pages 2-39 and 2-40, and potential modifications outside Reaches 2B and 4B1 on pages 2-45 and 2-46 of the Draft PEIS/R. Additional modifications to floodplain habitat in Reach 4B1 are included under

Alternatives A2, B2, and C2, as described on pages 2-80 through 2-82 of the Draft PEIS/R. The PEIS/R does not evaluate the need for such modifications, or identify quantities or locations for such modifications; these site-specific details will be developed as part of subsequent project-level evaluations. The lead agencies are currently assessing the need for various quantities and types of floodplain modifications in Reaches 2B and 4B1 as part of the Mendota Pool Bypass and Reach 2B Improvements Project and the Reach 4B, Eastside Bypass, and Mariposa Bypass Channel and Structural Improvements Project, respectively.

The description of the monitoring actions presented in Appendix D, "Physical Monitoring and Management Plan," of the Draft PEIS/R provides sufficient detail for the purposes of the PEIS/R. As described on page 1-1 of Appendix D of the Draft PEIS/R, the Physical Monitoring and Management Plan is intended to guide potential implementation of immediate actions, and to provide the basis for monitoring and management programs for long-term implementation. The guidelines in this plan would need ongoing refinement to develop specific thresholds, and would incorporate input from supporting agencies, the Settling Parties, and appropriate Third Parties. More detailed monitoring and management programs would be developed, as necessary, to identify specific methods for implementation, including exact monitoring locations, standards for data collection, and guidelines for implementing long-term management actions. An example of a more detailed plan is the Draft Seepage Management Plan developed to guide monitoring and management of seepage during release of Interim or Restoration flows, presented in the Draft PEIS/R as the Draft Seepage Management Plan Attachment to Appendix D. In addition to the monitoring and management actions described in Appendix D of the Draft PEIS/R, Appendix E, "Fisheries Management Plan," of the Draft PEIS/R describes the framework for addressing specific actions related to fisheries, including actions to address floodplain habitat for juvenile salmonids. This includes Action Q3 (page 5-51), Action Q4 (page 5-52), and Action Q6 page 5-53). Text has not been revised.

SJRP-3a: Comment noted. The Implementing Agencies recognize that partnering with complementary efforts could enhance the effectiveness of other related endeavors and the SJRRP. The lead agencies recognize and appreciate the careful consideration of the SJRRP and future of the San Joaquin River, as well as the valuable knowledge of the Restoration Area, offered by the San Joaquin River Partnership (SJRP) and other nonprofit organizations active along the San Joaquin River. The Implementing Agencies have conducted and will continue to conduct extensive public and stakeholder outreach activities to engage and inform interested parties of SJRRP activities early in the scoping process, throughout development of the PEIS/R, and into the future as SJRRP actions are implemented and monitored.

The purpose, need, and objectives of the project (described on page 1-13 through page 1-14 of the Draft PEIS/R) establish the basis for developing a range of alternatives to achieve the stated purpose and objectives. The purpose, need, and objectives of the project are consistent with and responsive to the direction provided to the Secretary in the Act, which states, "The Secretary of the Interior is hereby authorized and directed to implement the terms and conditions of the Settlement in cooperation with the State of California." Identification of alternatives that are evaluated in the PEIS/R was the

culmination of an extensive process undertaken by Reclamation and DWR that involved the Implementing Agencies, in coordination with Settling Parties, other stakeholders, and interested members of the public. The potential range for each Restoration and Water Management action was represented within the range of Initial Restoration and Water Management alternatives presented in the IPAR (SJRRP 2008). As the Initial Restoration and Water Management alternatives were developed, the Implementing Agencies also identified data requirements for evaluation of the alternatives.

In recognition of data limitations associated with the SJRRP and reliance on future monitoring data, the action alternatives are defined broadly and include provisions for flexibility when implemented. Accordingly, action alternatives evaluated in the Draft PEIS/R address large-scale systemwide variations, with flexibility for different methods of implementation. The action alternatives described in the Draft PEIS/R are generally consistent with the "ecosystem-based approach" recommended by the commenter. The different methods of implementation represent key decision points, including the ultimate extent of channel modifications and flow routing within the Restoration Area, and the extent and location of long-term water recapture opportunities. The living river ecosystem recommended by the commenter fits with and complements this essential aspect of the action alternatives, and none of the action alternative preclude developing and implementing a more holistic river corridor strategy in the future.

Similarly, an ecosystem-based approach complements two key pieces of the project description that are common to all action alternatives: the Conservation Strategy and the Physical Monitoring and Management Plan. As described in Chapter 2.0, "Description of Alternatives," of the Draft PEIS/R, all action alternatives include the Conservation Strategy, which consists of management actions necessary to provide a net increase in the extent and quality of riparian and wetland habitats in the Restoration Area, to avoid reducing the long-term viability of sensitive species, and to be consistent with adopted conservation plans. Additionally, as described in Chapter 2.0 of the Draft PEIS/R, the action alternatives include many actions to encourage, incorporate, and conserve functional floodplains, riparian and wetland habitat, and natural river hydrology and morphology. In addition to actions identified in the Settlement to incorporate integrated floodplain habitat in Reaches 2B and 4B1, the action alternatives include program-level actions to modify floodplain and side-channel habitats beyond Reaches 2B or 4B1 (as described on pages 2-45 and 2-46 of the Draft PEIS/R), as well as to implement the Conservation Strategy (described in Section 2.4.4 of the Draft PEIS/R, "Conservation Strategy"). The Conservation Strategy consists of management actions that would result in a net benefit for riparian and wetland habitats in the Restoration Area, to avoid reducing the long-term viability of sensitive species, and to be consistent with adopted conservation plans.

An ecosystem-based approach, depending on specific components of the approach that the commenter has not provided, appears implementable under all action alternatives and could be implemented along with the strategies for implementation identified in Section 2.11.1 of Chapter 2.0 of the Draft PEIS/R. An ecosystem-based approach, however, goes beyond the Settlement's Restoration and Water Management goals to improve the entire riverine ecosystem, including riparian habitat and wetlands for migratory birds and other

wildlife. While there are noteworthy opportunities for further river ecosystem management, they are not called for in the Settlement and would be an expansion and significant change in the Settlement's goals. Planning and implementing a more expanded ecosystem would require not only coordination among the Implementing Agencies and proponents of subsequent site-specific projects, but also would require the participation of downstream landowners and water districts, flood system planners and managers, conservation organizations, public and private wetlands agencies, and/or counties and communities.

Through coordination with other agencies, stakeholders, and the public, the Implementing Agencies would seek to develop the SJRRP in a manner that would provide space and suitable conditions for a range of river flows and functions. The Implementing Agencies present information and collect feedback on past and future SJRRP activities through outreach activities, including public meetings of technical feedback work groups focused on technical issues, including fisheries management, seepage and conveyance, and water management. These activities inform development of the Monitoring and Analysis Plan. The Monitoring and Analysis Plan presents studies, monitoring network changes, and development of analytical tools scheduled for the following year. The Monitoring and Analysis Plan provides a framework for the Implementing Agencies to prioritize and consolidate monitoring and analysis proposals into a coordinated program that best meets SJRRP needs within funding limits and other constraints.

To summarize, the ecosystem-based approach proposed by the commenter goes beyond the purpose and need, as described in Chapter 1.0, "Introduction," of the Draft PEIS/R. The river corridor strategy focuses on expanding natural habitats along the San Joaquin River beyond those that may be necessary to achieve the purpose and need. Recognizing these differences, and that agencies and stakeholders may have different approaches and objectives that go beyond those described in the Settlement, Act, or PEIS/R, the Implementing Agencies have developed the action alternatives with as much flexibility as possible such that implementing the Settlement would not preclude any future opportunities to modify or expand the ecosystem to achieve mutually beneficial ecosystem goals. Text has not been revised.

SJRP-3b: Comment noted. The purpose and need identified in the SJRRP are consistent with and responsive to direction provided to the Secretary in the Act, which states, "The Secretary of the Interior is hereby authorized and directed to implement the terms and conditions of the Settlement in cooperation with the State of California." Specific actions stipulated in the Settlement address channel capacity and floodplain habitat, and those actions are defined within the project description in Chapter 2.0, "Description of Alternatives," of the Draft PEIS/R.

As described in detail in MCR-1, "Analysis of Program Feasibility, Potential to Achieve Restoration and Water Management Goals," in Chapter 2.0, "Master Comment Responses," of this Final PEIS/R, the PEIS/R evaluates the potential impacts of implementing the Settlement consistent with the Act. The PEIS/R does not evaluate the feasibility of the Settlement, the likely efficacy of Settlement actions in achieving the

Restoration or Water Management goals, or the interactions of individual Settlement actions with other Settlement actions. Such evaluations could be undertaken in a feasibility study but, as described above, a feasibility study on implementing the Settlement consistent with the Act was not required before, or as a condition of, Settlement implementation.

The PEIS/R evaluates the environmental effects of implementing the Settlement within the planning horizon of 2030. The SJRRP implementation schedule and its correlation with available funding are not presented in the PEIS/R, nor are there resulting environmental effects that should be considered in the PEIS/R. Throughout Settlement implementation, however, the Implementing Agencies will remain cognizant of funding availability and the need to prioritize individual actions in recognition of their estimated costs and anticipated effectiveness. The Settling Parties have also recently developed a Third-Party working draft *Framework for Implementation* for the SJRRP (SJRRP 2012b). The *Framework for Implementation* outlines actions to be taken to implement the Settlement, and presents a schedule and budget for these actions. The *Framework for Implementation* also provides an accounting of the remaining funds available to implement the SJRRP. The *Framework for Implementation* can be found on the SJRRP Web site at www.restoresjr.net. While the *Framework for Implementation* presents a revised schedule for implementing the SJRRP, it does not result in any new significant environmental impacts or a substantial increase in the severity of an environmental impact, or create a feasible project alternative or mitigation measure that would clearly lessen environmental impacts identified in the PEIS/R. See also MCR-2, "SJRRP Funding Availability, Sources, and Cost Estimates," for further information.

Actions to address conservation for migratory birds and other wildlife are addressed, as appropriate, in the Conservation Strategy, in Chapter 2.0 of the Draft PEIS/R. Text has not been revised.

SJRP-3c: Comment noted. The lead agencies acknowledge that restoration actions would require the participation of downstream landowners and water districts, flood system planners and managers, conservation organizations, public and private wetlands agencies, and/or counties and communities. The Implementing Agencies have conducted and will continue to conduct extensive public and stakeholder outreach activities to engage and inform interested parties of SJRRP activities early in the scoping process, throughout development of the PEIS/R, and into the future as SJRRP actions are implemented and monitored.

Efforts to coordinate projects that affect the flood control system are described on page 2-95 of the Draft PEIS/R. Reclamation and DWR recognize the importance of coordination and communication in planning and implementing projects that affect the flood control system in prevent impacts to flood management, including SJRRP and FloodSAFE. Consistent with an MOU between the Settling Parties and the State, the California Natural Resources Agency will play a major role in funding and implementing actions called for in the Settlement and in the Act. DWR will assist in planning, designing, and constructing the physical improvements identified in the Settlement, including projects related to flood protection, levee relocation, and modifications to and maintenance of

channel facilities. DFG will provide technical assistance on actions related to releasing Interim and Restoration flows, reintroducing and monitoring fish, and planning, designing, and constructing facilities to provide fish passage. Text has not been revised.

SJRP-3d: As described in MCR-5, "Adequacy of Purpose and Need, and Range of Alternatives, Under NEPA/CEQA," in Chapter 2.0, "Master Comment Responses," of this Final PEIS/R, the purpose and need identified in the SJRRP are consistent with and responsive to direction provided to the Secretary in the Act, which states, "The Secretary of the Interior is hereby authorized and directed to implement the terms and conditions of the Settlement in cooperation with the State of California." The Settlement does not include stipulations regarding the Grassland Ecological Area (GEA); however, action alternatives do not preclude coordinating water management actions to include GEA.

The action to reintroduce fall-run and spring-run Chinook salmon is analyzed at a program-level in the Draft PEIS/R. The Program Biological Assessment (SJRRP 2011d) has already been completed under Section 7 of the ESA for potential fish and wildlife impacts due to SJRRP actions, which defines "take" for SJRRP actions. However, the Program Biological Assessment did not cover take of spring-run Chinook salmon because, as stipulated in the Settlement, they will be designated an "experimental population" under Section 10(j) of the ESA, and will be covered under separate consultation by NMFS and USFWS. If NMFS and USFWS deem the GEA to be an issue for take, it would be included in the Section 7 ESA consultation for reintroduction. Text has not been revised.

SJRP-4: Chapter 22.0, "Socioeconomics," of the Draft PEIS/R, notes the contributions of the SJRRP to the economy as part of analyzing the overall socioeconomic impacts that result from the beneficial and adverse consequences of the SJRRP (including regional employment and population levels, housing demand, and physical decay in communities). Please see Impacts SOC-1 (Alternative A1) and SOC-4 (Alternative A1) for program- and project-level examples of impact discussions that note the beneficial effects of the SJRRP on the regional economy. Text has not been revised.

SJRP-5: The environmental consequences section of Chapter 22.0, "Socioeconomics," of the Draft PEIS/R, concludes that no significant socioeconomic effects would result from implementing the Settlement. Therefore, although relevant to the socioeconomic effects, stipulations related to hiring practices for individual projects are not included in this chapter as mitigation. Chapter 22.0 notes that the local labor force is anticipated to fill many of the employment opportunities that would be created as a result of the implementing the action alternatives. Use of first-source hiring practices may be considered during implementation of subsequent site-specific projects; however, insufficient information on these projects is available at this time to stipulate these practices as part of the PEIS/R. Text has not been revised.

SJRP-6: The environmental consequences section of Chapter 22.0, "Socioeconomics," of the Draft PEIS/R, concludes that no significant socioeconomic effects would result from implementing the Settlement. Therefore, although relevant to the socioeconomic effects, stipulations related to hiring practices for individual projects are not included in this

chapter as mitigation. Chapter 22.0 notes that the local labor force is anticipated to fill many of the employment opportunities that would be created as a result of the implementing the action alternatives. Use of local youth service corps may be considered during implementation of subsequent site-specific projects; however, insufficient information on these projects is available at this time to stipulate these practices as part of the PEIS/R. Text has not been revised.

SJRP-7a: Text on page 21-5, after line 36, of the Draft PEIS/R has been revised in response to this comment. See revision in Chapter 4.0, "Errata," of this Final PEIS/R.

SJRP-7b: Comment noted. Text has not been revised.

SJRP-8a: The commenter recommends that additional mitigation be provided at both the program and project level, and suggests (in comment SJRP-9) that additional mitigation include developing a "River Access and Recreation Plan for the Restoration Area." As described in Chapter 3.0, "Considerations for Describing the Affected Environment and Environmental Consequences," of the Draft PEIS/R, mitigation measures are presented, where feasible, for all potentially significant impacts. Mitigation measures are not required nor identified for effects that are found to be less than significant.

Chapter 21.0, "Recreation," of the Draft PEIS/R identifies eight program-level and eight project-level impacts. Of the program-level impacts, Impacts REC-3, REC-4, and REC-5 are found to be potentially significant. At the project level, Impacts REC-9 and REC-12 were found to be potentially significant. For each of these potentially significant impacts, feasible mitigation measures are proposed in accordance with the State CEQA Guidelines Section 15126.4 and NEPA regulations (40 CFR 1508.20). After mitigation, Impacts REC-3, REC-4, REC-5, REC-9 and REC-12 would be less than significant, as described in Chapter 21.0.

As described under Impact REC-12, and referenced by the commenter, although increased flows would have beneficial effects on boating opportunities throughout the Restoration Area, boating opportunities would be reduced in Reach 1 from mid-March through April in most years. This impact to spring boating in Reach 1 would be potentially significant. Accordingly, Mitigation Measure REC-12 will be implemented to reduce this impact to less than significant. Under Mitigation Measure REC-12, Reclamation will develop and implement a recreation outreach program, and will prepare and implement a recreation outreach plan. The recreation outreach program will be completed within 1 year of the signing of the Record of Decision. Until such time as the recreation outreach program is in place, Reclamation will continue to implement the recreation outreach plan developed for the most recent Interim Flows project. Mitigation Measure REC-12 is described beginning on page 21-52 of the Draft PEIS/R. No mitigation is required for Impact REC-12 within Reaches 2 through 5 because project-level impacts in these reaches would be less than significant and beneficial. Text has not been revised.

SJRP-8b: As described in response to comment SJRP-8a, Chapter 21.0, "Recreation," of the Draft PEIS/R identifies eight program-level and eight project-level impacts. Of the

program-level impacts, Impacts REC-3, REC-4, and REC-5 are found to be potentially significant. At the project level, Impacts REC-9 and REC-12 were found to be potentially significant. For each of these potentially significant impacts, feasible mitigation measures are proposed in accordance with State CEQA Guidelines Section 15126.4 and NEPA regulations (40 CFR 1508.20). After mitigation, Impacts REC-3, REC-4, REC-5, REC-9 and REC-12 would be less than significant, as described in Chapter 21.0. Because mitigation measures REC-3, REC-4, REC-5, REC-9, and REC-12 would reduce these impacts to less than significant, no additional mitigation is required.

The commenter states that the PEIS/R "unreasonably off-loads this responsibility [to provide additional river access in the lower reaches] to State Parks, local agencies, and non-profits." This statement is examined for each mitigation measure, as follows:

- **Mitigation Measure REC-3, Program-Level** – Under this mitigation measure, the project proponent would develop specific actions to redevelop or relocate facilities in the San Luis Unit of the San Luis National Wildlife Refuge in coordination with USFWS. This mitigation measure does not rely on State Parks, local agencies, or nonprofits for implementation.

- **Mitigation Measure REC-4, Program-Level** – Under this mitigation measure, the project proponent would mitigate trout fishing opportunities lost on the San Joaquin River below Friant Dam because of Settlement actions by enhancing public fishing access and trout populations on the Kings River below Pine Flat Dam. This mitigation measure relies on the cooperation of the Kings River Conservancy and State and local agencies participating in ongoing park and river access construction and enhancement projects in developing specific actions to enhance fishing access. However, the burden for implementing this mitigation measure would remain with the project proponent for the site-specific project.

- **Mitigation Measure REC-5, Program-Level** – Under this mitigation measure, the project proponent would mitigate warm-water fishing opportunities that may be lost as a result of filling or isolating gravel pit ponds in the floodplain of Reach 1 of the San Joaquin River by enhancing remaining warm-water fishing opportunities or creating new opportunities in the vicinity. This mitigation measure relies on the cooperation of SJRC, SJRPCT, DFG, Fresno County, and other agencies managing the San Joaquin River Parkway in developing specific actions to enhance warm-water fishing opportunities. However, the burden for implementing this mitigation measure would remain with the project proponent for the site-specific project.

- **Mitigation Measure REC-9, Project-Level** – Under this mitigation measure, Reclamation will monitor Millerton Lake and extend, modify, or relocate facilities in the Millerton Lake State Recreation Area to allow boat launching at the lower pool elevations that may result from Interim and Restoration flows during Dry and Critical-High years. This mitigation measure does not rely on State Parks, local agencies, or nonprofits for implementation.

- **Mitigation Measure REC-12, Project-Level** – Under this mitigation measure, Reclamation will develop and implement a recreation outreach program, and will prepare and implement a recreation outreach plan. This mitigation measure relies on coordination with SJRPCT, SJRC, Fresno County, City of Fresno PARCS Department, and DFG to share information with the recreating public. However, the burden for implementing this mitigation measure would remain with Reclamation.

Text has not been revised.

SJRP-9: No mitigation involving a river access and recreation plan is required at the program or project level. As described in response to comment SJRP-8a, Chapter 21.0, "Recreation," of the Draft PEIS/R identifies eight program-level and eight project-level impacts. Of the program-level impacts, Impacts REC-3, REC-4, and REC-5 were found to be potentially significant. At the project level, Impacts REC-9 and REC-12 were found to be potentially significant. For each of these potentially significant impacts, feasible mitigation measures are proposed in accordance with State CEQA Guidelines Section 15126.4 and NEPA regulations (40 CFR 1508.20). After mitigation, Impacts REC-3, REC-4, REC-5, REC-9, and REC-12 would be less than significant, as described in Chapter 21.0. Because mitigation measures REC-3, REC-4, REC-5, REC-9, and REC-12 would reduce these impacts to less than significant, no additional mitigation is required. Text has not been revised.

SJRP-10: As described in Chapter 21.0, "Recreation," of the Draft PEIS/R, under Mitigation Measure REC-5, the project proponent would enhance warm-water fishing opportunities or create new opportunities in the vicinity of Reach 1. Specific actions would be developed with the San Joaquin River Conservancy and other agencies participating in managing the San Joaquin River Parkway. See MCR-9, "Recreation Impacts and Kings River," in Chapter 2.0, "Master Comment Responses," of this Final PEIS/R, for additional information relevant to this comment.

SJRP-11: Comment noted. The mental and physical benefits provided by all forms of recreation are widely known and implicit in the beneficial effects to recreation identified in the Environmental Consequences section of Chapter 21.0, "Recreation," of the Draft PEIS/R. Separate discussion of these benefits in Chapter 20.0, "Public Health and Hazardous Materials," of the Draft PEIS/R, would be redundant to the information presented in Chapter 21.0. Text has not been revised.

SJRP-12: The term "heat island" describes developed areas that are hotter than nearby rural areas. A discussion of the heat island effect was not included in the Draft PEIS/R because the SJRRP would not involve actions that would cause or contribute to urban heat islands. Text has not been revised.

SJRP-13: Climate change adaptation refers to efforts that respond to the impacts of climate change (i.e., adjustments in anticipation of, or in response to, climate change). Although not addressed in a single section of the Draft PEIS/R, mechanisms for adapting to changing environmental conditions, including climate change, are included in all

action alternatives described in the Draft PEIS/R. The SJRRP includes a set of structural or channel improvements based on Paragraph 12 of the Settlement that may be recommended by the RA to further enhance the success of achieving the Restoration Goal (discussed on pages 2-38 and 2-39 of the Draft PEIS/R). The RA's recommendations would be based, in part, on information collected through the Physical Monitoring and Management Plan (Appendix D of the Draft PEIS/R). Also, the action alternatives incorporate adaptive management of biological resources in response to changing environmental conditions, as presented in Table 2-7 of the Draft PEIS/R. The table includes conservation measures for a Riparian Habitat Mitigation and Monitoring Plan (RHSNC-2), an Invasive Vegetation Monitoring and Management Plan (INV-1), and a Delta Button-Celery Conservation Plan (DBC-1); and in Appendix E, "Fisheries Management Plan," of the Draft PEIS/R. The Draft PEIS/R also includes analysis of the effects of climate change on hydrologic conditions (see the Sensitivity of Future Central Valley Project and State Water Project Operations to Potential Climate Change Attachment to Appendix I, "Supplemental Hydrologic and Water Operations Analyses," of the Draft PEIS/R). Text has not been revised.

3.9.9 San Joaquin River Parkway and Conservation Trust

SJRPCT

San Joaquin River Parkway and Conservation Trust, Inc.

September 21, 2011
Sent via e-mail, PEISRComments@restoresjr.net

Alicia Forsythe, Program Manager
San Joaquin River Restoration Program
Bureau of Reclamation
2800 Cottage Way, MP–170
Sacramento, CA 95825

Subject: Comments on the San Joaquin River Restoration Program (SJRRP) Draft Program Environmental Impact Statement/Environmental Impact Report (PEIS/R)

Dear Ms Forsythe:

The San Joaquin River Parkway and Conservation Trust supports the San Joaquin River Restoration Program. Restoring the river's ecosystem will enhance quality of life in the San Joaquin Valley. The important connection of our community to the San Joaquin River is highlighted in the book, Take Me To The River[1], which is a collection of recorded stories of local people, documenting the river's vital role in our cultural and natural heritage.

The Trust has reviewed the SJRRP PEIS/R and submits this letter as our comments on the document.

SJRPCT-1 In the San Joaquin River Parkway section, Reach 1A, SJRRP project planning and construction activities should be coordinated with the San Joaquin River Conservancy in a manner that is mutually beneficial to implementation of the San Joaquin River Parkway Master Plan (SJRMP). Whenever feasible, future SJRRP projects should incorporate Parkway trail and public access facilities into their design, which will advance implementation of the Parkway as well as maximize the additional recreation opportunities outlined in the PEIS/R.

SJRPCT-2 An area of benefit that is understated in the PEIS/R is the important resource SJRRP will provide to the Valley as a result of additional recreation, education, and eco-tourism opportunities. Through re-establishment of salmon spawning areas in the Parkway reach, significant new interpretive and recreation programs will be made available to the public via the Parkway's mosaic of public lands and trails. The combination of economic activity from eco-tourism as well and the jobs created by the restoration projects provide long-term socio-economic benefits to our region. SJRRP should establish a

[1] Hallowell, Jodi and Coke, 2010, Take Me To The River, Heyday publishing, Berkeley, CA

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SJRPCT-2 cont'd

working committee with the Valley's schools, visitor bureaus, and other recreation and education stakeholders to maximize outreach and communications of these benefits.

SJRPCT-3

The PEIS/R identifies potential impacts to fishing in Reach 1 from restrictions that may be applied to the existing planted trout fishing program during certain times of the year in order to protect salmon and, from isolating old sand and gravel pits. In both of these situations, there are existing large ponds on public lands in the Parkway, such as Ball Ranch, that could be made available to the public for fishing. We recommend SJRRP work with the San Joaquin River Conservancy to study and identify ponds appropriate for enhancing fishing opportunities in Reach 1 and undertake the necessary improvements. Mitigation Measure REC-4 should be revised to include providing additional fishing opportunities in the Parkway, Reach 1.

Thank you for the opportunity to provide these comments and recommendations. We appreciate the work of the SJRRP and its goals.

Sincerely,

Dave Koehler
Executive Director

About the San Joaquin River Parkway and Conservation Trust

The San Joaquin River Parkway and Conservation Trust is a California non-profit land trust formed in 1988 with a governing board of citizens from Madera and Fresno County communities. Our mission is *"To preserve and restore San Joaquin River lands having ecological, scenic or historic significance, to educate the public on the need for stewardship, to research issues affecting the river, and to promote educational, recreational, and agricultural uses consistent with the protection of the river's resources."*

Responses to Comments from San Joaquin River Parkway and Conservation Trust

SJRPCT-1: The lead agencies recognize and appreciate the careful consideration of the SJRRP and future of the San Joaquin River, as well as the valuable knowledge of the Restoration Area, offered by the San Joaquin River Parkway and Conservation Trust and other nonprofit organizations active along the San Joaquin River. Reclamation and DWR recognize the need to work with these organizations to provide maximum benefits and minimize inefficiency during implementation of both the San Joaquin River Parkway and SJRRP. Reclamation and DWR welcome the invitation to work with these entities to provide ecosystem and community improvements while accomplishing the goals of the SJRRP. The recommendations provided by the San Joaquin River Parkway and Conservation Trust will be considered during Settlement implementation. The inclusion of this discussion does not change the analysis or conclusions of the Draft PEIS/R. Text has not been revised.

SJRPCT-2: As described in Chapter 21.0, "Recreation," of the Draft PEIS/R, the lead agencies are committed to implementing mitigation measures, including coordination with agencies and organizations that provide recreation access, facilities, and services in each reach. Specifically, this would include the following public and nonprofit agencies and organizations: the SJRPCT, SJRC, Fresno County, PARCS Department, and DFG. The inclusion of this discussion does not change the analysis or conclusions of the Draft PEIS/R. Text has not been revised.

SJRPCT-3: As described in Chapter 21.0, "Recreation," of the Draft PEIS/R, under Mitigation Measure REC-5, the project proponent would enhance warm-water fishing opportunities or create new opportunities in the vicinity of Reach 1. Specific actions would be developed with SJRC and other agencies participating in managing the San Joaquin River Parkway. See MCR-9, "Recreation Impacts and Kings River," in Chapter 2.0, "Master Comment Responses," of this Final PEIS/R, for additional information relevant to this comment. Text has not been revised.

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3.9.10 The Nature Conservancy

The Nature Conservancy
Protecting nature. Preserving life.™

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TNC

Alicia Forsythe, Program Manager
Bureau of Reclamation
2800 Cottage Way
Sacramento, CA 95825

Dear Ms. Forsythe:

On behalf of The Nature Conservancy, I would like to thank you for the opportunity to provide public comments on the Bureau of Reclamation's San Joaquin River Restoration Program Programmatic EIS/EIR. This lengthy document represents a substantial amount of work, and we commend the Bureau of Reclamation on the effort it took to compile. This letter addresses some of the specific contents of that programmatic document, and provides general comments from The Nature Conservancy on the Restoration Program's programmatic goals and objectives.

General Comments

Biological Significance of SJR

TNC-1 In historic times, biologists estimate that the wetlands, flood plains, and riparian forests of the San Joaquin River supported a rich diversity of aquatic and terrestrial plants, mammals, fish, reptiles, amphibians, and more than 30 million migratory ducks, geese, shorebirds, and songbirds. Since that time, more than 95% of those wetlands have been dried up, riparian forests reduced to a few scattered cottonwood trees, and the San Joaquin River flows reduced to patches of sand. More than 150 species of birds depend on riparian corridors and wetlands associated with the San Joaquin River, and many of those species that historically bred commonly along the river—Yellow-billed Cuckoo, Least Bell's Vireo, Bank Swallow, and Southwest Willow Flycatcher—have been extirpated or their populations reduced to almost zero. With restored flows from Friant Dam comes the opportunity to restore a once-great river, restore those natural communities, and protect the region's vibrant economic engine—agriculture—that relies upon the River.

The importance of restoring functional flood plains

TNC-2 Currently in many parts of the San Joaquin River, there is effectively no functional flood plain for natural ecosystems or flood protection. Restoration of functional flood plains along the San Joaquin River presents the opportunity to fix some of the challenges created by years of "improvements" to drain the region's characteristic hydric soils, channelization, and the loss of wetlands and riparian forests in the region. The Nature Conservancy strongly encourages the Bureau of Reclamation to place a higher priority on restoring and connecting functional flood plains as part of the implementation of the Restoration Program. The designs for implementation of the San Joaquin River Restoration Program should not only allow for restoration of those functional flood plains, but should focus on them as a key strategy, especially in Reaches 2B, 3, and 4B. Specifically, some lands along the river that will be too wet to farm under inundation models should be restored to riparian flood plain forests and wetlands, and levees should be set back or removed entirely in key areas, to accommodate natural flood regimes. In addition to benefiting natural communities, levee set-backs would provide flood protection for communities and property along the river, and would shore up aging infrastructure to protect existing

TNC-2 cont'd

water delivery infrastructure and adjacent agricultural lands. In addition, floodplain restoration is less expensive than building infrastructure, can reduce liability for levees and eliminates the need for perpetual operations and maintenance costs.

Floodplain as an economical solution to implementation

TNC-3

Riparian restoration and integrated floodplains provide shade, natural cooling, and refugia for juvenile fish. While there is no question that engineering projects and infrastructure improvements will play a major role in the implementation, in many parts of the San Joaquin River, especially Reaches 2B, 3, and 4B, riparian restoration is the most cost-effective way to meet the Bureau's obligations associated with restoring fish and fish survival. Simply engineering the system may not provide sufficient spawning and rearing habitat, vegetative cover, and shade and natural pools to maintain lower ambient river temperatures. Riparian restoration and integrated floodplain provide a cost-effective means to achieve these goals, while providing increased open space, flood protection for human communities, and habitat for a variety of birds and other wildlife.

Chapter Comments

2.0 et seq.–Description of Alternatives (General)

TNC-4a

The Nature Conservancy strongly supports the integration of floodplain habitat, especially as described in Action Alternatives A-2, B-2, and C-2 for Reach 4B, which is a stated requirement under the terms of the Settlement, but the programmatic document should specifically reference components of that floodplain, including riparian and wetlands restoration, levee set-backs, and integrated floodplain management. We appreciate the Bureau's consideration of acreage targets for restoration goals in the document, but it is important that these "integrated floodplain" goals also include whole-ecosystem restoration. In addition, in the Action Alternatives contemplated by this section, if the Bureau of Reclamation selects Action Alternatives A-1, B-1, and C-1, the document should address how integrated floodplain, specifically riparian and wetlands restoration, levee set-backs, and integrated floodplain

TNC-4b

management, would be created along the bypass system. If Action Alternatives A-1, B-1, and C-1 are selected, it would appear that the only way to meet the long-term goals of fish restoration would be to do riparian restoration and install set-back levees along the bypasses. The Nature Conservancy encourages the Bureau of Reclamation to provide additional information about how this could be accomplished.

TNC-5

Regardless of the Action Alternative selected, if floodplain habitat is not included, either along the main stem of the San Joaquin River or along the bypass system, this could prove to be a significant bottleneck for fish survival. In particular, restoration of riparian floodplain should provide side channel habitats for fish, disperse native vegetation, substantially benefit a suite of riparian breeding migratory birds, and provide wildlife corridors for terrestrial species. It is currently unclear how the restoration program would account for bottlenecks if Alternatives A-1, B-1, or C-1 were to be selected, or how or where integrated floodplain and riparian restoration would be implemented, if at all, which would appear to fail to meet the goals of supporting spring run and fall run salmonids and other native fish populations.

TNC-6

We encourage the Bureau to consider providing more detailed consideration of riparian restoration within integrated floodplain and levee setbacks, where appropriate, including, but not limited to, Reach 4B, Reach 2B and Reach 3, in Action Alternatives A-2, B-2, and C-2. With regard to Action Alternatives A-1, B-1, and C-1, the programmatic document should include additional details on how functional floodplains and native vegetation would be restored along a bypass system.

Section 2.4 In addition, and specific to Section 2.4, the positive effects of erosion and sedimentation, both natural river processes, should be considered. The contemplated "repairs" and intent to monitor and "fix" erosion (presumptively riprap, and rocking the banks) appear to be outside the scope of the Bureau's obligations for restoration. Moreover, installation of riprap and other bank rocking is contrary to the goals of restoring functional, integrated floodplain, contrary to salmon restoration goals, and would likely create long term costs and obligations for the agency. Rivers in other parts of the Central Valley, specifically the Sacramento River, are particularly instructive. On the Sacramento River mitigating for riprapped banks has become a big issue, and a number of federal agencies including the Army Corps, the EPA, and NOAA Fisheries are now engaged in a working group process to achieve mitigation goals. The Bureau of Reclamation has the opportunity now to address the issue of riprap before it becomes a major obstacle to fish restoration goals.

TNC-7

It is widely recognized that riprap directly degrades or outright destroys the habitat for some of the rarest and most imperiled species and communities in California, both aquatic and terrestrial. Specifically, riprapped banks lack velocity refugia and expose juvenile salmon to predation, and do not provide the intricate habitat requirements for multiple age classes or species of salmon that natural vegetated banks provide. Riprapped banks are less often undercut, and are less likely to contribute terrestrial prey or Large Woody Debris (LWD) to the river. LWD has key roles in physical habitat formation, sediment and organic matter storage, and in maintaining essential habitat complexity and fish survival. Additionally, riprapped banks reduce the amount of Shaded Riverine Aquatic Cover (SRA), a composite riparian/aquatic habitat consisting of overhanging and instream woody and herbaceous vegetation, and reduce the reworking of sediments that is required to keep the channel substrate suitable for invertebrates—the base of the aquatic food web, and the food source for salmonids. Moreover, riprapped banks arrest meandering, thus precluding the formation of point bars and channel cutoffs, and halting the regeneration of riparian vegetation that naturally recruits in these areas, which is particularly important to juvenile fish. Due to increased local scour and incision the channel is wider and shallower at naturally eroding bends than on rocked bends. This reduces overall channel complexity (e.g., number of mid-channel islands, overall wetted area), and fish habitat. The Bureau should take this opportunity to articulate the positive effects of erosion and sedimentation, such as benefits to restoration of natural river processes and fish survival, in the programmatic document.

5.0 et seq.—Fisheries (General)

Many of the Action Alternatives as currently presented do not necessarily provide the floodplain and off-channel habitat needed to support the goals of restoring floodplain habitat to meet the long term fish population goals for spring and fall run salmon and other native fish, especially in Reaches 2B and 3. Restoring natural riparian communities including cottonwood-willow forests and wetlands along river

TNC-8a

systems is widely recognized as improving conditions for fish. However, the establishment of shaded river aquatic habitat wasn't included in Chapter 5.0 or the Fisheries Management Plan at Appendix E. The Nature Conservancy encourages the Bureau to provide additional details describing the importance of incorporating riparian restoration to support fish goals for each of the Action Alternatives. For example, incorporating riparian and wetlands restoration and integrated floodplains, both along the main stem of the San Joaquin River, and/or along the bypasses, would provide shade, natural cooling, and refugia for juvenile salmonids, regardless of the selected alternative.

TNC-8b

Furthermore, it is difficult to determine, under the programmatic document, how the Bureau would achieve those outcomes, and how and where such floodplain functionality could be implemented. As currently described, Alternatives A-2, B-2, and C-2 appear to provide the greatest opportunity to

TNC-8b cont'd

improve fisheries resources, given the improved and increased floodplain and off-channel habitat, but specific riparian restoration to advance fish goals should be specified in this chapter. If Alternatives A-1, B-1, and C-1 are selected, The Nature Conservancy strongly encourages the Bureau of Reclamation to address the need for additional floodplain and off-channel habitat along the bypass systems to support healthy fish populations.

TNC-8C

The Nature Conservancy also strongly recommends that the Bureau consider how it will improve channel conditions for restored salmon populations into the document, including removing non-natural barriers to fish passage such as historic and currently unutilized gravel pits, weirs, gates, and installing fish ladders to facilitate fish passage.

6.0 et seq.—Biological Resources, Vegetation and Wildlife (General)

TNC-9

As noted, diversions for agricultural and urban uses in the last 150 years have resulted in significant loss of wetlands and riparian forests along the San Joaquin River, as well as regional fragmentation of available habitat for migratory birds and other wildlife species. Maintaining robust wetlands and riparian communities requires a natural flow regime, which has been absent on the river since the construction of Friant Dam and other water control structures and diversions. Moreover, due to these diversions and structures, the river lacks the typical scouring process associated with natural flow regimes, and therefore lacks high quality spawning and rearing habitat for salmonids. Additionally, in most areas the riparian corridors have been reduced to less than 30 feet, making it difficult for native vegetation to thrive, and resulting in significant infestations of invasive species, which provide reduced habitat to migratory birds and other wildlife. The Nature Conservancy strongly supports steps to restore functional flood plains and flow regimes that support a diversity of plants and animals along those functional flood plains. In addition to supporting these native ecosystems, functional floodplains can provide flood protection for human communities and agricultural users.

TNC-10a

In the selection and implementation of Alternative Actions A-1, A-2, B-1, B-2, C-1, or C-2, The Nature Conservancy supports the Bureau of Reclamation's stated goals to avoid, minimize, or mitigate removing native riparian or emergent marsh vegetation, and wherever possible creating and/or replacing native vegetation within functional flood plains, unless it negatively impacts required infrastructure, but the programmatic document should address how this would be accomplished. In many instances, avoidance, mitigation, or minimization will be impossible, but there are no details on how or where such mitigation would be undertaken. In areas where native vegetation negatively impacts required infrastructure, and avoidance is not possible, we support the stated policy of mitigating on a no-net-loss basis for that habitat elsewhere along the San Joaquin River. We suggest incorporating additional language that would link site-specific programmatic actions on the river to local, site-specific mitigation projects, also along the San Joaquin River on a Reach by Reach basis.

TNC-10b

The Nature Conservancy also strongly supports the Bureau of Reclamation's stated goals of following Conservation Measures included in Chapter 6 that protect vernal pools, seasonal wetlands, and special status habitats by creating avoidance buffers, develop site-specific mapping and mitigation plans resulting in no-net-loss of acreage, functions, or values of wetlands, vernal pools, and special status habitats in accordance with Section 404 of the Clean Water Act and the Endangered Species Act, however, we also strongly encourage the Bureau of Reclamation to consider how it will restore some of the functionality in river flow regimes and floodplains that has been lost in the last 100 years, which in turn will benefit these habitats, and how the Bureau can work with other local, state, and federal agencies, non-profits, and private entities on projects where several mitigation goals can be combined into larger projects to advance multiple benefit projects along the San Joaquin River. We suggest

TNC-11 incorporating language that would link site-specific programmatic actions on the river to local, site-specific mitigation projects to protect, restore, or enhance similar habitat, on a Reach by Reach basis, San Joaquin River-wide basis, and consider the opportunities to collaborate with other agencies, non-profits, and private landowners.

The following is a list of specific suggested changes to and clarifications requested in Chapter 6:

6.1—Environmental Setting

TNC-12 Page 6-1. Eliminate all text from line 19-24. Redundant with above.

TNC-13 Page 6-2. Clarify how riparian forests "were not very extensive", and provide more details on the extent and range. Is this in relation to present day? Clarify what "not very extensive" means, exactly. Some sources suggest otherwise, and depending on context, this can be misleading.

TNC-14 Page 6-6 through 6-11. Habitat descriptions could better distinguish between the native and non-native plant and animal species and communities.

TNC-15 Page 6-23. lines 17-19 state that zebra mussels occur in the study area, but lines 36-37 says not known to occur in restoration area. Is the study area larger than the restoration area?

6.2—Regulatory Setting

TNC-16 Page 6-38. Line 9. DFG has just released a draft strategic plan for the CALFED Ecosystem Restoration Program. Could provide the link: http://www.dfg.ca.gov/ERP/reports_docs.asp

Executive Summary

TNC-17 Figure ES-3. It seems the "increase channel capacity and integrate floodplain habitat" icon should be shown in more locations (Reach 4B) than just Reach 2B.

11.0—Floodplains

TNC-18 The Nature Conservancy strongly supports project and program level activities to develop integrated floodplains, including by using set-back levees, and to restore riparian habitat in Reaches 2B, 3, and 4B, among other areas, in order to increase vegetation and improve sediment deposition in the river for aquatic plants and animals, including fish. While there is minimal detail in this Chapter 11, some of the supporting sections, for example Appendix E, have additional details on the goals of integrated floodplains. However, some of the stated goals elsewhere within the programmatic document appear to be in direct contradiction with others. For example, stated goals of vegetation management along levees, engineered features to control or restrict channel meanders such as maintenance of existing channelized levees, and limitations on flow rates, all seem to contradict or restrict natural floodplain processes, which depend on periodic scouring and flooding to sustain native vegetation and support healthy fish populations. However, such functionality and on-going intensive agricultural use of the river can co-exist. We recommend clarifying how these goals can be mutually achieved.

For example, The Nature Conservancy supports the removal or setback of levees and berms, construction of additional hydraulic structures where necessary, as associated with program level

actions to reconfigure floodplains, convey flows, and provide development of flood plain habitat, but the programmatic document should include additional details to address this in the context of integration of floodplain connectivity and restoration of native plant communities in connection with those engineered projects. Set-back levees in key areas, which include enough capacity off the main channel to support high flows, appear to be the most effective way to achieve both hydrologic flows and biological goals, and the programmatic document should address this if possible. Where possible, this document should also incorporate more specific descriptions of integrated floodplain, including for restoration of native species, and composition, extent, and cover for riparian restoration, as well as plans for addressing the considerable challenge of invasive, non-native species management in the current system, without loss of native habitat.

TNC-18 cont'd

Additionally, the programmatic document should also include statements that clarify how levee management actions and maintenance of healthy and productive native vegetation can work together, particularly by removing invasive plants in highly disturbed areas and replacing those with native, ground-level, vegetation that functions to hold down dust and does not interfere with levee use or management. We encourage the Bureau of Reclamation to specifically describe how such projects could be useful to the local levee district and support multiple benefits, including to native wildlife.

TNC-19

Thank you for the opportunity to comment. Please do not hesitate to get in touch if you have any questions or would like additional clarification on any of the comments contained herein. We are happy to provide additional details or more specific examples about how some of these challenges have been addressed on other river systems in California, especially related to projects that benefit a multitude of users and still provide ecosystem functionality to support native plants and wildlife.

Sincerely,

Magill Weber

The Nature Conservancy

Responses to Comments from The Nature Conservancy

TNC-1: Comment noted. Text has not been revised.

TNC-2: Comment noted. The lead agencies acknowledge that establishing a functional floodplain throughout the Restoration Area along the San Joaquin River and resolving impediments to develop such a corridor would require the participation of downstream landowners and water districts, flood system planners and managers, conservation organizations, public and private wetland agencies, and/or counties and communities. The Implementing Agencies have conducted and will continue to conduct extensive public and stakeholder outreach activities to engage and inform interested parties of SJRRP activities early in the scoping process, throughout development of the PEIS/R, and into the future as SJRRP actions are implemented and monitored. While the Implementing Agencies continue to coordinate with related programs, projects, and organizations involved in these programs and projects, the amount and timing of funding available for Settlement implementation is limited and may vary considerably on a year-to-year basis. Because of this variability, the Implementing Agencies coordinate activities and budgets closely to minimize or avoid delays in implementation. Public involvement and outreach activities conducted by the Implementing Agencies seek to create an open and transparent process through which the general public, stakeholders, affected Third Parties, and other interested parties can track and participate in SJRRP activities.

The purpose, need, and objectives of the project (described on pages 1-13 through page 1-14 of the Draft PEIS/R) establish the basis for developing a range of alternatives to achieve the stated purpose and objectives. The purpose, need and objectives of the project are consistent with and responsive to the direction provided to the Secretary in the Act, which states, “The Secretary of the Interior is hereby authorized and directed to implement the terms and conditions of the Settlement in cooperation with the State of California.” Identification of alternatives that are evaluated in the PEIS/R was the culmination of an extensive process undertaken by Reclamation and DWR that involved the Implementing Agencies in coordination with Settling Parties, other stakeholders, and interested members of the public. The potential range for each Restoration and Water Management action was represented within the range of Initial Restoration and Water Management alternatives presented in the IPAR (SJRRP 2008). As the Initial Restoration and Water Management alternatives were developed, the Implementing Agencies also identified data requirements for evaluation of the alternatives.

In recognition of data limitations associated with the SJRRP and reliance on future monitoring data, the action alternatives are defined broadly and include provisions for flexibility when implemented. Accordingly, action alternatives evaluated in the Draft PEIS/R address large-scale systemwide variations, with flexibility for different methods of implementation. The action alternatives described in the Draft PEIS/R are generally consistent with the functional floodplain strategy recommended by the commenter. The different methods of implementation represent key decision points, including the ultimate extent of channel modifications and flow routing within the Restoration Area, and the extent and location of long-term water recapture opportunities. The functional floodplain strategy recommended by the commenter fits with and complements this essential aspect

of the action alternatives, and none of the action alternative precludes developing and implementing a more holistic river corridor strategy in the future.

Similarly, a functional floodplain strategy complements two key pieces of the project description that are common to all action alternatives: the Conservation Strategy and the Physical Monitoring and Management Plan. As described in Chapter 2.0, "Description of Alternatives," of the Draft PEIS/R, all action alternatives include the Conservation Strategy, which consists of management actions necessary to provide a net increase in the extent and quality of riparian and wetland habitats in the Restoration Area, to avoid reducing the long-term viability of sensitive species, and to be consistent with adopted conservation plans. Additionally, as described in Chapter 2.0 of the Draft PEIS/R, the action alternatives include many actions to encourage, incorporate, and conserve functional floodplains, riparian and wetland habitat, and natural river hydrology and morphology. In addition to actions identified in the Settlement to incorporate integrated floodplain habitat in Reaches 2B and 4B1, the action alternatives include program-level actions to modify floodplain and side-channel habitats beyond Reaches 2B or 4B1 (as described on pages 2-45 and 2-46 of the Draft PEIS/R), as well as to implement the Conservation Strategy (described in Section 2.4.4 of the Draft PEIS/R, "Conservation Strategy"). The Conservation Strategy consists of management actions that would result in a net benefit for riparian and wetland habitats in the Restoration Area, to avoid reducing the long-term viability of sensitive species, and to be consistent with adopted conservation plans.

A functional floodplain strategy, depending on specific components of the strategy that the commenter has not provided, appears implementable under all action alternatives and could be implemented along with the strategies for implementation identified in Section 2.11.1 of the Draft PEIS/R. A functional floodplain strategy, however, goes beyond the Settlement's Restoration and Water Management goals to improve the entire riverine ecosystem, including riparian habitat and wetlands for migratory birds and other wildlife. While there are noteworthy opportunities for further river ecosystem management, they are not called for in the Settlement and would be an expansion and significant change in the Settlement's goals. Planning and implementing a more expanded ecosystem would require not only coordination among the Implementing Agencies and proponents of subsequent site-specific projects, but would also require the participation of downstream landowners and water districts, flood system planners and managers, conservation organizations, public and private wetlands agencies, and/or counties and communities.

Through coordination with other agencies, stakeholders, and the public, the Implementing Agencies would seek to develop the SJRRP in a manner that would provide space and suitable conditions for a range of river flows and functions. The Implementing Agencies present information and collect feedback on past and future SJRRP activities through outreach activities, including public meetings of technical feedback work groups focused on technical issues, including fisheries management, seepage and conveyance, and water management. These activities inform the development of the Monitoring and Analysis Plan. The Monitoring and Analysis Plan presents studies, monitoring network changes, and development of analytical tools scheduled for the following year. The Monitoring and Analysis Plan provides a

framework for the Implementing Agencies to prioritize and consolidate monitoring and analysis proposals into a coordinated program that best meets SJRRP needs within funding limits and other constraints.

To summarize, the functional floodplain strategy proposed by the commenter goes beyond the purpose and need, as described in Chapter 1.0, "Introduction," of the Draft PEIS/R. The functional floodplain strategy focuses on restoring riparian floodplain forests and wetlands along the San Joaquin River beyond the extent that may be necessary to achieve the purpose and need. Recognizing these differences, and that agencies and stakeholders may have different approaches and objectives that go beyond those described in the Settlement, Act, or PEIS/R, the Implementing Agencies have developed the action alternatives with as much flexibility as possible such that implementing the Settlement would not preclude any future opportunities to modify or expand the ecosystem to achieve mutually beneficial ecosystem goals. Text has not been revised.

TNC-3: Comment noted. Measures for conserving and restoring riparian habitat are included in the Conservation Strategy, as described in Section 2.4.4 of the Draft PEIS/R. Integrated floodplain and related riparian, wetland, and off-channel habitat are included as potential actions in any reach or in the bypasses under all action alternatives. Those actions are evaluated at the program level in the Draft PEIS/R and would require future project-level compliance documentation for the site-specific projects. The need, extent, cost-effectiveness, and details of implementing integrated floodplain habitat would be determined during site-specific studies. Riparian restoration is expected to occur over the long term in the Restoration Area with Settlement implementation, and will need to be balanced in the context of flood management activities. Text has not been revised.

TNC-4a: The need for and extent and details of implementing integrated floodplain habitat would be determined during site-specific studies, such as the Reach 4B, Eastside Bypass, and Mariposa Bypass Channel and Structural Improvements Project. The level of detail recommended by the commenter is not available at this time and will be developed as part of future project-level analyses. The purpose, need, and objectives of the project (described on page 1-13 through page 1-14 of the Draft PEIS/R) establish the basis for developing a range of alternatives to achieve the stated purpose and objectives. The purpose, need, and objectives of the project are consistent with and responsive to the direction provided to the Secretary in the Act, which states, "The Secretary of the Interior is hereby authorized and directed to implement the terms and conditions of the Settlement in cooperation with the State of California." Identification of alternatives that are evaluated in the PEIS/R was the culmination of an extensive process undertaken by Reclamation and DWR that involved the Implementing Agencies, in coordination with Settling Parties, other stakeholders, and interested members of the public. The potential range for each Restoration and Water Management action was represented within the range of Initial Restoration and Water Management alternatives presented in the IPAR (SJRRP 2008). As the Initial Restoration and Water Management alternatives were developed, the Implementing Agencies also identified data requirements for evaluation of the alternatives.

In recognition of the data limitations associated with the SJRRP and reliance on future monitoring data, the action alternatives are defined broadly and include provisions for flexibility when implemented. Accordingly, action alternatives evaluated in the Draft PEIS/R address large-scale systemwide variations, with flexibility for different methods of implementation. The different methods of implementation represent key decision points, including the ultimate extent of channel modifications and flow routing within the Restoration Area, and the extent and location of long-term water recapture opportunities. The whole-ecosystem approach recommended by the commenter fits with and complements this essential aspect of the action alternatives, and none of the action alternative precludes developing and implementing a more holistic river corridor strategy in the future. Levee setbacks are included as a potential action to achieve the objectives of the Channel Capacity Monitoring and Management Component Plan of the Physical Monitoring and Management Plan (Appendix D of the Draft PEIS/R). Integrated floodplain and related riparian, wetland, and off-channel habitat are included as potential actions in any reach or in the bypasses under all action alternatives.

However, in addition to actions identified in the Settlement to incorporate integrated floodplain habitat in Reach 4B1, all action alternatives include program-level actions to modify floodplain and side-channel habitats beyond Reach 4B1 (as described on pages 2-45 and 2-46 of the Draft PEIS/R), as well as to implement the Conservation Strategy (described in Section 2.4.4 of the Draft PEIS/R, "Conservation Strategy"). The Conservation Strategy consists of management actions that would result in a net benefit for riparian and wetland habitats in the Restoration Area, to avoid reducing the long-term viability of sensitive species, and to be consistent with adopted conservation plans (see, in particular, Conservation Measure RHSNC-1, page 2-73, and RHSNC-2, page 2-74 of the Draft PEIS/R).

As described in this Final PEIS/R, the Preferred Alternative is Alternative C1. Alternative C1 is described in Chapter 2.0, "Description of Alternatives," of the Draft PEIS/R beginning on page 2-86. Integrated floodplain and related riparian, wetland, and off-channel habitat are included as potential actions in any reach or in the bypasses under the Preferred Alternative. See also response to comment TNC-2. Text has not been revised.

TNC-4b: The need for and extent and details of implementing integrated floodplain habitat would be determined during site-specific studies, such as for the Mendota Pool Bypass and Reach 2B Improvements Project. The level of detail recommended by the commenter is not available at this time and will be developed as part of future project-level analyses.

In addition to actions identified in the Settlement to incorporate integrated floodplain habitat in Reach 2B, all action alternatives include program-level actions to modify floodplain and side-channel habitats beyond Reach 2B (as described on pages 2-45 and 2-46 of the Draft PEIS/R), as well as to implement the Conservation Strategy (described in Section 2.4.4, "Conservation Strategy" of the Draft PEIS/R). The Conservation Strategy consists of management actions that would result in a net benefit for riparian and wetland habitats in the Restoration Area, to avoid reducing the long-term viability of sensitive species, and to be consistent with adopted conservation plans (see, in particular,

Conservation Measure RHSNC-1, page 2-73, and RHSNC-2, page 2-74, of the Draft PEIS/R).

As described in this Final PEIS/R, the Preferred Alternative is Alternative C1. Alternative C1 is described in Chapter 2.0, "Description of Alternatives," of the Draft PEIS/R beginning on page 2-86. Integrated floodplain and related riparian, wetland, and off-channel habitat are included as potential actions in any reach or in the bypasses under the Preferred Alternative. See also response to TNC-4a. Text has not been revised.

TNC-5: All action alternatives include program-level actions to modify floodplain and side-channel habitats (as described on pages 2-45 and 2-46 of the Draft PEIS/R), as well as to implement the Conservation Strategy (described in Section 2.4.4, "Conservation Strategy," of the Draft PEIS/R). The Conservation Strategy consists of management actions that would result in a net benefit for riparian and wetland habitats in the Restoration Area, to avoid reducing the long-term viability of sensitive species, and to be consistent with adopted conservation plans (see, in particular, Conservation Measure RHSNC-1, page 2-73, and RHSNC-2, page 2-74, of the Draft PEIS/R).

As described in this Final PEIS/R, the Preferred Alternative is Alternative C1. Alternative C1 is described in Chapter 2.0, "Description of Alternatives," of the Draft PEIS/R beginning on page 2-86. Integrated floodplain and related riparian, wetland, and off-channel habitat are included as potential actions in any reach or in the bypasses under the Preferred Alternative. Alternative C1 and all other action alternatives evaluated in the Draft PEIS/R address large-scale systemwide variations, with flexibility for different methods of implementation. The different methods of implementation represent key decision points, including the ultimate extent of channel modifications. Integrated floodplain and related riparian, wetland, and off-channel habitat are included as potential actions in any reach or in the bypasses under all action alternatives, although the actual method of implementation remain to be determined. See also response to comment TNC-4b. Text has not been revised.

TNC-6: Comment noted. Integrated floodplain and related riparian, wetland, and off-channel habitats are included as potential actions in any reach or in the bypasses under all action alternatives, as described in Section 2.4.2, "Program-Level Actions" of the Draft PEIS/R. The Physical Monitoring and Management Plan (included in Appendix D of the Draft PEIS/R) provides guidelines for observing and adjusting to changes in conditions. Potential program-level actions described in the Physical Monitoring and Management Plan include creating floodplain habitat through levee setbacks, and conserving or restoring native vegetation, among other actions. The need for and extent and details of implementing integrated floodplain habitat or levee setbacks would be determined during site-specific studies. See also response to comment TNC-4b. Text has not been revised.

TNC-7: Comment noted. Naturally occurring erosion and sedimentation processes can benefit ecosystems. Although the San Joaquin River erosion and sedimentation processes are highly modified by dams, diversions, levees, and flow regimes, the role of runoff patterns in these processes is reflected in the pattern of Restoration Flows put forth in Exhibit B of the Settlement. Exhibit B includes provisions for the release of pulse flows

in Normal-Wet and Wet Years to perform several geomorphic functions, such as flushing spawning gravels. While sediment monitoring and management actions are described in the Draft PEIS/R, riprap and rocking are not mentioned among possible actions identified. Monitoring of natural river geomorphology to inform actions to manage erosion is described on pages 2-27 and 2-28 of the Draft PEIS/R. Erosion management actions identified through monitoring, as described above, may fall under the routine maintenance of the Lower San Joaquin River Flood Control Project currently performed by LSJLD. Text has not been revised.

TNC-8a: Integrated floodplain and related riparian, wetland, and off-channel habitat are included as potential actions in any reach or in the bypasses under all action alternatives, as described in Section 2.4.2, "Program-Level Actions," of the Draft PEIS/R. Additionally, conserving and restoring riparian habitat would be implemented within the Restoration Area, as specified in measure RHSNC-1 or mitigated for, as specified in RHSNC-2 in Section 2.4.4, "Conservation Strategy," of the Draft PEIS/R. The need for and extent and details of implementing integrated floodplain habitat would be determined during site-specific studies. The level of detail recommended by the commenter is not available at this time and will be developed as part of future project-level analyses.

The Draft PEIS/R evaluates potential impacts of the action alternatives on the riparian and aquatic habitat described for the No-Action Alternative. Benefits of the action alternatives to riparian and aquatic habitat, important to fish, could occur as described in impacts FSH-6, FSH-9, FSH-25, and FSH-28. As described in Impact FSH-6 on page 5-71 of the Draft PEIS/R, changes in habitat conditions in the San Joaquin River between Friant Dam and the Merced River for program-level actions are expected to be less than significant and beneficial, increasing the quantity and quality of instream, riparian, and floodplain habitats over the long term, and providing benefits to all fish species, including representative special-status and game fishes. Text on pages 5-71 and 5-72 describes the importance of riparian habitat and potential improvements under the action alternatives for various fish species. Impact FSH-9 on page 5-73 of the Draft PEIS/R, actions to restore and improve riparian and aquatic habitat, would have a less than significant and beneficial impact on changes in food web support in the San Joaquin River between Friant Dam and the Merced River. Impact FSH-25, on page 5-92 through 5-94 of the Draft PEIS/R, which describes changes in habitat conditions in the San Joaquin River between Friant Dam and the Merced River for project level actions, would also be less than significant and beneficial. Impact FSH-28, on page 5-95 of the Draft PEIS/R, which describes changes in food web support in the San Joaquin River between Friant Dam and the Merced River for project level actions, would also be less than significant and beneficial. Text has not been revised.

TNC-8b: The need for and extent and details of implementing integrated floodplain habitat would be determined during site-specific studies. The level of detail recommended by the commenter is not available at this time and will be developed as part of future project-level analyses.

In addition to actions identified in the Settlement to incorporate integrated floodplain habitat in Reach 2B, all action alternatives include program-level actions to modify

floodplain and side-channel habitats beyond Reach 2B (as described on pages 2-45 and 2-46 of the Draft PEIS/R), as well as to implement the Conservation Strategy (described in Section 2.4.4, "Conservation Strategy," of the Draft PEIS/R). The Conservation Strategy consists of management actions that would result in a net benefit for riparian and wetland habitats in the Restoration Area, to avoid reducing the long-term viability of sensitive species, and to be consistent with adopted conservation plans (see, in particular, Conservation Measure RHSNC-1, page 2-73, and RHSNC-2, page 2-74, of the Draft PEIS/R).

As described in this Final PEIS/R, the Preferred Alternative is Alternative C1. Alternative C1 is described in Chapter 2.0, "Description of Alternatives," of the Draft PEIS/R, beginning on page 2-86. Integrated floodplain and related riparian, wetland, and off-channel habitat are included as potential actions in any reach or in the bypasses under the preferred alternative. See also similar responses to comments TNC-2, TNC-4a, and TNC-4b. Text has not been revised.

TNC-8c: The Settlement includes a wide range of actions to improve channel conditions and facilitate naturally reproducing and self-sustaining populations of salmon and other fish. Removing barriers to fish passage, installing fish ladders, and implementing other measures to enable fish passage are included as potential actions in any reach or in the bypasses under all action alternatives, as described in Section 2.4.2, "Program-Level Actions," of the Draft PEIS/R. The Conservation Strategy, Section 2.4.4 of the Draft PEIS/R, incorporates both project- and program-level actions intended to guide Settlement implementation, and addresses the relationship between SJRRP activities and biological resources within the Restoration Area. For example, as noted in Table 2-7, on pages 2-78 through 2-79 of the Draft PEIS/R, actions related to suitable conditions for fish passage in the Restoration Area include operating and maintaining the Hills Ferry Barrier to exclude Pacific salmonids from the Restoration Area during construction activities and until suitable habitat conditions are restored (Conservation Measure EFH-1). For project-level actions, the need for and extent of implementation, as well as implementation details, would be determined during site-specific studies. Text has not been revised.

TNC-9: Interim and Restoration flow targets specified in Exhibit B of the Settlement reflect the timing and relative magnitude of the historical river flow regime, and include variations in flow to provide the processes associated with natural flow regimes, such as flushing spawning gravels and successful vegetation recruitment (as described in Exhibit B of the Settlement). The Physical Monitoring and Management Plan (provided in Appendix D of the Draft PEIS/R) provides guidelines for observing and adjusting to changes in conditions. Potential actions described in the Physical Monitoring and Management Plan include augmenting gravel for spawning habitat, widening riparian corridors, creating floodplain habitat through levee setbacks, and conserving or restoring native vegetation, among other actions. See also responses to comments TNC-2, and TNC-4b.

TNC-10a: Comment noted. The need for and extent and details of implementing actions to restore or enhance riparian and floodplain habitat would be determined during site-

specific studies, such as the Mendota Pool Bypass and Reach 2B Improvements Project, and the Reach 4B, Eastside Bypass, and Mariposa Bypass Channel and Structural Improvements Project. The level of detail recommended by the commenter is not available at this time and will be developed as part of future project-level analyses.

Chapter 2.0, "Description of Alternatives," of the Draft PEIS/R describes the Physical Monitoring and Management Plan and the Conservation Strategy, which are measures incorporated into all action alternatives to minimize and avoid potential impacts to sensitive species and habitats, and to attain the management objectives, if necessary, to avoid or reduce the need for mitigation measures to be implemented. The Conservation Strategy includes measures to minimize and avoid potential impacts to sensitive species and habitats, including a number of riparian and floodplain species. The Physical Monitoring and Management Plan, included under all action alternatives, provides guidelines for observing and adjusting to changes in physical conditions within the Restoration Area during Settlement implementation, and includes monitoring and management actions to establish and maintain native riparian vegetation. The implementing Agencies will work to identify opportunities to incorporate implementing Settlement actions with local mitigation projects to the extent such mitigation complies with all applicable laws (e.g., standard plan formulation, NEPA/CEQA processes), is consistent with the PEIS/R, and is consistent with the stated purpose and need of the action. Text has not been revised.

TNC-10b: Comment noted. As described in Chapter 2.0, "Description of Alternatives," of the Draft PEIS/R, all action alternatives include the Conservation Strategy, which consists of management actions necessary to provide a net increase in the extent and quality of riparian and wetland habitats in the Restoration Area, to avoid reducing the long-term viability of sensitive species, and to be consistent with adopted conservation plans. Interim and Restoration flows, as specified in the Settlement in Exhibit B, reflect the timing and relative magnitude of the historical river flow regime. Actions to create or enhance floodplain habitat are addressed in Chapter 2.0 of the Draft PEIS/R in several locations, including in program-level actions in Section 2.4.2; in the Physical Monitoring and Management Plan in Section 2.4.3; and in the Conservation Strategy in Section 2.4.4. Additionally, the Physical Monitoring and Management Plan, included under all action alternatives, provides guidelines for observing and adjusting to changes in physical conditions within the Restoration Area during Settlement implementation.

Reclamation and DWR acknowledge that restoration will require the participation of downstream landowners and water districts, flood system planners and managers, conservation organizations, public and private wetlands agencies, and/or counties and communities. The Implementing Agencies have conducted and will continue to conduct extensive public and stakeholder outreach activities to engage and inform interested parties of SJRRP activities early in the scoping process, throughout development of the PEIS/R, and into the future as SJRRP actions are implemented and monitored. The Implementing Agencies recognize the need to work with these organizations to maximize benefits and minimize inefficiency during implementation of the SJRRP and other restoration projects on the San Joaquin River. See also response to comment TNC-10a.

TNC-11: The need for and extent and details of implementing actions to restore or enhance riparian and floodplain habitat would be determined during site-specific studies, such as the Mendota Pool Bypass and Reach 2B Improvements Project, and the Reach 4B, Eastside Bypass, and Mariposa Bypass Channel and Structural Improvements Project. The level of detail recommended by the commenter is not available at this time and will be developed as part of future project-level analyses.

The lead agencies acknowledge that establishing a functional floodplain throughout the Restoration Area along the San Joaquin River and resolving impediments to develop such a corridor would require the participation of downstream landowners and water districts, flood system planners and managers, conservation organizations, public and private wetland agencies, and/or counties and communities. The Implementing Agencies will work to identify opportunities to incorporate implementation of Settlement actions with local mitigation projects to the extent such mitigation complies with all applicable laws (e.g., standard plan formulation, NEPA/CEQA processes), is consistent with the PEIS/R, and is consistent with the stated purpose and need of the action. See also responses to comments TNC-3 through TNC-8b and TNC-10a. Text has not been revised.

TNC-12: Text on page 6-1, lines 16-24, has been revised to remove redundant text. See Chapter 4.0, "Errata," of this Final PEIS/R.

TNC-13: The commenter is referred to the cited document, *From the Sierra to the Sea: The Ecological History of the San Francisco Bay-Delta Watershed* (The Bay Institute 1998). This reference includes full color maps illustrating historical and current riparian habitat extents along the San Joaquin River. The document is available online at http://www.bay.org/display.aspx?pageid=164.

TNC-14: Text on pages 6-6 through 6-11 has been revised in response to the comment. See Chapter 4.0, "Errata," of this Final PEIS/R.

TNC-15: In addition to the Restoration Area, the study area, as described in Chapter 1.0, "Introduction," of the Draft PEIS/R, also encompasses the San Joaquin River upstream from Friant Dam, including Millerton Lake; the San Joaquin River from the Merced River to the Delta; the Delta; and CVP/SWP water service areas, including the Friant Division of the CVP. Text has not been revised.

TNC-16: In response to this comment, a reference to the *Draft Ecosystem Restoration Program Conservation Strategy for Restoration of the Sacramento-San Joaquin Delta Ecological Management Zone and the Sacramento and San Joaquin Valley Regions* (DFG 2011c) has been inserted in the text (page 6-38, line 6 has been revised). See Chapter 4.0, "Errata," of this Final PEIS/R.

TNC-17: The "[i]ncrease channel capacity and integrate floodplain habitat" icon is a Paragraph 11 item; under Paragraph 11, this action is not included in Reach 4B1 in Alternatives A1, B1, or C1, or in other reaches. Therefore, it is not a common Restoration action and is not shown outside of Reach 2B in the cited figure.

TNC-18: Chapter 11.0, "Hydrology – Flood Management," of the Draft PEIS/R describes the potential impacts and benefits of all actions on the flood management system. Natural floodplain processes would be restricted, as necessary, to minimize increases in flood risk through those actions described in Chapter 2.0, "Description of Alternatives," of the Draft PEIS/R. Modifications to increase floodplain habitat are described at a program level of detail in the Draft PEIS/R; thus, site-specific details would be developed during subsequent studies of these actions. Such modifications would be implemented consistent with measures to minimize increases in flood risk. Regarding invasive, nonnative species management, Conservation Strategy Measure INV-1, "Implement the Invasive Vegetation Monitoring and Management Plan," is presented in Chapter 2.0 and Appendix L, "Biological Resources – Vegetation and Wildlife," of the Draft PEIS/R, and will address and minimize expansion of invasive, nonnative species. See also responses to comments TNC-2, TNC-4a, and TNC-4b. Text has not been revised.

TNC-19: The description of flood control system maintenance actions, including vegetation control, provides a sufficient level of detail for the purpose of the PEIS/R. As described in Appendix D, "Physical Monitoring and Management Plan," of the Draft PEIS/R, removal of nonnative vegetation to address channel capacity would receive priority over removal of native vegetation. Potential actions to encourage growth of native vegetation are described separately in several locations in the Draft PEIS/R, including in Appendix D, "Physical Monitoring and Management Plan," beginning on page 5-1, and in Chapter 2.0, "Description of Alternatives," as part of program-level actions to modify floodplain and side-channel habitats (page 2-45). Other actions to manage invasive vegetation are described separately in Chapter 2.0 as part of the Conservation Strategy, beginning on page 2-75, and in the Invasive Species Monitoring and Management Plan Attachment to Appendix L, "Biological Resources – Vegetation and Wildlife," of the Draft PEIS/R. Additional detail describing the potential mutual benefits of levee management actions and maintenance of healthy and productive native vegetation, and additional evaluation of the potential trade-offs between these actions would be included, when appropriate, in subsequent site-specific analysis of actions to implement floodplain and side-channel habitats in the Restoration Area. Text has not been revised.