

Duane Morris<sup>®</sup>

A PROFESSIONAL CORPORATION

JON D. RUBIN 400 CAPITOL MALL. 18<sup>TH</sup> FLOOR SACRAMENTO, CA 95814 PHONE: 916-492-5000 FAX: 916-446-4535

DIRECT DIAL: 916-492-5055 E-MAIL: jrubin a diepenbrock.com THOMAS M. BERLINER SPEAR TOWER. ONE MARKET PLAZA, SUITE 2200 SAN FRANCISCO, CA 94105-1127 PHONE: 415-957-300 FAX: 415-957-300

DIRECT DIAL: 415-957-3333 PERSONAL FAX: 415 520 5835 E-MAIL: tmberliner @ duanemorris.com

September 3, 2010

Via e-mail: <u>InterimFlows@restoresjr.net</u> And U.S. Mail

Michelle Banonis Natural Resources Specialist U. S. Bureau of Reclamation 2800 Cottage Way, MP-170 Sacramento, California 95825

> Re: Draft Supplemental EA/Proposed FONNSI for the San Joaquin River Restoration Program's Water Year 2011 Interim Flows Project

Dear Ms. Banonis:

The San Luis & Delta-Mendota Water Authority and San Joaquin River Exchange Contractors Water Authority ("Water Agencies") previously submitted comments on the draft supplemental environmental assessment and finding of no new significant impact ("Draft SEA/FONNSI") for the San Joaquin River Restoration Program's ("SJRRP") Water Year 2011 Interim Flows Project ("Proposed Project"). Since the comment period closed, however, the United States Bureau of Reclamation ("Reclamation") published its "Draft 1 2010 Annual Technical Report" ("Technical Report"), a copy of which is attached to this letter. As explained below, the Technical Report should be made a part of the administrative record for the Proposed Project.

SLDMWA & SJRECWA -1

This is the SJRRP's second year. As Reclamation is well aware, the SJRRP is intended to be guided by the information gathered and developed during the SJRRP's first year. Significant here, the Technical Report "provides an incremental update on monitoring and analyses completed during the spring 2010 Interim Flows period of

<sup>&</sup>lt;sup>1</sup> The Technical Report is attached to the copy of this letter sent by mail.

Michelle Banonis Natural Resources Specialist U. S. Bureau of Reclamation September 3, 2010 Page 2

February 1, 2010, through June 30, 2010." (Draft 1 2010 Annual Technical Report, at p. 1.) The Technical Report also "report[s] monitoring activities and data collected, problem statements and studies, and management performed to implement the Stipulation of Settlement in NRDC, et al., v. Kirk Rodgers, et al. (Settlement)." (Id.) Further, the Technical Report provides a means for the Implementing Agencies to present to stakeholders the process used to address specific SJRRP needs." (Id.) In other words, the Technical Report provides precisely the sort of information necessary to guide the SJRRP, and which needs to be considered in relation to the Proposed Project. The importance of the Technical Report to the Proposed Project is additionally underscored by the fact that the "Supplemental Environmental Assessment Interim Flows Project - Water Year 2011" is supported, in part, by the "Draft 2009 Annual Technical Report." (Supplemental Environmental Assessment Interim Flows Project -Year Water 2011. p. iii, http://www.usbr.gov/mp/nepa/documentShow.cfm?Doc\_ID=5856. available September 3, 2010.)

SLDMWA & SJRECWA-1 continued

For all of these reasons, the Technical Report is relevant and patently significant to the Draft SEA/FONNSI and Proposed Project. The Water Agencies therefore respectfully submit that the document must be included in the administrative record and given due consideration by Reclamation during its analysis of the Proposed Project. (See Kem County Farm Bureau v. Badgley, 2004 U.S. Dist. LEXIS 30572, \*19 (E.D. Cal. 2004) ["An agency may use "supplementary" data, unavailable during the notice and comment period, that 'expand[s] on and confirm[s]' information contained in the proposed rulemaking and addresses 'alleged deficiences' [sic] in the pre-existing data, so long as no prejudice is shown.' [Citations]"; see also Ctr. for Biological Diversity v. Nat'l Highway Traffic Safety Admin., 538 F.3d 1172, 1199 fn 44 (9th Cir. 2008) [citing to "an additional comment letter [submitted] after the comment period closed noting a recent study . . . ."].)

Thank you for your time and attention to this issue.

Very truly yours,

DIEPENBROCK HARRISON A Professional Corporation

Jon D. Rubin

Attorneys for the

San Luis & Delta-Mendota Water Authority

**DUANE MORRIS** 

Thomas M. Berliner

Attorneys for the San Joaquin River Exchange Contractors Water Authority

cc:	Dan Nelson Frances Mizuno Steve Chedester Chris White

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# **Comments from Paramount Farming Company**



33141 E. Lerdo Highway

Bus: (661) 399-4456 Fax: (661) 399-1735

Bakersfield, CA 93308-9767

July 23, 2010

#### VIA FEDERAL EXPRESS AND EMAIL

Michelle Banonis
U.S. Bureau of Reclamation
San Joaquin River Restoration Program Office, MP-170
2800 Cottage Way, Room W-1727
Sacramento, CA 95825-1898
InterimFlows@restoresjr.net

Re: Comments on San Joaquin River Restoration Program, Supplemental Environmental Assessment for Water Year 2011

#### Dear Ms. Banonis:

Paramount Orchard Partners VI, LLC ("Paramount") owns New Columbia Ranch on the San Joaquin River, just upstream from the Mendota Pool and downstream from the historic Whitehouse Gauging Station near the head of Lone Willow Slough, which is within the project area described in the San Joaquin River Restoration Project, Supplemental Environmental Assessment for Water Year 2011 ("Supplemental EA"). Paramount appreciates the opportunity to submit these comments on the Supplemental EA.

## 1. NEPA Does Not Allow Segmented Review of Projects.

#### PFC (A)-1

As an initial matter, Paramount notes that the Supplemental EA addresses the continuation of the Bureau of Reclamation's ("Reclamation") San Joaquin River operations that were in place during Water Year 2010. To the extent that Reclamation intends to extend these operations each year until full restoration flows are released in 2014, the National Environmental Policy Act ("NEPA") requires Reclamation to address the effects of these extended operations in a comprehensive environmental document and not on a segmented annual basis. 40 C.F.R. 1508.25(a).

# The Proposed Restoration Program Would Impact Paramount's Water Rights.

#### PFC (A)-2

Paramount has explained to Reclamation in various communications that it has prior existing water rights at New Columbia Ranch. Reclamation must protect these rights and the San Joaquin River Restoration Program may not create additional restrictions or costs on Paramount's ability to exercise these rights.

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The discussion of water deliveries in the Supplemental EA suggests that Reclamation's proposed project would interfere with these rights. For example, the Supplemental EA indicates that Reclamation has no responsibility to make water available below Gravelly Ford and that, upon implementation of the San Joaquin River Restoration Program, only "restoration flows" would sustain the River in Reach 2. Given that New Columbia Ranch is located downstream of Gravelly Ford, this obviously disturbs Paramount.

PFC (A)-2

Likewise, Reclamation's proposed treatment of flood flow releases could impact Paramount because Paramount has historically diverted flood flows for irrigation use and groundwater recharge at New Columbia Ranch. Under the proposed project, however, Reclamation would not release interim flows in addition to flood flows in periods when flood flows would satisfy all or part of the targets identified in Exhibit B of the Settlement. In essence, Reclamation would recharacterize flood flows as interim flows, which would be outside the reach of downstream water users. The ultimate effect of this recharacterization would be to reduce Paramount's available water supply.

Although the proposed project and Paramount's water rights are in apparent conflict, the Supplemental EA does not even mention the issue. Paramount reminds Reclamation that the State Water Resources Control Board conditioned Reclamation's Interim Flow regime as "subject to prior rights." Order WR 2009-058, *In the Matter of Permits 11885, 11886, and 11887 of the U.S. Bureau of Reclamation*, pp. 5, 10 (Oct. 1, 2009). Because Paramount is a prior water right holder, Reclamation may not cut off or improperly limit Paramount's access to water through the proposed project or the final implementation of the San Joaquin River Restoration Program.

#### 3. The Supplemental EA Does Not Address Groundwater Rights.

PFC (A)-3

The Supplemental EA discloses that the proposed project could affect groundwater levels in and around the project area, but does not address the rights to such groundwater. Paramount is an overlying landowner, and much of its property lies within the alluvial cone of the San Joaquin River (which was historically replenished by, but not directly connected to, river flows). Paramount asserts that it has the right to any increased groundwater under its property for use at New Columbia Ranch.

## Reclamation Must Protect Property Owners from Seepage and Project Flow Impacts.

PFC (A)-4

The Supplemental EA acknowledges that the proposed project could result in elevated seepage in the project area and that such seepage has the potential to impact crops, water salinity, and levee stability. Although the Supplemental EA indicates that Reclamation will monitor groundwater levels to reduce seepage impacts, it does not state how Reclamation will protect property owners or mitigate damages if these impacts do occur. Paramount asserts that Reclamation is responsible for any seepage impacts to its crops, private levees, groundwater wells, or other structures on its property that the proposed project flows may cause. In addition Interim Flows that exceed current channel capacity and result in impacts to crops, private levees, groundwater wells, or other structures must also be mitigated by Reclamation should they occur.

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# PFC (A)-5

## The Proposed Project Would Result in Agricultural Impacts at New Columbia Ranch.

The Supplemental EA repeatedly states that the proposed project will not result in agricultural impacts, either on a project level or cumulative level. *See, e.g.*, Supplemental EA at 3-3, 3-16, 3-21. These statements completely ignore the impacts on Paramount's agricultural operations caused by the take of prime agricultural land and water resources.

Paramount appreciates the opportunity to submit these comments and would be willing to discuss options for Reclamation to pursue the San Joaquin River Restoration Program without interfering with Paramount's rights and interests.

Sincerely,

William D. Phillimore Executive Vice President

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# **Comments from Paramount Farming Company**



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Michelle Banonis
U.S. Bureau of Reclamation
San Joaquin River Restoration Program Office, MP-170
2800 Cottage Way, Room W-1727
Sacramento, CA 95825-1898
InterimFlows@restoresjr.net

Re: Additional Comments on San Joaquin River Restoration Program, Supplemental Environmental Assessment for Water Year 2011

Dear Ms. Banonis:

PFC (B)-1

In addition to the detailed commented submitted by Paramount Orchard Partners VI, LLC ("Paramount"), Paramount hereby join in the comments submitted by the San Joaquin River Resource Management Coalition (RMC).

Sincerely,

William D. Phillimore Executive Vice President

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# 3.0 Responses to Comments

This section contains the responses to the comments received from Federal agencies, State agencies, local agencies and organizations, and individuals. Responses are provided in the same order and using the same numbering system as the comments provided in Chapter 2.

Because the WY 2010 Final EA/IS has been incorporated as part of this Final Supplemental EA, responses to comments received on the WY 2010 Final EA/IS are also incorporated as part of this Final Supplemental EA. Therefore, comments received on the Draft Supplemental EA that generally incorporate comments received on the WY 2010 Draft EA/IS are addressed by the responses in Appendix I of the WY 2010 Final EA/IS.

Modifications to the Draft Supplemental EA made in response to comments are included in Chapter 4 of this Final Supplemental EA (the Errata section of this document).

CEQ's NEPA guidance provides for the agency preparing an environmental document the discretion to respond to comments and to determine if comments are substantive. CEQ Regulation Section 1503.3 (a) states that comments on an environmental impact statement or on a proposed action shall be as specific as possible and may address either the adequacy of the statement or the merits of the alternatives discussed or both. CEQ Regulation Section 1503.4(a)(5) states that the agency preparing the document may provide an explanation of why comments do not warrant further agency response. If the agency determines that the comment is not substantive then no substantive response is required for the comment.

# 3.1 National Marine Fisheries Service (NMFS)

**NMFS-1:** Additional information regarding the possible timing for recapture is provided below and in Chapter 4 of this Final Supplemental EA. In summary, the Proposed Action was modified to identify that water diverted under the Proposed Action at the West Stanislaus Irrigation District's diversion and the Patterson Irrigation District's diversion would only be diverted with authority to take listed species under the Endangered Species Act at these locations. Additional clarity was added to the Proposed Action for Patterson Irrigation District's diversion to explain that the facility would only be used upon the installation of an operationally-compliant fish screen at the facility.

As described in Section 1.2 of the Draft Supplemental EA, the purpose of the Interim Flows Project is to collect relevant data concerning flows, temperatures, fish needs, seepage, recirculation, recapture, and reuse. The Proposed Action includes the conveyance of Interim Flows through the upper San Joaquin River system from Friant Dam to at least the Merced River confluence. However, Reclamation recognizes that for a variety of reasons, including the need to avoid seepage and potential endangered species impacts, all or a portion of the flows may need to be recaptured before flows reach the confluence of the Merced River. Although this has the potential to reduce the amount of data collected in the lower reaches (Reaches 3, 4, and 5), it would not inhibit the ability to collect data in the upper reaches (Reaches 1 and 2) where

spawning habitat for reintroduced salmon would be present. The purpose of the Proposed Action would be fulfilled as valuable data would continue to be collected in the upper reaches.

Water recaptured under the Proposed Action would be limited to the amount of water released from Friant Dam under the Proposed Action minus losses. Water to be released from New Melones Reservoir to meet Delta water quality objectives is not part of the Proposed Action and would not be considered part of the recaptured flows.

**NMFS-2:** Additional information regarding the operations of the Hills Ferry Barrier during the WY 2011 Interim Flows Project is provided as errata to the Draft Supplemental EA (see Chapter 4). This information further clarifies the Proposed Action, the timing of Interim Flows in relation to the operation of the Hills Ferry Barrier, and the inclusion and implementation of a monitoring plan for Central Valley steelhead during the spring period, when the barrier is not operated.

**NMFS-3:** Additional information regarding the interaction of the Proposed Action and VAMP or a VAMP-like action is provided as errata to the Draft Supplemental EA (see Chapter 4). This information includes a description of VAMP-like conditions and additional confirmation that Reclamation considers VAMP or a VAMP-like action as part of the environmental baseline for the purposes of the impact analysis, with the understanding that the future of VAMP or a VAMP-like action is currently reasonably foreseeable, but the details are uncertain.

Reclamation would implement the Interim Flows Project in accordance with legal requirements (e.g., biological opinions, agreements, and similar legal and regulatory requirements) in place at the time the Proposed Action is implemented, including the U.S. Fish and Wildlife Service's (USFWS) Delta Smelt Biological Opinion for the Continued Long-term Operations of the Central Valley Project and State Water Project (USFWS Operations BO) (USFWS 2008) and the NMFS Biological and Conference Opinion on the Continued Long-Term Operations of the Central Valley Project and State Water Project (NMFS Operations BO) (NMFS 2009). The Reasonable and Prudent Alternatives (RPAs) in the USFWS Operations BO and the NMFS Operations BO would protect fisheries species in the tributary rivers both with and without the implementation of the Interim Flows Project.

**NMFS-4:** The text in Section 2.2.4 has been revised (see Chapter 4 of this Final Supplemental EA). Comments on Section 4.4.4 of the WY 2011 Interim Flows Biological Assessment are outside of the scope of this Supplemental EA. Additionally, clarification on the Delta Stewardship Council and the CALFED Bay-Delta Program does not result in changes to the impacts described in the Supplemental EA.

# 3.2 Central Valley Flood Protection Board (CVFPB)

**CVFPB-1:** The Proposed Action was developed using the best available information at the time the Draft Supplemental EA was prepared, which suggested that flows below 1,300 cubic feet per second (cfs) would not result in significant seepage-related or flooding impacts to land adjacent to the river. Additional analysis is included in the WY 2010 Final EA/IS as Attachment 6 to Appendix G, "Cursory Evaluation of Flood Impacts from Interim Flows," which supports these findings. Landowner reports, in addition to numerical modeling tools, were the primary tools

used to determine the flows that are not anticipated to cause significant seepage-related or flooding impacts. As described in the Draft Supplemental EA and consistent with the San Joaquin River Restoration Settlement Act (Act; Public Law 111-11), Interim Flows would be held constant or reduced to the extent necessary to address any material adverse impacts to third parties from groundwater seepage. Impacts to flood control facilities are expected to be less than significant.

Additional operations and maintenance costs (including the costs of potential channel vegetation removal) are not an environmental impact that should be analyzed under NEPA, and are not addressed in the Draft or Final Supplemental EA. These costs would be addressed, as needed, through an agreement between Reclamation and the Lower San Joaquin Levee District (LSJLD), who is responsible for the operations and maintenance of the Lower San Joaquin River Flood Control Project. Reclamation pursued development of such an agreement in WY 2010 and provided an agreement for signature by the LSJLD (see Appendix A). However, for various reasons the LSJLD declined to sign such an agreement. Reclamation would be willing to pursue a similar agreement for increased operations and maintenance activities that may occur as a result of the WY 2011 Interim Flows Project. See response to comment LSJLD-1.

# 3.3 Lower San Joaquin Levee District (LSJLD)

LSJLD-1: Reclamation would like to work with the LSJLD to develop an agreement to provide for financial reimbursement of the costs that the LSJLD may incur as a result of the WY 2011 Interim Flows Project. We would envision such an agreement to be similar to the one we prepared for the LSJLD for WY 2010 Interim Flows Project and would include flapgate inspection, operation of control structures, levee patrols, maintenance assessments, debris removal, vegetation control, and sand excavation (see Appendix A). It is expected that regardless of the execution of such an agreement, the LSJLD would continue to maintain the Lower San Joaquin River Flood Control Project as described in the Operations and Maintenance Manual for Levees, Irrigation and Drainage Structure, Channels and Miscellaneous Facilities and as described in its agreements with the Central Valley Flood Protection Board (Reclamation Board 1967). Vegetation management and flood system maintenance and operations in the portions of the river and flood bypass system that are part of the Lower San Joaquin River Flood Control Project are expected to continue.

Although not an environmental impact under NEPA, as discussed in the prior correspondence between Reclamation and the LSJLD, Reclamation is not able to hold the LSJLD harmless and insulate the LSJLD from third party liability (see Appendix A for copies of prior correspondence).

**LSJLD-2:** Reclamation is in the process of identifying lands that may be subject to agreements with landowners.

**LSJLD-3:** As described in LSJLD-1 above, the LSJLD operates and maintains the Lower San Joaquin River Flood Control Project as described in the Operations and Maintenance Manual for Levees, Irrigation and Drainage Structure, Channels and Miscellaneous Facilities (Reclamation Board 1967). The Draft Supplemental EA recognizes that increased operations and maintenance activities could occur as a result of the increased flows in the river and the Eastside and Mariposa

bypasses and the longer duration of these flows in these channels throughout the year. The Draft Supplemental EA correctly recognizes that operations and maintenance activities could occur more frequently as a result of the WY 2011 Interim Flows Project. The Operations and Maintenance Manual does not specify the types of activities, such as herbicide application and chaining, that are required. Reclamation recognizes that some of the LSJLD's current practices may not be consistent with water in the river year-round and would be willing to discuss what changes, if any, could be made to the WY 2011 Interim Flows schedule to allow the LSJLD to continue with its current operations and maintenance practices in WY 2011 consistent with the Settlement and the Act.

**LSJLD-4:** See response to comments LSJLD-1 and LSJLD-3.

**LSJLD-5a:** See response to comments LSJLD-1 and LSJLD-3.

**LSJLD-5b**: Interim Flows would be recaptured for exchange and recirculation to Friant Division long-term contractors to the extent the recaptured water can replace other existing Central Valley Project (CVP) delivery obligations, if any. The exact exchange and recirculation mechanisms would be developed, if such an exchange were pursued.

**LSJLD-5c:** See response to comment LSJLD-5a.

LSJLD-5d: Traffic detours were identified in the WY 2010 Final EA/IS as an Environmental Commitment. During WY 2010 Interim Flows, local jurisdictions were contacted prior to and during inundation on public roadways, including Merced, Madera, and Fresno counties. The jurisdictions placed road closure signs, where appropriate at the existing low-water crossings, and notified the public via press releases and/or web site postings. A draft traffic control plan was prepared and developed in accordance with the California Department of Transportation and the Manual on Uniform Traffic Control Devices' specifications and in coordination with the local jurisdictions, and submitted to Fresno, Madera, and Merced counties for comment. Comments received from the counties were incorporated into the draft plans. Due to the timing of preparation of the plans, receiving comments, and making subsequent revisions, the traffic control plan process was delayed past the inundation of San Mateo and Dan McNamara roads. Efforts were made to ensure the public agencies were aware of the inundation of roads through the river channel and flood bypass system. Reclamation plans to submit the revised traffic control plans with the permit applications to the appropriate agencies for review and approval in late 2010.

Guidance issued by the Federal Emergency Management Agency states "low water crossings have limited application due to continued disturbance of the streambed and frequent inundation. Do not use a low water crossing to serve occupied dwellings where no alternate emergency access is available" (FEMA 2009). Dan McNamara Road has no permanent residences along its length and is primarily utilized as a farm road. Based on correspondence with Merced County Roads Department, Dan McNamara Road has a low-water crossing through the Eastside Bypass that is normally inundated during flood events. As such, emergency vehicles are not encouraged to use Dan McNamara Road for emergency purposes. Existing paved routes for emergency county vehicles to access occupied dwellings are present on either side of the Eastside Bypass.

San Mateo Road is a private low-water crossing not maintained or accessed by any local jurisdiction and emergency vehicles would not utilize this road under normal circumstances. The San Joaquin River at the San Mateo Road crossing is also the border between Fresno and Madera County. It is unlikely that emergency access would occur over county lines or via an unmaintained, private crossing. Therefore, for both Dan McNamara and San Mateo roads, there are less than significant impacts associated with emergency access related to the Proposed Action as the emergency access conditions under Interim Flows poses no change from that of normal flood conditions. In either event, Merced County has an existing parallel access for emergency actions to occupied dwellings on both sides of the Eastside Bypass.

**LSJLD-5e:** The Draft Supplemental EA includes an evaluation of the release of Interim Flows for an additional year. Sediment mobilization was considered in the Hydrology and Water Quality analysis (Section 3.11 and 4.10 of the WY 2010 Final EA/IS and Section 3.2.3 of the Draft Supplemental EA). During the release of Interim Flows during WY 2011, sediment mobilization due to less than one year of flow is anticipated to be de minimus. Therefore, no cumulative impacts are anticipated due to implementation of Interim Flows during WY 2011.

**LSJLD-6:** Comment noted. Changes to the Settlement are outside of the scope of this Supplemental EA.

**LSJLD-7:** See response to comments LSJLD-1 and LSJLD-3.

# 3.4 Friant Water Users Authority (FWUA)

**FWUA-1:** Text was revised to clarify.

**FWUA-2:** The version of the FONSI posted to the website was a previous version. A corrected version was re-posted on June 23, 2010. Print copies of the Draft Supplemental EA and Draft FONSI contained the correct version.

**FWUA-3:** Reclamation would implement the Interim Flows Project in accordance with legal requirements (e.g., biological opinions, agreements, and similar legal and regulatory requirements) in place at the time the Proposed Action is implemented, including the USFWS Operations BO (USFWS 2008) and the NMFS Operations BO (NMFS 2009).

**FWUA-4:** The potential change in groundwater pumping due to implementation of Interim Flows during WY 2011 as a one-year action is less than significant because of the short-term and temporary nature of the Proposed Action. Consistent with the Water Management Goal of the Settlement, Reclamation would take actions to reduce or avoid adverse water supply impacts to Friant Division long-term contractors due to implementation of Interim Flows during WY 2011. This could include recapture and recirculation of Interim Flow releases, and other actions consistent with and as described in the Settlement, such as making water available under the Recovered Water Account.

The WY 2011 Interim Flows Project is a continuation of the one-year WY 2010 Interim Flows Project. During the WY 2010 Interim Flows Project, the water supply impact to the Friant Water Users Authority was estimated to be 230,000 acre-feet from October 1, 2009 to June 13, 2010.

This lost water supply was made up, in part by 80,000 acre-feet being allocated to the water users from the Recovered Water Account called for in the Settlement. In addition, approximately 42,550 acre-feet was recovered at Mendota Pool and transferred/exchanged back to the water users. The long-term implementation of the Settlement is likely to have significant water supply effects and associated effects to groundwater and socioeconomics. However, the long-term effects from the implementation of the Settlement are outside of the scope of this one-year action and are being analyzed in a separate Program Environmental Impact Statement/Report (EIS/R) that is currently under preparation.

**FWUA-5:** As stated above in response to FWUA-4, Reclamation would take actions to reduce or avoid adverse water supply impacts to Friant Division long-term contractors through recapture and recirculation of Interim Flow releases, and other actions consistent with and as described in the Settlement, such as making water available under the Recovered Water Account.

**FWUA-6:** Agricultural resources were evaluated in the Draft Supplemental EA and impacts were found to be less than significant because of the short-term and temporary nature of the Proposed Action. Therefore, no disproportionate impacts to minority or disadvantaged populations or communities would occur as a result of impacts to agricultural resources.

**FWUA-7:** See response to comment FWUA-1.

**FWUA-8:** The text was revised as suggested.

**FWUA-9:** The text was revised as suggested.

**FWUA-10:** The January 12, 2010 Draft of the Fisheries Implementation Plan 2009-2010 is available on the Program website at the following location: www.restoresjr.net/program\_library/02-Program\_Docs/DraftFisheriesImplPlan20100112.pdf. Future implementation plans will be prepared as part of the Annual Technical Report process with Final Spring and Summer Plan anticipated to be available the prior November and the Final Fall and Winter Plan anticipated to be available the prior July.

**FWUA-11:** The text was revised.

**FWUA-12:** As described in the Draft Supplemental EA, CEQA-related language and impact determinations are included in the Supplemental EA for consistency with the WY 2010 Final EA/IS and to allow direct reference and comparison between the two documents.

**FWUA-13:** The text has been updated consistent with the comment.

**FWUA-14:** See response to comment FWUA-12.

**FWUA-15:** "Other deliveries" includes water right deliveries that are met with sources other than Millerton Lake/Friant Dam. Specifically, Table 2-1 includes deliveries to the San Luis Canal Company from the Delta-Mendota Canal.

**FWUA-16:** As described in the March 25, 2010, letter to the Restoration Administrator regarding the management of Interim Flows (see Appendix C of the Draft Supplemental EA), and on page 2-12 of the Draft Supplemental EA, Interim Flows would be managed flexibly based on the flexible flows provisions for the Restoration Flows in Exhibit B. Recommendations provided by the Restoration Administrator would be considered in implementing the WY 2011 Interim Flows. Additional information on factors that would be considered in implementing the Restoration Administrator's recommendations is provided on page 2-11 of the Draft Supplemental EA. The Restoration Administrator would not be given decision-making authority to implement the Interim Flows. The sentence has been modified.

**FWUA-17:** See response to comment FWUA-16.

**FWUA-18:** Table 2-3 provides the maximum Interim Flow releases from Friant Dam under the Proposed Action and 5 cfs of riparian releases that are needed past Gravelly Ford. Table 1E and 1F in Exhibit B includes full riparian releases in addition to the Interim Flow (Restoration Flow) releases in the Friant Dam release values. The Proposed Action is the release of Interim Flows and thus, the riparian releases are not included in Table 2-3. Additionally, Table 2-3 provides for both the fall and spring flexible flow periods to represent an instantaneous maximum Interim Flow release from Friant Dam at any one time. Table 1E and 1F in Exhibit B do not include the flexible flow periods.

**FWUA-19:** See response to comment FWUA-18.

**FWUA-20:** Reclamation's decisions to modify Interim Flow releases to minimize or avoid seepage-related impacts would be subject to water supply demand considerations. For example, in the event that an action threshold is being approached in Reach 3, modifying Interim Flow releases downstream of Mendota Dam by allowing for the diversion of some Interim Flows at the Mendota Pool would be subject to water supply demands in the Mendota Pool if diversion of Interim Flows at the Mendota Pool were to be considered recapture of Interim Flows.

**FWUA-21:** The text was revised as suggested.

**FWUA-22:** For clarification on the text provided, recapture of flows refers to Reclamation taking Interim Flows released from Friant Dam and down the San Joaquin River and putting them into storage. Recirculation refers to pulling the water out of storage and sending it to Friant Division long-term contractors. The third sentence of the paragraph is revised to read "Water recirculation and recapture via the CVP/SWP facilities would be possible using south-of-Delta facilities." The seventh sentence of the paragraph is revised to read "As previously described, recirculation and recapture would be subject to available capacity within CVP/SWP storage and conveyance facilities." As recapture and recirculation may occur at several locations within the CVP/SWP area, it is important to leave the paragraph as-is in respect to geographical location to incorporate this breadth.

**FWUA-23**: Interim Flows recaptured at the refuges would be recaptured as part of the refuge's Level 2 or Level 4 water supply and used in lieu of Delta-Mendota Canal supplies to facilitate recapture and recirculation opportunities.

- FWUA-24: The text was revised.
- **FWUA-25:** Paragraph 16(b)(1) of the Settlement requires that Reclamation annually adjust the balance of any Friant Division long-term contractor in the Recovered Water Account which would result in an annual determination of delivery reductions to the Friant Division long-term contractors. The time of year when this analysis will be completed is currently being addressed as part of the development of the Restoration Flow Guidelines, which the Friant Water Users Authority are party to.
- **FWUA-26:** The WY 2011 Interim Flows Project would be operated consistent with and in compliance with applicable laws, permits, and regulations in place at the time of implementation.
- **FWUA-27:** The text has been modified to remove reference to the Restoration Flow Guidelines.
- **FWUA-28:** See response to comment FWUA-20.
- **FWUA-29:** The text was revised as suggested.
- **FWUA-30:** The term "diverted" refers to diverting water at existing locations as described in the Supplemental EA and upstream of any potential seepage-related impact to reduce or avoid such impact.
- **FWUA-31:** The text was revised to clarify.
- **FWUA-32:** To the extent that Interim Flows reach Vernalis, they are assumed to contribute to the baseflows and water quality requirements at Vernalis, with or without VAMP in place. Therefore, the text in the Supplemental EA was not revised. In the event that an agreement is reached for the VAMP flows in 2011 such that the WY 2011 Interim Flows Project does not contribute to baseflow and water quality requirements at Vernalis, Reclamation would evaluate the impacts of these changes as required under NEPA.
- **FWUA-33:** Text is added as follows: "The Friant Division irrigates over one million acres along the Central Valley's east side between Arvin and Chowchilla through the Friant-Kern and Madera canals with San Joaquin River water diverted out of Friant Dam. There are 29 Friant Division long-term water service contractors. Of these contractors, 24 deliver primarily agricultural water. Kaweah Delta Water Conservation District received a partial assignment of the CVP contract and associated water supply from Ivanhoe Irrigation District on March 1, 2010."
- **FWUA-34:** See response to FWUA-33.
- **FWUA-35:** The Draft Supplemental EA text commented upon was not the basis for the evaluation, and therefore the text was not revised.
- **FWUA-36:** See response to comment FWUA-30.

**FWUA-37:** The text was revised as suggested.

**FWUA-38:** The Draft Supplemental EA text commented upon was not the basis for the evaluation. However, this paragraph has been removed.

**FWUA-39:** See response to comment FWUA-38.

**FWUA-40:** The text has been revised.

**FWUA-41:** Changes to Millerton Lake water storage were described in the WY 2010 Final EA/IS (Section 4.10 and Appendix G), which was incorporated by reference to the Supplemental EA.

# 3.5 San Joaquin River Exchange Contractors Water Authority (SJECWA) and the San Joaquin River Resource Management Coalition (RMC)

**SJRECWA & RMC-1:** See responses to comments from the San Luis and Delta-Mendota Water Authority (SLDMWA), State Water Contractors (SWC), and LSJLD.

**SJRECWA & RMC-2:** The Proposed Action constitutes a complete project under NEPA because it is a project that has independent utility and provides useful information on flows, temperatures, fish needs, seepage losses, shallow groundwater conditions, recirculation, recapture and reuse conditions, channel capacity (high and low flows), and levee stability regardless of the future implementation of the Settlement. These data are useful independent of the San Joaquin River Restoration Program (SJRRP), particularly with respect to understanding the flood management system and seepage. While the Proposed Action is one of the first several steps in implementing the SJRRP, the Proposed Action can be implemented successfully in meeting its purpose and need without any prior (e.g., WY 2010 Interim Flows) or subsequent SJRRP activities.

While there are no significant differences between the description of the Proposed Action and evaluations presented in the Draft Supplemental EA and the WY 2010 Final EA/IS, minor differences do occur. The Supplemental EA includes a synthesis of conditions that have changed and new data/information that have occurred since the approval of the WY 2010 Final EA/IS, as well as an evaluation of potential impacts due to implementation of WY 2011 Interim Flows resulting from the changed conditions. Because of the similarities between the two projects, Reclamation has determined that a Supplemental EA is appropriate.

Regarding the Petition for Temporary Transfer of Water/Water Rights process, the State Water Resources Control Board (SWRCB) is responsible for evaluating whether the petition meets the California Water Code Section 1725 et seq. requirements and issuing a decision. In acting on a water right petition, the SWRCB must consider potential impacts to other legal users of the water, and whether there would be any unreasonable effects from the transfer on fish, wildlife, or other instream beneficial uses. Although the SWRCB process may utilize information from the Supplemental EA, the petition is a separate document. The Supplemental EA has been prepared in accordance with and to comply with NEPA.

**SJRECWA & RMC-3:** The timeframe for the WY 2011 Interim Flows Project is October 1, 2010 to September 30, 2011, which represents a separate and distinct timeframe from either the WY 2010 Interim Flows Project or the overall implementation of the SJRRP. See response to comment SJRECWA & RMC-2 above.

**SJRECWA & RMC-4:** See responses to comments SJRECWA & RMC-2 and SJRECWA & RMC-3.

**SJRECWA & RMC-5:** See response to comment SJRECWA & RMC-2.

**SJRECWA & RMC-6:** The Program Environmental Impact Statement/Report (PEIS/R) is being prepared under a separate process and is outside of the scope of the Supplemental EA.

**SJRECWA & RMC-7:** Reclamation will prepare a separate document to address the recirculation of water that would potentially be recaptured as part of the WY 2011 Interim Flows Project. It is currently unknown where and how much water would be recaptured, although potential locations and a range of volumes are identified and covered in the Supplemental EA. Because the specific plans for recirculation are not known at this time, it is too speculative to evaluate in the Supplemental EA. The recirculation of Interim Flows would be subject to subsequent environmental review and will be evaluated under NEPA and the California Environmental Quality Act (CEQA), if applicable, prior to implementation of those actions.

**SJRECWA & RMC-8:** As described in Section 1.1 on page 1-2 of the Draft Supplemental EA, the California Department of Water Resources (DWR) does not have the same discretionary action for the WY 2011 Interim Flows Project as it did for the WY 2010 Interim Flows Project. Below is a description of the discretionary actions taken by DWR related to the WY 2010 Interim Flows and a discussion of their status:

- Install seals on the Chowchilla Bypass Bifurcation Structure to reduce leakage around closed radial gates DWR completed this effort in 2010.
- Implement physical parameters monitoring program actions (including the Seepage Monitoring and Management Plan and the Flow Monitoring and Management Plan), in coordination with Reclamation to monitor the response of the physical system to the release of WY 2010 Interim Flows DWR has installed the San Joaquin River near Dos Palos Gage and the San Joaquin River at top of Reach 4B Gage as part of the Flow Monitoring and Management Plan. These activities were also covered in the San Joaquin River Restoration Program Stream Gage Installation and Operation and Maintenance Project; Initial Study and Negative Declaration, State Clearinghouse No. 2008092116 (DWR 2009a). That document also addresses the long-term monitoring activities at these gages. Reclamation is implementing the Seepage Monitoring and Management Plan. Any assistance provided by DWR in implementing the Seepage Monitoring and Management Plan is technical assistance and expertise.

The California Public Resources Code § 21080(a) states that "except as otherwise provided in this division, this division shall apply to discretionary projects proposed to be carried out or approved by public agencies." The State CEQA Guidelines Section 15002(i) goes on to state that "CEQA applies in situations where a governmental agency can use its judgment in deciding whether and how to carry out or approve a project. A project subject to such judgmental controls is called a "discretionary project."" The State CEQA Guidelines Section 15357 defines a discretionary project as "a project which requires the exercise of judgment or deliberation when the public agency or body decides to approve or disapprove a particular activity, as distinguished from situations where the public agency or body merely has to determine whether there has been conformity with applicable statutes, ordinances, or regulations." Because the discretionary actions taken by DWR related to the WY 2010 Interim Flows are either completed or have undergone separate CEQA analysis, there is no discretionary action for DWR with regard to the WY 2011 Interim Flows and CEQA review is not needed for the WY 2011 Interim Flows Project.

The WY 2010 Final EA/IS also included discussion of operations and maintenance activities in the San Joaquin River Flood Control Project as possible DWR actions (for example, see section 2.2.2). However, the operation and maintenance activities related to the San Joaquin River Flood Control Project are the responsibility of the LSJLD consistent with their agreements with the Central Valley Flood Protection Board (formerly the Reclamation Board) dated March 1956 and any subsequent agreement(s).

**SJRECWA & RMC-9:** See response to comment SJRECWA & RMC-8.

**SJRECWA & RMC-10:** The commentor has provided a list of actions that they feel must be taken by DWR to implement the WY 2011 Interim Flows Project. With regard to monitoring groundwater depth and temperature levels observed in wells permitted and installed on public lands to determine when to reduce flow releases from Friant Dam, this action is an action taken by Reclamation. Any assistance provided by DWR is technical assistance and expertise. The following actions consist of on-going monitoring actions that would not result in ground disturbing activities and would not result in a direct physical change or a reasonably foreseeable indirect physical change in the environment: establishing control points to facilitate monitoring activities for portions of the river outside of Reach 1A and 2A; measuring water surface profiles in Reaches 1A, 2A, and 2B and collect data for future releases; collecting data related to flow measurements in Reaches 1 thorugh3; continuing to monitor water-level recorders at key locations to inform hydraulic models; conducting topographic surveys at 11 sites in Reach 2A; monitoring scour chains in Reach 2A; monitoring bathymetric profiles at two sites in Reach 2A; assessing 70 sites in Reaches 1 through 5 for fish passage suitability; conducting review of aerial photographs and field assessments; and conducting continuous "real time" water quality monitoring. Additionally, the ground disturbing activities necessary to install the scour chains, water-level recorders, and the continuous real time flow and water quality stations was addressed under separate CEQA analysis (DWR 2009a; DWR 2009b; DWR 2009c). Collecting subsurface soils data in Reach 2B as part of the Mendota Pool Bypass and Reach 2B Channel Improvements Project is not part of the WY 2011 Interim Flows Project and has been addressed under a separate CEQA analysis. No changes to the text in the Supplemental EA are necessary.

**SJRECWA & RMC-11:** The Draft Supplemental EA analyzes WY 2011 actions related to implementation of the Water Management Goal that are known at the time of preparation of the document. At the time of preparation of the Draft Supplemental EA and of this Final Supplemental EA, the potential recapture locations and possible maximum recapture amounts are known. Therefore, these have been included as part of the Proposed Action. However, because the specific plans for recirculation are not known at this time and would depend on recapture amounts and future agreements that have not been developed, it is too speculative to evaluate recirculation of the WY 2011 Interim Flows in this Final Supplemental EA. See response to SJRECWA & RMC-7.

**SJRECWA & RMC-12:** See responses to comments SJRECWA & RMC-2 and SJRECWA & RMC-3.

**SJRECWA & RMC-13:** Section 2.2.7 of the Draft Supplemental EA summarizes the results of WY 2010 Interim Flow monitoring available at the time of preparation of the environmental document. Since the time of preparation of the Draft Supplemental EA, Reclamation has completed and released the Draft 2010 Annual Technical Report, which is included as Appendix B to this Final Supplemental EA.

SJRECWA & RMC-14: From April 22 through April 28, 2010, recaptured WY 2010 Interim Flows and low irrigation demands at Mendota Pool reduced Delta deliveries via the Delta-Mendota Canal (DMC). Seepage drainage water returned to the DMC resulted in electrical conductivity levels that would not permit the Mendota Pool pump-in program. The water delivered to the Mendota Pool from the DMC did not thoroughly mix with low-salinity releases from Friant Dam and resulted in higher salinity water in Fresno Slough and the irrigation canal headworks in the Mendota Pool, than desired by irrigators that divert from the Pool. Reclamation, SLDMWA, and SJRECWA adjusted operations to close the DMC at Check 21, meet Arroyo Canal demands through the Firebaugh Wasteway, and dilute high salinity in Mendota Pool/Fresno Slough with low-salinity San Joaquin River water. Reclamation met demands at Mendota Pool with deliveries from Friant Dam. The situation that occurred in WY 2010 was not unique and has occurred historically (prior to Interim Flows). The situation was a result, in part, of the low demands at that time by the irrigators in the Mendota Pool likely due to cooler and wetter weather conditions. Existing water quality sensors and water quality monitoring data are available to monitoring water quality conditions in the DMC at Check 21, upstream of the Pool (San Joaquin River below Bifurcation gage), and downstream (San Joaquin River near Dos Palos gage). The existing water quality sensors and water quality monitoring data are adequate to monitor water quality and address this unique situation, if it were to occur again in the future.

**SJRECWA & RMC-15:** See responses to comments SJRECWA & RMC-2, SJRECWA & RMC-7, SJRECWA & RMC-11, and SJRECWA & RMC-13.

**SJRECWA & RMC-16:** See response to comment SJRECWA & RMC-11.

**SJRECWA & RMC-17:** Table 1-1 on page 1-6 of the Draft Supplemental EA reflects that flows were held at a target of 700 cfs below Sack Dam. As described in the April 12, 2010,

Flow Bench Evaluation prepared by Reclamation (included as Appendix E to the Draft 2010 Annual Technical Report [included as Appendix B to this Final Supplemental EA]), flows were limited to 700 cfs downstream of Sack Dam due to seepage concerns in Reach 4A. The text has been revised.

**SJRECWA & RMC-18:** See response to comment SJRECWA & RMC-2.

**SJRECWA & RMC-19:** Because the WY 2010 Final EA/IS has been incorporated as part of this Final Supplemental EA, responses to comments in the WY 2010 Final EA/IS are also incorporated as part of this Final Supplemental EA. Therefore, this comment is addressed by the responses in Appendix I of the WY 2010 Final EA/IS.

**SJRECWA & RMC-20:** Table 2-5 identifies channel capacities by reach. The Seepage Monitoring and Management Plan identifies monitoring efforts that are and will continue to occur during implementation of the Interim Flow releases in order to avoid adverse seepage-related impacts. Additionally, the WY 2011 Interim Flows Project would be operated consistent with and to comply with applicable laws, permits, regulations, and agreements in place at the time of implementation.

SJRECWA & RMC-21: The project description in the Draft Supplemental EA constrains the flows to non-damaging flows based on Reclamation's best estimate of channel capacities (see Table 2-5 on page 2-10 of the Draft Supplemental EA). All of the quality controlled flow and seepage data was not available for public release at the time the Draft Supplemental EA was released for review, but has since been released to the public in the Draft 2010 Annual Technical Report (included as Appendix B to this Final Supplemental EA). As described in response to comment SJRECWA & RMC-17, based on the groundwater monitoring efforts for the WY 2010 Interim Flows Project, seepage in Reach 4A may be a greater concern than anticipated. Reclamation is currently evaluating the data from the WY 2010 Interim Flows Project for this location and actively working with the landowner to address concerns and determine what resulted in groundwater thresholds being exceeded in this area. This analysis is ongoing and there is not sufficient information to change our assessment of channel capacities in this reach at this time. However, Reclamation intends to release Interim Flows in a way that reduces or avoids seepage impacts. If based on the analysis, it is determined that the non-damaging channel capacity of Reach 4A is less than the current best estimate of channel capacities, flows would be reduced to not exceed this new channel capacity estimate.

Section 10004(d) of San Joaquin River Restoration Settlement Act (Act; Public Law 111-11) states the following:

Prior to the implementation of decisions or agreements to construct, improve, operate, or maintain facilities that the Secretary determines are needed to implement the Settlement, the Secretary shall identify –

- (1) The impacts associated with such actions; and
- (2) The measures which shall be implemented to mitigate impacts on adjacent and downstream water users and landowners.

The impacts associated with the WY 2011 Interim Flows Project and proposed mitigation measures are described in the Draft Supplemental EA and this Final Supplemental EA. The measures which shall be implemented to mitigation impacts on adjacent and downstream water users and landowners will be included in the FONSI for the Proposed Action.

**SJRECWA & RMC-22:** Monitoring has occurred and data have been collected during the WY 2010 Interim Flow releases and would continue as part of the Proposed Action (see Chapter 2 of the Draft Supplemental EA). As described in response to comment SJRECWA & RMC-21, Reclamation is currently evaluating the monitoring data. However, preliminary evaluations do not indicated that channel capacities should be different during the WY 2011 Interim Flows Project from those presented in the Draft Supplemental EA.

**SJRECWA & RMC-23:** Reclamation is working with the water users to better define losses at the Mendota Pool. The amount of water available for recapture is subject to these potential losses. The possible amount of water available for recapture is described in the Draft Supplemental EA, which would be recaptured at the points identified in the Draft Supplemental EA.

SJRECWA & RMC-24: As described in the Draft Supplemental EA and the Seepage Monitoring and Management Plan, Interim Flows would increase gradually and incrementally from base flows to the full releases (up to 1,660 cfs). Specific ramping rates are not identified in the Draft Supplemental EA or the Seepage Monitoring and Management Plan as these rates depend on a variety of conditions, such as existing groundwater elevations, weather conditions, adjacent cropping patterns, and similar conditions. These factors create a need to adaptively manage the Proposed Action based on real-time conditions within the Restoration Area. It is anticipated that the ramping of WY 2011 Interim Flows would follow the "bench evaluation" process that was established during the WY 2010 Interim Flows. As part of these bench evaluations, specific groundwater, flow, and weather factors were assessed along with potential changes in shallow groundwater prior to an increase in Interim Flow releases. Each bench evaluation also included a recommendation on whether to increase flows, hold flows, or reduce flows.

The groundwater information provided as part of the comment, as well as the electrical conductivity measurements in wells sent to Reclamation on April 29, 2010, are helpful to provide a more regional dataset and determine groundwater gradients. However, the commentor does not identify how the data resulted in impacts. Many wells show deeper groundwater levels on April 7, 2010, when Interim Flows in Reaches 3 and 4A had been near 400 cfs for several weeks, than on June 28, 2010, when Interim Flows were less than 100 cfs. Additional analysis and information is required to understand the extent of the link between the San Joaquin River surface flows and groundwater levels in these specific locations. Additional information on adjacent crops, cropping patterns, and irrigation patterns and amounts would also allow for a more comprehensive evaluation and response. Continued coordination, including continued information sharing, with landowners, would occur during the WY 2011 Interim Flows.

As described in the Draft Supplemental EA and the Seepage Monitoring and Management Plan, additional water in the river as a result of the Interim Flows results in changes the shallow

groundwater conditions adjacent to the river. These changes in shallow groundwater conditions have the potential to impact adjacent agricultural lands. However, implementation of the Seepage Monitoring and Management Plan would result in the reduction or avoidance of these impacts. While shallow groundwater conditions would change during the WY 2011 Interim Flows Project as compared to existing conditions, implementation of the Seepage Monitoring and Management Plan would result in less than significant impacts to adjacent agricultural resources. As part of the implementation of the Seepage Monitoring and Management Plan during the WY 2010 Interim Flows Project, monitoring and action thresholds were established. These thresholds would also be used during the WY 2011 Interim Flows Project, with thresholds updated in specific areas based on monitoring information.

**SJRECWA & RMC-25:** The activities suggested by the SJRECWA and RMC have been and are actively taking place, consistent with Reclamation's commitment to implement the Seepage Monitoring and Management Plan. A variety of outreach activities to landowners were conducted prior to and during the WY 2010 Interim Flows Project. A subset of these activities is provided below:

- 1. Discussion of Interim Flows at a minimum of 11 landowner meetings as described below, not including the monthly San Joaquin River Resources Management Coalition meetings.
  - a. May 2008 Landowner Workshop: Reach-Specific Alternatives and Restorations Flows (2 meetings) "Flow Presentation" ("Interim Flow" not included in notice)
  - b. January 2009 Reach 2B and 4B Landowner Workshop (2 meetings)
  - c. March 2009 Reach 2B and 4B Landowner Meetings (2 meetings)
  - d. June 2009 Reach 2A, 3 and 4A Landowner Meetings (2 meetings)
  - e. September 2009 Reach 2B Landowner Meeting (1 meeting)
  - f. November 2009 Reach 2B and 4B Landowner Meetings (2 meetings)
- 2. Direct mailing of information on the seepage hotline to landowners adjacent to the San Joaquin River in Reaches 2 through 5 and in the bypass system in September 2009 and in March 2010.
- 3. Posting of seepage hotline information on the SJRRP website along with prompt response to all calls and e-mails to the seepage hotline and/or expressing concerns regarding seepage.
- 4. Providing financial assistance to the SJRECWA to support a landowner coordinator to coordinate activities and disseminate information to landowners.

Information provided by landowners, water agencies, and others was considered in making changes to flows (including increasing and decreasing flows). Such information was documented in and considered during the respective bench evaluation along with the resulting findings of Reclamation's independent investigation and/or analysis of this information. It is anticipated that information provided by landowners, water agencies, and others would be considered in a similar way during the WY 2011 Interim Flows Project.

Managing the amount of groundwater data collected as part of the WY 2010 Interim Flows Project and getting this information out to the public has been an on-going part of the project. Weekly groundwater reports that include groundwater elevations in 13 key wells are posted on the SJRRP website, and the Groundwater Atlas continues to be updated with the previous month's measurements in all wells monitored and posted to the website on a monthly basis. The SJRRP Interim Flows monitoring website was also recently updated to make it more user friendly. Monitoring data are released to the public and made available on the SJRRP website as soon as possible. It is anticipated that information would be made available to the public in similar timeframes during the WY 2011 Interim Flows Project as were provided during the WY 2010 Interim Flows Project.

As described by the commentor, the Seepage Monitoring and Management Plan included five potential actions to address nonattainment of the seepage management objectives. Three of the five actions were implemented during the WY 2010 Interim Flows. As described in the bench evaluations for the WY 2010 Interim Flows (see Appendix B), flows were incrementally increased with benches to allow groundwater monitoring wells to stabilize prior to evaluation of a flow increase. Delivery of WY 2010 Interim Flows to the San Joaquin River Exchange Contractors at Mendota Pool was an element used extensively to keep flows at no greater than 700 cfs in Reach 4A due to the potential for seepage impacts. When exchangeable demands were not great enough on April 13, 2010, WY 2010 Interim Flows were reduced at Friant Dam. While the Seepage Monitoring and Management Plan included five potential actions to address nonattainment of the seepage management objectives, there was only a need to use three of the five actions during the WY 2010 Interim Flows.

**SJRECWA & RMC-26:** See responses to comments SJRECWA & RMC-24 and SJRECWA & RMC-25. With respect to the operations of Mendota Dam and Sack Dam, Reclamation anticipates to continue the daily coordination e-mails and phone calls for the WY 2011 Interim Flows Project that occurred during the WY 2010 Interim Flows Project.

The WY 2011 Interim Flows Project has been formulated to reduce or avoid seepage. Managing to reduce or avoid seepage is inherently challenging due to the lag in time between the change in river stage and resulting change in groundwater elevations and other factors, such as adjacent canal seepage, flood irrigation of lands, and heavy rainfall that can affect groundwater elevations. In the event that a mistake is made while managing to reduce or avoid seepage, it would be likely that any resulting seepage that could occur would be limited in area and temporary in nature (affect a growing season or a few seasons). These limited affects to agricultural production would not result in a significant environmental impact as they would not convert farmland to non-agricultural uses, would not conflict with existing zoning or Williamson Act contracts, and would not involve other changes that could result in conversion of farmland to non-agricultural use (See significance criteria used in the WY 2010 Final EA/IS. Because the Draft Supplemental EA supplements the WY 2010 Final EA/IS, the significance criteria in the WY 2010 Final EA/IS have also been used in the Draft and Final Supplemental EA).

**SJRECWA & RMC-27:** See responses to comments SJRECWA & RMC-2, SJRECWA & RMC-7, SJRECWA & RMC-11, and SJRECWA & RMC-13.

**SJRECWA & RMC-28:** As described in Section 2.2.2 of the Draft Supplemental EA, the WY 2011 Interim Flows could be recaptured at the following locations (listed from upstream to downstream): Mendota Pool at various points of diversion; Arroyo Canal at Sack Dam; the Lone Tree Unit of the Merced National Wildlife Refuge (NWR) in Eastside Bypass Reach 2; and, the East Bear Creek Unit of the San Luis NWR in Eastside Bypass Reach 3; Patterson Irrigation District facility; West Stanislaus Irrigation District facility; Banta-Carbona Irrigation District facility; the CVP C.W. Bill Jones Pumping Plant (Jones Pumping Plant); and the State Water Project Harvey Banks Pumping Plant (Banks Pumping Plant). While WY 2010 Interim Flows were recaptured at the Mendota Pool, this is not the only available location for recapture.

The first sentence on page 2-7, 2nd paragraph is correct as stated in the Draft Supplemental EA. The amount of recaptured water available for transfer would range from zero to the quantity of Interim Flows that reaches the Mendota Pool as this is the first recapture location. Reclamation will account for these flows in coordination with the Settling Parties and the agency/entity that owns and/or operates the recapture location.

Table 2-4 is only intended to provide the upper bound of potential recapture opportunities.

**SJRECWA & RMC-29:** Recirculation of recaptured water to the Friant Division could require mutual agreements between Reclamation, DWR, Friant Division long-term contractors and other south-of-Delta CVP/SWP contractors. The actual agreements needed are not known at this time because the amount of water recaptured, the location of this water, and the transfer, exchange, or conveyance mechanism is not known at this time. However, once additional information is known, potential recirculation actions would be reviewed for NEPA and or CEQA compliance, as required by law. Any specific agreements or contracts associated with the recirculation of water are outside of the scope of this EA.

**SJRECWA & RMC-30:** Implementation of the WY 2011 Interim Flows Project would remain consistent with the Reasonable and Prudent Alternative (RPAs), to the extent that they are in place, by the USFWS Operations BO (USFWS 2008) and the NMFS Operations BO (NMFS 2009), respectively or as amended by court action. Delta export facilities would continue to operate consistent with existing operating criteria, and prevailing and relevant laws, regulations, BOs, and court orders in place at the time the water is recaptured.

**SJRECWA & RMC-31:** Reclamation is working with the water users to better define losses at the Mendota Pool. The amount of water available for recapture is subject to these potential losses. The Draft Supplemental EA describes the upper limit of potential recapture. Reclamation would continue to follow the accounting procedures described in the current operations agreement and work with Mendota Pool operators to refine the agreement as additional information on losses at the Mendota Pool is obtained.

**SJRECWA & RMC-32:** See response to comment SJRECWA & RMC-21.

**SJRECWA & RMC-33:** As noted by the commentor, the unsteady hydraulic modeling effort conducted for the Interim Flows analysis was completed in advance of the WY 2010 Interim

Flow releases. Therefore, it would not be possible to have calibrated the model in all reaches since Interim Flows had not yet occurred.

**SJRECWA & RMC-34:** The Seepage Monitoring and Management Plan includes thresholds developed during the WY 2010 Interim Flows Project to avoid adverse seepage-related impacts.

**SJRECWA & RMC-35:** The purpose of the Draft and Final Supplemental EA is to evaluate the impacts associated with implementation of WY 2011 Interim Flows Project consistent with NEPA, not to document extensively the data collected during the WY 2010 Interim Flows Project or provide exhaustive analysis. However, the Draft 2010 Annual Technical Report, which summarizes the data gathering efforts and results of flow monitoring through April 2010, is included as Appendix B to this document for reference. See also responses to comments SJRECWA & RMC-2 and SJRECWA & RMC-13.

**SJRECWA & RMC-36:** Reclamation will work with the Restoration Administrator to establish the benches and subsequent flow changes during implementation of Interim Flows during WY 2011. The Seepage Monitoring and Management Plan (see Appendix D of the WY 2010 Final EA/IS) described the monitoring and management guidelines included in the WY 2010 Final EA/IS, which also apply to the Proposed Action, as related to groundwater or levee seepage. The Draft 2010 Annual Technical Report describes monitoring and analyses conducted through June 30, 2010, during the WY 2010 Interim Flows Project.

SWRCB Order Water Right 2009-0058-DWR pertains to the WY 2010 Interim Flows Project. Reclamation has submitted a separate petition for temporary transfer of water (less than 1 year), pursuant to California Water Code Section 1725 et seq., to address the release and rediversion of WY 2011 Interim Flows. The SWRCB is anticipated to act on that petition for WY 2011, and the terms of any subsequent order or decision are not yet known.

**SJRECWA & RMC-37:** Reclamation would operate consistent with the Settlement and the Act, as described in Section 2 of the Draft Supplemental EA. Reclamation would evaluate the recommendations from the RA and, in consideration of available groundwater data, may hold flows constant or reduce flows to avoid material adverse seepage impacts.

**SJRECWA & RMC-38:** Interim Flows are water released from storage from Millerton Reservoir under Reclamation's appropriative water right. These flows are anticipated to be protected under Section 1707 of the California Water Code. Flood flows are water released that cannot be stored in Millerton Reservoir. Flood flows and other natural flows in the San Joaquin River, when they occur in the future, would continue to be available to the Exchange Contractors and/or the CVP contractors. In the event that releases from Friant Dam include both Interim Flows and flood flows, the Interim Flows would be reduced to the extent that the combination of the two did not exceed downstream channel capacities. The portion of the release that is Interim Flows would be protected under Section 1707 of the California Water Code and the portion of the release that is flood flows would continue to be available to the Exchange Contractors and/or the CVP contractors.

**SJRECWA & RMC-39:** Coordination with Federal, State, and/or local agencies, as well as landowners, for the release and conveyance of flows through some reaches of the San Joaquin River and bypass system, and/or the potential diversion of flows could take place via various forms, such as calls, e-mails, and other communications. Such coordination does not require that an agreement be in place with these entities. At this time, no additional agreements beyond those specified in the Draft and Final Supplemental EA are anticipated to be needed to implement the WY 2011 Interim Flows Project.

**SJRECWA & RMC-40:** Reclamation would continue to coordinate with the implementing agencies, stakeholders, and water contractors during implementation of the WY 2011 Interim Flows. See also responses to comments SJRECWA & RMC-8 and SJRECWA & RMC-10.

**SJRECWA & RMC-41:** Recapture of WY 2011 Interim Flows water would be subject to available capacity at the Jones and Banks pumping plants and would be conducted in a manner consistent with Reclamation's operation of the CVP for the benefit of the CVP contractors.

**SJRECWA & RMC-42:** See response to LSJLD-5d. A traffic plan is being developed in coordination with the local jurisdictions.

**SJRECWA & RMC-43:** See response to comment SJRECWA & RMC-21, SJRECWA & RMC-24, and SJRECWA & RMC-25. The text has been modified.

**SJRECWA & RMC-44:** Data from wells with hourly dataloggers helps determine interactions between surface water and groundwater, response time, and groundwater gradients. Realtime operations are informed by weekly manual measurements and telemetered wells in key locations.

**SJRECWA & RMC-45:** All of the quality controlled flow and seepage data was not available for public release at the time the Draft Supplemental EA was released for review, but has since been released to the public in the Draft 2010 Annual Technical Report (included as Appendix B to this Final Supplemental EA).

**SJRECWA & RMC-46:** See the response to SJRECWA & RMC-21, SJRECWA & RMC-24 and SJRECWA & RMC-26.

Groundwater level data and thresholds are available in the Draft 2010 Annual Technical Report (included as Appendix B to this Final Supplemental EA). Soil salinity data is currently undergoing quality control and quality assurance.

**SJRECWA & RMC-47:** Easements will be considered as a long-term response to address seepage concerns. The identification of locations for easements necessary to avoid seepage-related impacts is an ongoing analysis/investigation and is outside of the scope of the Supplemental EA. Acquisition of easements would require subsequent evaluation and environmental documentation, as required. Although easements are not part of the WY 2011 Interim Flows Project, the WY 2011 Interim Flows Project would likely inform the need for easements.

**SJRECWA & RMC-48:** Table 2-10 provides information on the Fall 2009/Spring 2010 Monitoring Activities. The monitoring activities for WY 2011 Interim Flows are still in the planning stages and responsibilities by agency are not known at this time. If any monitoring activity to be conducted during the WY 2011 Interim Flows has the potential to result in ground disturbing activities or impacts to the environment beyond those addressed in the Supplemental EA or would be conducted by a State agency, additional NEPA and/or CEQA analysis would be conducted, as required.

**SJRECWA & RMC-49:** A summary of available water quality monitoring data is presented in the Draft 2010 Annual Technical Report (included as Appendix B to this document). See also responses to comments SJRECWA & RMC-13 and SJRECWA & RMC-35.

**SJRECWA & RMC-50:** A summary of available water temperature monitoring data is presented in the Draft 2010 Annual Technical Report (included as Appendix B to this document). See also responses to comments SJRECWA & RMC-13 and SJRECWA & RMC-35.

**SJRECWA & RMC-51:** A summary of available bed sediment data is presented in the Draft 2010 Annual Technical Report (included as Appendix B to this document). See also responses to comments SJRECWA & RMC-13 and SJRECWA & RMC-35.

**SJRECWA & RMC-52:** Section 10004(h)(1) of the Act states the following:

STUDY REQUIRED.—Prior to releasing any Interim Flows under the Settlement, the Secretary shall prepare an analysis in compliance with the National Environmental Policy Act of 1969 (42 U.S.C. 4321 et seq.), including at a minimum— . . . (E) an analysis of the likely Federal costs, if any, of any fish screens, fish bypass facilities, fish salvage facilities, and related operations on the San Joaquin River south of the confluence with the Merced River required under the Endangered Species Act of 1973 (16 U.S.C. 1531 et seq.) as a result of the Interim Flows.

No fish screens, fish bypass facilities, fish salvage facilities, and related operations on the San Joaquin River south of the confluence with the Merced River are required under the Endangered Species Act of 1973 (16 U.S.C. 1531 et seq.) as a result of the Interim Flows, and thus, there are no Federal costs associated with such facilities.

Section 10004(h)(2) of the Act states the following:

CONDITIONS FOR RELEASE.—The Secretary is authorized to release Interim Flows to the extent that such flows would not— . . . (4) TEMPORARY FISH BARRIER PROGRAM.—The Secretary, in consultation with the California Department of Fish and Game, shall evaluate the effectiveness of the Hills Ferry barrier in preventing the unintended upstream migration of anadromous fish in the San Joaquin River and any false migratory pathways. If that evaluation determines that any such migration past the barrier is caused by the introduction of the Interim Flows and that the presence of such fish will result in the imposition of additional regulatory actions against third parties, the

Secretary is authorized to assist the Department of Fish and Game in making improvements to the barrier. From funding made available in accordance with section 10009, if third parties along the San Joaquin River south of its confluence with the Merced River are required to install fish screens or fish bypass facilities due to the release of Interim Flows in order to comply with the Endangered Species Act of 1973 (16 U.S.C. 1531 et seq.), the Secretary shall bear the costs of the installation of such screens or facilities if such costs would be borne by the Federal Government under section 10009(a)(3), except to the extent that such costs are already or are further willingly borne by the State of California or by the third parties.

The evaluation of the effectiveness of the Hills Ferry barrier is planned to occur during the fall of 2010. At this time, there is not sufficient information to determine if migration past the barrier occurs, is caused by or exacerbated by the Interim Flows, or that the presence of such fish will result in the imposition of additional regulatory actions against third parties. No fish screens or fish bypass facilities are required due to the release of Interim Flows in order to comply with the Endangered Species Act.

Nothing in Act requires that the Secretary of the Interior (Secretary) to maintain the Hills Ferry Barrier. Nor does the Act mandate that the Secretary work with the California Department of Fish and Game to improve the barrier.

**SJRECWA & RMC-53:** See responses to comments SJRECWA & RMC-17, SJRECWA & RMC-20, SJRECWA & RMC-21, SJRECWA & RMC-26, SJRECWA & RMC-34, SJRECWA & RMC-36.

**SJRECWA & RMC-54:** The purpose of the Supplemental EA is to evaluate the impacts associated with implementation of WY 2011 Interim Flows. The Supplemental EA includes a synthesis of conditions that have changed and new data/information that have occurred since the approval of the WY 2010 Final EA/IS, as well as an evaluation of potential impacts due to implementation of WY 2011 Interim Flows resulting from the changed conditions.

Additionally, the Seepage Monitoring and Management Plan identifies monitoring efforts that are occurring for the WY 2010 Interim Flows releases and would continue to occur during implementation of the WY 2011 Interim Flows releases. The Seepage Monitoring and Management Plan is intended to avoid or reduce seepage-related impacts. The Draft 2010 Annual Technical Report, which summarizes the data gathering efforts and results of flow monitoring through April 2010, is included as Appendix B to this document for reference.

Agricultural resources were evaluated in the Draft Supplemental EA and impacts were found to be less than significant because of the short-term and temporary nature of the Proposed Action. Reclamation would take actions to reduce or avoid adverse water supply impacts to Friant Division long-term contractors. This could include recapture and recirculation of Interim Flow releases, and other actions consistent with and as described in the Settlement, such as making water available under the Recovered Water Account.

**SJRECWA & RMC-55:** The commentor has not provided any data or information to show that there has been an increase in drug activities, nor that there is a relationship to implementation of the Interim Flow releases during WY 2010 or WY 2011.

**SJRECWA & RMC-56:** Terrestrial Biological Resources are analyzed in Section 3.2.3 of the Draft Supplemental EA.

**SJRECWA & RMC-57:** See response to comment SJRECWA & RMC-14. The final flow, seepage, and water quality data was not available for public release at the time the Draft Supplemental EA was released for review, but has since been released to the public in the Draft 2010 Annual Technical Report (included as Appendix B to this Final Supplemental EA).

**SJRECWA & RMC-58:** See response to comment SJRECWA & RMC-55.

**SJRECWA & RMC-59:** See responses to comments SJRECWA & RMC-20, SJRECWA & RMC-21, SJRECWA & RMC-24, SJRECWA & RMC-25, and SJRECWA & RMC-26, SJRECWA & RMC-64, SJRECWA & RMC-67, and SJRECWA & RMC-55.

Seepage Report #12 documents the evaluation for water overtopping a Mendota Pool Levee and the justification for continuing flow releases (see page E-217 of the 2010 Draft Annual Technical Report included as Appendix B of this Final Supplemental EA). The report shows a call received at 8:30 in the morning and Reclamation staff visiting the site that same day. The evaluation did not identify a need to reduce flows.

**SJRECWA & RMC-60:** See response to comment SJRECWA & RMC-59.

**SJRECWA & RMC-61:** The potential change in groundwater pumping due to implementation of Interim Flows during WY 2011 as a one-year action is considered less than significant. Consistent with the Water Management Goal of the Settlement, Reclamation would take actions to reduce or avoid adverse water supply impacts to Friant Division long-term contractors due to implementation of Interim Flows during WY 2011.

**SJRECWA & RMC-62:** The analysis of agricultural resources in the Supplemental EA and the WY 2010 Final EA/IS, as incorporated by reference, found that the potential impacts due to implementation of Interim Flows during WY 2011would be less than significant. As described in the Supplemental EA, Reclamation would take actions to reduce or avoid adverse impacts to Friant Division long-term contractors due to implementation of Interim Flows during WY 2011. Although the commentor claims that impacts would not be less than significant, no supporting data or analysis for this conclusion is provided.

**SJRECWA & RMC-63:** Food conditions in Reach 1 are considered of high importance as this reach is expected to support most life-history stages of Chinook salmon for the greatest period of time. Food conditions in Reaches 2 through 5 are considered to be of moderate importance to accommodate other life-history requirements, though likely for a shorter temporal period.

The SJRRP Fish Management Work Group, primarily through the California Department of Fish and Game, is conducting studies to determine the potential habitat conditions within the upper reaches of the Restoration Area. The focus is on habitat conditions unique to anadromous salmonids, including temperature, substrate, holding and migration habitats, and water quality. A bioassessment investigation is included to evaluate the benthic community as an indicator of biological health, which also serves to identify food-production related conditions, including species composition.

Based on the schedule provided in the FMWG's *Fisheries Implementation Plan 2009-2010 January 12, 2010 Draft,* the pertinent studies will start during WY 2010 and continue through at least WY 2012.

**SJRECWA & RMC-64:** Reclamation would monitor red sesbania, salt cedar, giant reed, Chinese tallow, and sponge plant along affected portions of the San Joaquin River and bypass system (before and after WY 2011 Interim Flows) and control and manage these species, as specified in the Invasive Species Management Plan (Appendix F of the WY 2010 Final EA/IS). This mitigation program is the same as the program described for the WY 2010 Interim Flows Project.

SJRECWA & RMC-65: See response to comment SJRECWA & RMC-55.

**SJRECWA & RMC-66:** Table 2-1 on page 2-3 of the Draft Supplemental EA provides an estimate of Interim Flows in the bypass system (the Eastside and Mariposa bypasses, depending on how flows are routed). As described in the Draft FONNSI, the Interim Flows are expected to remain in the existing low-flow channel. This low-flow channel typically carries flows in some years as shown in Figure 3-1. As described in the FONNSI, the WY 2011 Interim Flows would not result in significant environmental impacts to agricultural and forest resources in the bypasses. The WY 2011 Interim Flows Project would result in inundation of some areas of active grazing lands in the bypass system, but would not convert farmland to non-agricultural uses, would not conflict with existing zoning or Williamson Act contracts, and would not involve other changes that could result in conversion of farmland to non-agricultural use. The commentor has provided no evidence that there would be long-term impacts to these lands that would be considered significant environmental impacts under NEPA. Rather, the commentor has identified that property damage, and specifically damage to crops and/or use of the land, may occur as a result of the Interim Flows Project. Reclamation would like to work with landowners to address property damage concerns; however, these property damages would be temporary due to the temporary nature of the Proposed Action, and thus, would not result in significant impacts under NEPA.

**SJRECWA & RMC-67:** As described in the Invasive Species Monitoring and Management Plan in Appendix F of the WY 2010 Final EA/IS, comprehensive surveys for invasive nonnative plants will be performed "following the Water Year 2010 Interim Flow period during 2009, and 2010 or 2011." Pre-flow surveys were conducted and completed in 2008. Reclamation will be developing specific invasive species management procedures following a post-Interim Flows evaluation in 2011. These procedures are anticipated to identify ways to quantify pre- and post-

flow conditions, methods to control the spread of invasive species due to Interim Flows, and mechanisms for follow-up reporting.

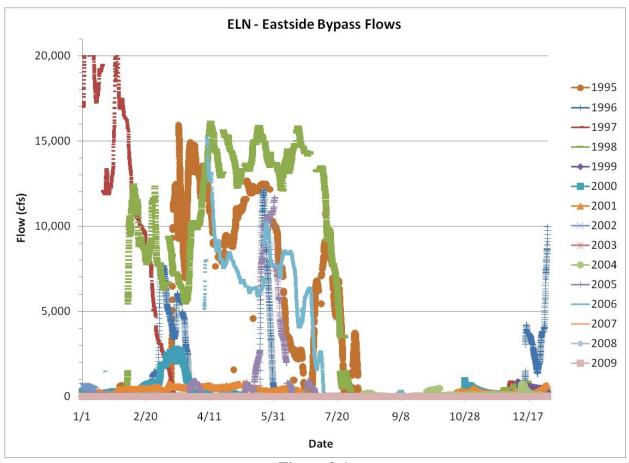


Figure 3-1. Historical Flows in the Eastside Bypass

**SJRECWA & RMC-68:** Section 106 of the National Historic Preservation Act of 1966 (NHPA) requires Federal agencies to take into account the effects of their undertakings on historic properties. The FONSI text has been revised.

**SJRECWA & RMC-69:** Implementation of WY 2011 Interim Flows is a one-year, temporary action. The SWRCB petition identifies groundwater as a potential source of make-up water for water contractors, with 389,355 acre-feet as a worst case reduction in water supplies to Friant Division long-term contractors. Reclamation is working with the contractors to implement the Water Management Goal to reduce the amount of water lost to the Friant Division long-term contractors.

SJRECWA & RMC-70: See response to comment SJRECWA & RMC-55.

# 3.6 San Luis and Delta-Mendota Water Authority (SLDMWA) and the State Water Contractors (SWC)

**SLDMWA & SWC-1:** The Draft Supplemental EA was prepared consistent with NEPA. CEQ Regulation 1502 states that NEPA procedures must insure that environmental information is made available to public officials and citizens before a federal action is taken. The NEPA process further is intended to identify environmental effects and values in adequate detail to make decisions related to an action. Environmental documentation prepared to satisfy NEPA needs to provide full and fair discussion of significant environmental impacts that may cause adverse impacts or enhance the quality of the human environment. NEPA does not make a claim to have a "no-harm principle" associated with its implementation and outlines the need for efforts to minimize, avoid, or mitigate impacts that are considered adverse. Rather, NEPA is intended to fully disclose possible impacts. The Draft Supplemental EA and this Final Supplemental EA for the WY 2011 Interim Flows Project provides for full and fair discussion and disclosure of foreseeable environmental impacts.

**SLDMWA & SWC-2:** The Draft Supplement EA utilizes the same comparison of conditions – the then existing conditions without and with implementation of the Interim Flows Project – to determine whether there are significant adverse environmental impacts. It is important to note that Section 10004(f) of the Act states the following:

EFFECT ON CONTRACT WATER ALLOCATIONS.—Except as otherwise provided in this section, the implementation of the Settlement and the reintroduction of California Central Valley Spring Run Chinook salmon pursuant to the Settlement and section 10011, shall not result in the involuntary reduction in contract water allocations to Central Valley Project long-term contractors, other than Friant Division long-term contractors.

Section 10004(g) of the Act states the following:

EFFECT ON EXISTING WATER CONTRACTS.—Except as provided in the Settlement and this part, nothing in this part shall modify or amend the rights and obligations of the parties to any existing water service, repayment, purchase, or exchange contract.

**SLDMWA & SWC-3:** The continuous monitoring stations requested in the comment are in place and operational. The data from these stations is also published daily on the SJRRP website and on the California Data Exchange Center website as requested by the commentor. Some gaps in the data exist at these stations due to maintenance and other problems at the stream gages. However, the stations are continuously maintained and the data is publically available on the internet.

**SLDMWA & SWC-4:** From April 22 through 28, 2010, recaptured WY 2010 Interim Flows and low irrigation demands at Mendota Pool reduced Delta deliveries via the DMC. Seepage drainage water returned to the DMC resulted in electrical conductivity levels that would not permit the Mendota Pool pump-in program. The water delivered to the Mendota Pool from the

DMC did not thoroughly mix with low-salinity releases from Friant Dam and resulted in higher salinity water in Fresno Slough and the irrigation canal headworks in the Mendota Pool, than desired by irrigators that divert from the Pool. Reclamation, SLDMWA, and the SJRECWA adjusted operations to close the DMC at Check 21, meet Arroyo Canal demands through the Firebaugh Wasteway, and dilute high salinity in Mendota Pool/Fresno Slough with low-salinity San Joaquin River water. Reclamation met demands at Mendota Pool with deliveries from Friant Dam. The situation that occurred in WY 2010 was not unique and has occurred historically (prior to Interim Flows). The situation was a result, in part, of the low demands at that time by the irrigators in the Mendota Pool likely due to cooler and wetter weather conditions. Existing water quality sensors and water quality monitoring data are available to monitoring water quality conditions in the DMC at Check 21, upstream of the Pool (San Joaquin River below Bifurcation gage), and downstream (San Joaquin River near Dos Palos gage). The existing water quality sensors and water quality monitoring data are adequate to monitor water quality and address this unique situation, if it were to occur again in the future.

**SLDMWA & SWC-5:** As described in Chapter 2 of the Draft Supplemental EA, the Proposed Action is a one-year, temporary project. Because of the short-term and temporary nature of the Proposed Action, impacts to water supply would be less than significant. In addition, Section 10004(f) of the Act states the following:

(f) Effect on Contract Water Allocations – Except as otherwise provided in this section, the implementation of the Settlement and the reintroduction of California Central Valley Spring Run Chinook salmon pursuant to the Settlement and section 10011, shall not result in the involuntary reduction in contract water allocations to the Central Valley Project long-term contractors, other than Friant Division long-term contractors.

WY 2011 Interim Flows would be implemented consistent with the Act, which includes not involuntarily reducing non-Friant Division contract water allocations.

The long-term implementation of the SJRRP is outside of the scope of the Supplemental EA and is being evaluated in a separate Program EIS/R, currently under preparation.

**SLDMWA & SWC-6:** See response to comment SLDMWA & SWC-5.

**SLDMWA & SWC-7:** See response to comment SLDMWA & SWC-5.

**SLDMWA & SWC-8:** As described in Section 2.2.2, Recapture and Recirculation, of the Draft Supplemental EA, recirculation would be subject to available capacity within CVP/SWP storage and conveyance facilities, including the Jones and Banks pumping plants, California Aqueduct, DMC, San Luis Reservoir and related pumping facilities, and other facilities of CVP/SWP contractors (facilities are identified in Figure 2-13 of the WY 2010 Final EA/IS, shown on Page 2-11).

**SLDMWA & SWC-9:** See response to comment SLDMWA & SWC-1

# 3.7 San Luis & Delta-Mendota Water Authority (SLDMWA) and San Joaquin River Exchange Contractors Water Authority (SJRECWA)

**SLDMWA & SJRECWA-1:** Since the time of preparation of the Draft Supplemental EA, Reclamation has completed and released the Draft 2010 Annual Technical Report, which is included as Appendix B to this Final Supplemental EA.

# 3.8 Paramount Farming Company (PFC) (A)

**PFC** (A)-1: The release of WY 2011 Interim Flows constitutes a complete project under NEPA because it is a project that has independent utility and provides useful information on flows, temperatures, fish needs, seepage losses, shallow groundwater conditions, recirculation, recapture and reuse conditions, channel capacity (high and low flows), and levee stability regardless of the future implementation of the Settlement. These data are useful independent of the SJRRP, particularly with respect to understanding the flood management system and seepage. While the Proposed Action is one of the first several steps in implementing the SJRRP, the Proposed Action can be implemented successfully in meeting its purpose and need and objectives without any prior (e.g., WY 2010 Interim Flows) or subsequent SJRRP activities. See also response to comment SJRECWA & RMC-2.

**PFC** (A)-2: Reclamation has been working with Paramount Farms outside of the scope of the Draft Supplemental EA to determine the nature and extent of Paramount Farm's water rights. These discussions are on-going. However, regardless of the discussions, no significant impacts to Paramount Farms water supply are anticipated due to the short-term and temporary nature of the WY 2011 Interim Flows Project. Interim Flows released from Friant Dam would be a rediversion of water released from the reservoir that was previously held in storage. Both the storage of this water and the rediversion of this water would be conducted under Reclamation's appropriate water rights. While Interim Flows could reduce the potential for flood releases by "creating" more space in Millerton Reservoir due to increased releases downstream, this would not result in a significant impact to Paramount Farm's water rights due to the short-term and temporary nature of the Proposed Action.

**PFC** (A)-3: Comment noted. Groundwater rights are outside of the scope of the Supplemental EA and are not evaluated as part of the Proposed Action.

**PFC** (A)-4: As described in the Draft Supplemental EA, flows under the Proposed Action would be limited to volumes that do not cause substantial seepage effects on adjacent land. Reclamation would implement the Seepage Monitoring and Management Plan, which is intended to avoid or reduce seepage as a result of the Proposed Action. As described in the Seepage Monitoring and Management Plan, Interim Flow releases would begin at low amounts and be incrementally increased based on monitoring information. The Seepage Monitoring and Management Plan also describes the actions to be taken if unanticipated seepage were to occur as a result of the Proposed Action. It is important to note however that effective implementation of the Seepage Monitoring and Management Plan relies on Reclamation's ability to monitor and thus, be able to response to changes in shallow groundwater conditions by changing flows or

holding flows constant. This monitoring is conducted through a series of seepage wells installed by Reclamation and through communications with local landowners. At this time, it is Reclamation's understanding that Paramount Farms is not allowing access to its property to install seepage monitoring wells. Reclamation has a monitoring transect within the public right-of-way at San Mateo Road, just upstream from Paramount Farms, along with wells on the north side of the Mendota Pool near Paramount Farms. Thus, Reclamation's monitoring and evaluation of seepage conditions in the area would be based on these existing wells.

**PFC** (**A**)-5: The Draft Supplemental EA included an analysis of the impacts of the Proposed Action on Agricultural Resources and Hydrology and Water Quality in Sections 3.2.3. Additional information can also be found in the WY 2010 Final EA/IS, which is incorporated by reference, in Sections 4.3 and 4.10, respectively. As described in both documents, impacts to agricultural resources and hydrology and water quality are less than significant.

# 3.9 Paramount Farming Company (PFC) (B)

**PFC** (**B**)-1: See responses to comments from the SJRECWA & RMC in Section 3.5 above.

# 4.0 Errata

Based on comments received on the Draft Supplemental EA, some revisions to the Draft Supplemental EA text were identified and are provided below. The revisions to the Draft Supplemental EA are one component of the materials that comprise the Final Supplemental EA.

This errata sheet identifies certain modifications and corrections to the Draft Supplemental EA, which have been identified in response to public and agency comments received during the public review and comment period. The changes presented below provide additional clarification and/or correct minor errors. The changes do not alter the analyses or conclusions that were presented in the Draft Supplemental EA.

Additions to the Draft Supplemental EA are included in <u>double underline</u> and deletions are included in <u>strikethrough</u>.

# 4.1 Chapter 1

# Page 1-3, Second Paragraph, the following sentence has been revised:

The RA also consults with the Technical Advisory Committee on topics including how River Restoration hydrographs are to be implemented; when Buffer Flows (two-releases of up to an additional 10 percent of the applicable hydrograph flows) may be needed; and Interim Flows for data collection purposes.

# Page 1-3, Fourth Paragraph, the following sentence has been revised:

Full Restoration Flows are described in Exhibit B of the Settlement that was provided as Appendix <u>BA</u> of the WY 2010 Final EA/IS.

## Page 1-4, First Partial Paragraph, the following sentence has been revised:

The overall need <u>is</u> to address all issues pertinent to eventually defining restoration actions, including restoration flow, habitat restoration or enhancement, channel modifications, to accommodate the Settlement.

# Page 1-5, Last paragraph, the following sentence has been revised:

Subsequent changes in releases, ranging from 1,100 cfs to 1,350 cfs were made between April 13 and May 1, 2010, to meet the RA's recommendations and to achieve a 700 cfs flow downstream of Sack Dam due to seepage concerns in Reach 4A.

### Page 1-6, Table 1-1:

Change July 1 to June 8. Also, between May 1 and June 8 lines, flows were reduced to 800 cfs on May 28 to meet the RA flow target.

# **4.2** *Chapter 2*

## Page 2-5, First Paragraph, the first sentence has been modified as follows:

The actual daily WY 2011 Interim Flow releases (the resulting hydrograph) would be subject to the application of the flexible flows provisions described in Exhibit B and other ramping and flow scheduling changes, as including recommendations by the RA.

# Page 2-6, Third Paragraph, the second sentence has been modified as follows:

The Proposed Action includes potential recapture of Interim Flows at several diversion points including: facilities downstream of the Restoration Area in the Delta; in the San Joaquin River at the Banta-Carbona Irrigation District facility and the West Stanislaus Irrigation District facility downstream of the Stanislaus River confluence; at the Patterson Irrigation District facility between the Tuolumne and Merced River confluences; and, facilities within the Restoration Area including the East Bear Creek Unit of the San Luis National Wildlife Refuge (East Bear Creek Unit) in Eastside Bypass Reach 3, the Lone Tree Unit of the Merced National Wildlife Refuge (Lone Tree Unit) in Eastside Bypass Reach 2, Sack Dam at the downstream end of Reach 3, and the Mendota Pool at the downstream end of Reach 2B.

# Page 2-6, The following language has been added for clarification following the last paragraph:

Table 2-3b provides an overview of each recapture location including the estimated range for recapture, estimated timing of recapture, and whether or not the facility is screened for fish. It is important to note that at this time, the exact recapture rates, amounts, and timing at each facility are not known and would depend upon a variety of conditions, including water supply demand, operations of other facilities, impacts to endangered species, potential for seepage, and real time management strategies. Therefore, the estimated range for recapture at each facility is from zero to either the estimated maximum amount of Interim Flows during the spring pulse time at the facility or the estimated facility capacity. Additionally, to maintain the most flexibility in implementing the Project in order to respond to study needs and to avoid potential seepage and endangered species impacts, if any should arise based on Interim Flow monitoring, the Project includes all of the potential points of diversion in Table 2-3b. However, not all points may be used, nor is there any priority in which they would be used.

Table 2-3b.

Overview of the Recapture Locations under the Proposed Project

Facility	Estimated Recapture Range (cfs) <sup>1,2</sup>	Estimated Recapture Timing <sup>3</sup>	Facility Screened
Facilities within the Restoration Area			
Facilities within the Mendota Pool			
Main Canal	0 – 1,500	During Interim Flows	No
Outside Canal	0 – 300	During Interim Flows	No
Columbia Canal	0 – 200	During Interim Flows	No
Helm Ditch	0 – 10	During Interim Flows	No

Facility	Estimated Recapture Range (cfs) <sup>1,2</sup>	Estimated Recapture Timing <sup>3</sup>	Facility Screened
Firebaugh Canal Water District Canal	0 – 300	During Interim Flows	No
Arroyo Canal	0 - 800	During Interim Flows	No
Lone Tree Unit of the Merced NWR	0-20	During Interim Flows	No
East Bear Creek Unit of the San Luis NWR	0 -<60	During Interim Flows	No

Table 2-3b. (continued)

# Overview of the Recapture Locations under the Proposed Project

Facilities downstream of the Restoration Area			
Patterson Irrigation District	0 – 195	June through January <sup>4,5</sup>	No
West Stanislaus Irrigation District	0 – 262	During Interim Flows <sup>6</sup>	No
Banta-Carbona Irrigation District	0 – 204	During Interim Flows	Yes
Jones Pumping Plant	0 – 1,300	During Interim Flows	Yes
Banks Pumping Plant	0 – 1,300	During Interim Flows	Yes

Note: Additional points of rediversion in Reclamation's petitions to the State Board allow for routing of Interim Flows into and through the Eastside and Mariposa bypasses.

- cfs cubic feet per second
  - 1. Estimated range for recapture at each facility is from zero to either the estimated maximum amount of Interim Flows during the spring pulse time at the facility or the estimated facility capacity in the event that the spring Interim Flows at the facility are estimated to be greater than the facility capacity.
  - 2. Assumes a Wet Year Type. All based on Background Report maximum capacity except refuges.
  - 3. Dependent on other regulations (i.e. pumping restrictions, etc).
  - 4. Juvenile steelhead are within the vicinity of the diversions and thus, would be vulnerable to entrainment from February through May (NMFS 2009a, b).
  - WY 2011 Interim Flows may be diverted after the proposed fish screen is constructed and operationally compliant.
  - 6. WY 2011 Interim Flows would only be diverted with authority to take listed species under the Endangered Species Act.

# Page 2-7, First Partial Paragraph, the following sentence has been deleted:

Continued implementation of the RPAs or other measures that are in place at the time would avoid jeopardy of protected species, including Central Valley steelhead on the Stanislaus River and Delta, and spring—and winter run Chinook salmon, green sturgeon, and delta smelt in the Delta (see Section 2.2.8 for further discussion).

### Page 2-7, Third Sentence in First Paragraph has been modified as follows:

Water recirculation and recapture via the CVP/SWP facilities would be possible using south-of-Delta facilities.

## Page 2-7, Seventh Sentence in First Paragraph has been modified as follows:

As previously described, recirculation and recapture would be subject to available capacity within CVP/SWP storage and conveyance facilities.

# Page 2-9, First full paragraph, the first sentence has been modified as follows:

The quantity of water to be released from Friant Dam as WY 2011 Interim Flows under the Proposed Action is defined by the hydrologic year type classifications provided in Exhibit B<sub>7</sub> consistent with the Restoration Flow Guidelines (included in Appendix C of the WY 2010 Final EA/IS), and recent direction by Reclamation on management of Interim Flows (see Appendix C in this Supplemental EA).

# Page 2-10, Table 2-5, Footnote 7 has been modified as follows:

Includes existing inflow from Mud and Salt sloughs of up to 500 cfs, as <u>defined assumed</u> in Exhibit B.

## Page 2-16, Last Paragraph, First sentence has been modified as follows:

As part of the SJRRP, monitoring wells have been permitted and installed on <u>private and</u> public lands at several transects along the San Joaquin River in the Restoration Area to identify groundwater level responses to river flows.

# Page 2-16, Last Paragraph, Third sentence has been modified as follows:

Following installation of each monitoring well, groundwater elevations thresholds have been developed in consideration of nearby land uses, known groundwater and subsurface conditions, and other information available or provided by the landowner; thresholds may change as additional information becomes available.

# Page 2-17, Third Paragraph, the fourth sentence has been modified as follows:

Three existing wells are equipped with realtime telemetered stations, reporting to CDEC the California Data Exchange Center.

# Page 2-33, Hills Ferry Barrier Section deleted and replaced with the following:

The current Hills Ferry Barrier is a type of resistance weir commonly used to exclude and/or trap anadromous fish in rivers. This barrier consists of panels aligned perpendicular to the flow of the river with evenly spaced pipes that allow water, small fish, and particles to pass but prevent larger anadromous fish such as Chinook salmon from passing upstream. Operated by DFG since 1992, the Hills Ferry Barrier is typically installed in mid-September and operated until it is removed in early December. DFG currently operates the Hills Ferry Barrier near the town of Newman, approximately 300 feet upstream from the confluence with the Merced River (in Reach 5).

The barrier's main purpose is to redirect upstream-migrating adult fall-run Chinook salmon into suitable spawning habitat in the Merced River and prevent migration into the mainstem San Joaquin River upstream, where conditions are currently unsuitable for Chinook salmon. Central Valley steelhead migrate during fall and spring in a manner similar to migration by fall-run Chinook salmon, and they have a similar body type; therefore, maintenance of the Hills Ferry

Barrier would continue for the purpose of redirecting Chinook salmon during the fall WY 2011 Interim Flow period. The barrier is expected to be equally effective in redirecting any Central Valley steelhead.

NMFS permits the take of Federally listed threatened species for rescue and salvage by various State and nongovernmental agencies through the ESA Section 10a(1)A and 4(d) rules in the unlikely event that ESA-listed anadromous fish, including Central Valley steelhead, stray into San Joaquin River reaches above the Merced River. DFG applies annually for an ESA Section 4(d) research permit and accompanying take limit for Central Valley steelhead from NMFS for operation of the barrier. In 2008, DFG was allowed to take up to five Central Valley steelhead. In 2009, DFG was allowed to take up to 10 Central Valley steelhead. DFG was issued a permit for 2010 (expires on December 31, 2010) with a take limit of 10 Central Valley steelhead. If Central Valley steelhead are encountered at or above the Hills Ferry Barrier during fall Interim Flows, the Central Valley steelhead would be released downstream in suitable reaches as required by the permit.

Historic streamflow conditions upstream from the Merced River confluence during the spring averaged from 119 cfs to 13,050 cfs, with peak flows reaching 59,000 cfs in 1997. WY 2011 Interim Flows may add an average of up to 220 cfs at this location beginning on February 1, 2011, with peak flows reaching 1,300 cfs in the spring. This small increase is not anticipated to trigger any change to Central Valley steelhead migration patterns in the San Joaquin Basin. However, the Proposed Action will develop a monitoring plan to check for Central Valley steelhead in the Restoration Area during spring Interim Flows and submit this plan to NMFS prior to February 1, 2011. In the event a steelhead is encountered in the Restoration Area, NMFS will be notified immediately. In addition, stranded steelhead will be recovered and returned downstream in an appropriate location designated by DFG and/or NMFS. Salvaged fish will likely have genetic samples (i.e., fin clips) taken.

Reclamation will also develop a monitoring plan, in coordination with the SJRRP Fisheries Management Working Group, to check for Central Valley steelhead in the Restoration Area during spring Interim Flows and submit this plan to NMFS prior to February 1, 2011. The plan will include notification of NMFS in the event that a steelhead is encountered in the Restoration Area and include the recovery and return downstream in an appropriate location designated by DFG and/or NMFS of stranded steelhead. Such recovery would be conducted under and consistent with DFG's ESA Section 4(d) research permit.

Page 2-34, Last two paragraphs of Vernalis Adaptive Management Plan revised as follows: WY 2011 Interim Flows could increase flows in the San Joaquin River, at the confluence of the Merced River, by up to 1,300 cfs. VAMP expires in WY 2010. NMFS expects tributary contributions from the Merced and Tuolumne rivers to continue through 2011, and that Reclamation shall seek supplemental agreement with the SJRGA for tributary contributions so as to not rely on New Melones Reservoir to meet required flows at Vernalis, California. Reclamation is working with the SJRGA to address the requirements of the NMFS Operations BO. However, at this time, no agreement has been reached on any future VAMP action and although it is reasonable to assume that VAMP or a VAMP-like action would occur in WY 2011,

there is no information as to how this action would be implemented. Therefore, the Draft Supplemental EA included an analysis assuming that any future implementation of VAMP or a VAMP-like action would be similar to historical implementation.

In response to WY 2011 Interim Flows, tributary releases to meet VAMP water quality objectives at Vernalis could be affected. The Settlement does not provide guidance on coordination with VAMP flows. However, flows for both the VAMP and the Proposed Action would occur during similar times of the year and have the potential to overlap in time. For WY 2011 Interim Flows, the SJRRP would meet flow targets at Vernalis under the existing VAMP agreement by contributing to the baseline that determines tributary contributions. Tributary releases to meet VAMP and water quality objectives at Vernalis would be affected in one of two ways. In conditions where WY 2011 Interim Flows contribute toward meeting the same VAMP flow threshold that would have otherwise been in place, required releases from tributary reservoirs could be reduced. In conditions where WY 2011 Interim Flows cause a higher VAMP flow threshold than would have otherwise been in place, required releases from tributary reservoirs would be made to achieve the higher threshold. As a result, tributary flows would increase in some years and decrease in other years. Changes in VAMP contribution releases from tributary reservoirs would not affect the ability to meet instream fish and water quality minimum flow requirements in the Merced, Tuolumne, Stanislaus, or mainstem San Joaquin rivers. However, it is possible that flows in the tributaries could be less because of VAMP operations with WY 2011 Interim Flows than they would be without the WY 2011 Interim Flows.

The Vernalis water quality requirement is an electrical conductivity (EC) requirement of 700 and 1000 micromhos/cm for the irrigation (April to August) and non-irrigation (September to March) seasons, respectively. This is modeled in CalSim by estimating the water quality at Vernalis using a link-node salinity algorithm, consisting of a series of EC mass balance equations, covering the San Joaquin River from Lander Avenue to Vernalis. The computed EC from an upstream node is used as the input EC of a downstream node. Flow-EC regressions are used for the San Joaquin River at Lander Avenue, Merced River near Stevinson, and the Tuolumne River near Modesto. Mud and Salt sloughs, both return flow and accretion EC, use monthly average values. If the estimated EC does not meet the standard at Vernalis, higher quality releases are made from New Melones Reservoir on the Stanislaus River to mix with the San Joaquin River to meet the standard.

NMFS Operations BO and RPAs addressing San Joaquin and Stanislaus River effects on steelhead establish conditions that include those contained in VAMP, exclusive of requirements to meet Vernalis flows, per D-1641, with releases from the Merced and Tuolumne Rivers. Per Appendix 5 of the NMFS BO, the following RPA specifies actions to be taken to accommodate uncertainties regarding the status of VAMP experiments during 2010 and 2011.

**Phase I:** pertains to the interim operations period and is implemented during 2010 and 2011. From April 1 through May 31:

1. Flows at Vernalis (7-day running average shall not be less than 7 percent of the target requirement) shall be based on the New Melones Index<sup>1</sup>. In addition to the Goodwin flow schedule for the Stanislaus River prescribed in Action III.1.3 and Appendix 2-E, Reclamation shall increase its releases at Goodwin Reservoir, if necessary, in order to meet the flows required at Vernalis, as provided in the following table. NMFS expects that tributary contributions of water from the Tuolumne and Merced rivers, through the SJRA, will continue through 2011 and that the installation of a fish barrier at the Head of Old River will continue to occur during this period as permitted.

New Melones Index (TAF)	Minimum flow required at Vernalis (cfs)
0-999	No new requirements
1,000-1,399	D1641 requirements or 1,500, whichever is greater
1,400-1,999	D1641 requirements or 3,000, whichever is greater
2,000-2,499	4,500
2,500 or greater	6,000

2. Combined CVP and SWP exports shall be restricted through the following:

Flows at Vernalis (cfs)	Combined CVP and SWP Export
0-6,000	1,500 cfs
$6,000-21,750^2$	4:1 (Vernalis flow:export ratio)
21,750 or greater	Unrestricted until flood recedes below 21,750

#### *In addition:*

1. Reclamation/DWR shall seek supplemental agreement with the SJRGA as soon as possible to achieve minimum long term flows at Vernalis (see following table) through all existing authorities.

San Joaquin River Index (60-20-20)	Minimum long-term flow at Vernalis (cfs)
Critically dry	1,500
Dry	3,000
Below normal	4,500
Above normal	6,000
Wet	6,000

<sup>&</sup>lt;sup>1</sup> The New Melones Index is a summation of end of February New Melones Reservoir storage and forecasted inflow using 50% exceedance from March through September

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<sup>&</sup>lt;sup>2</sup> Flood warning stage at Vernalis is 24.5 feet, flow is 21,750 cfs at this point. Flood stage is 29 feet with a corresponding flow of 34,500 cfs. Data from CDEC looking at April 8-9, 2006 period. As such, recognizing that the flows associated with these stages do vary, the trigger allowing unrestricted exports will be a Vernalis stage of 24.5 feet.

Although the NMFS Operations BO and RPAs state that agreements for VAMP-like conditions will be pursued, the future of VAMP is uncertain, and Reclamation and SJRA participants are discussing the future approach for VAMP. No decisions on the future of VAMP have been made at the time of preparation of this EA. However, because of the requirements in the NMFS Operations BO, it is reasonable to assume that VAMP or a VAMP-like action would occur in the future.

## Page 2-35, Sentence added at the end of the last paragraph:

NMFS developed an RPA in accordance with ESA requirements.

# **4.3** *Chapter 3*

# Page 3-18, First Paragraph, the last sentence is modified as follows:

This coordination between the agencies and Reclamation's commitment to modify flows based on real time conditions would ensure that the impacts of the WY 2011 Interim Flows on Fish Biological Resources would be less than significant.

## Page 3-18, Second Paragraph has been deleted:

Additionally, Chapter 6 of the BA for implementation of Interim Flows during WY 2011 analyzes the impacts that would result from WY 2011 Interim Flows after incorporation of conservation measures developed to minimize potential impacts to listed species. The effects of the WY 2011 Interim Flows will be similar to those for the WY 2010 Interim Flows. The Proposed Action is not expected to result in any measureable changes later in time to water levels, riparian vegetation, or other habitat conditions for listed species.

#### Page 3-21, Second Paragraph, first sentence has been deleted:

The SJRRP was developed to reduce resource conflicts and to aid in fish and wildlife protection.

# 5.0 References

- DWR (Department of Water Resources). 2009a. San Joaquin River Restoration Program Stream Gage Installation and Operation and Maintenance Project; Initial Study and Negative Declaration, State Clearinghouse No. 2008092116. February.
   \_\_\_\_\_\_. 2009b. San Joaquin River Restoration Program Scour Chain Installation and Data Collection, Notice of Exemption. February.
   \_\_\_\_\_\_. 2009c. San Joaquin River Restoration Program Water Level Recorder Installation and Data Collection, Notice of Exemption. February.
   FEMA (Federal Emergency Management Agency). 2009. Private Water Crossings Manual. June.
- NMFS (National Marine Fisheries Service). 2009. Biological and Conference Opinion on the Continued Long-Term Operations of the Central Valley Project and State Water Project.
- Reclamation Board, The. 1967. Lower San Joaquin River Flood Control Project Operations and Maintenance Manual for Levees, Irrigation and Drainage Structure, Channels and Miscellaneous Facilities.
- USFWS (U.S. Fish and Wildlife Service). 2008. Delta Smelt Biological Opinion for the Continued Long-term Operations of the Central Valley Project and State Water Project.