II.5 Comments from Local Agencies and Responses

II.5.1 City of Mendota

CITY OF MENDOTA

"Cantaloupe Center Of The World"

August 10, 2015

Ms. Becky Victorine
Bureau of Reclamation
San Joaquin River Restoration Program Office, MP-170
2800 Cottage Way
Sacramento, CA 95825-1898

Subject: City of Mendota comments to the San Joaquin River Restoration Program Mendota Pool Bypass and Reach 2B Improvements Project Draft Environmental Impact Statement/ Environmental Impact Report

Dear Ms. Victorine:

L-Mendota-1 The City of Mendota appreciates the opportunity to provide comments regarding the Mendota Pool Bypass and Reach 2B Environmental Impact Statement/Environmental Impact Report (EIS/R). Given Mendota's proximity to the project site, it is imperative that the project take into consideration potential impacts to the City and its residents. To that end please consider the following comments, which are intended to illustrate the City's concerns with the project as well as to clarify certain things and request clarification on others.

L-Mendota-2 1. Borrow areas are first mentioned on Page 15 of the Executive Summary and are discussed in other locations throughout the EIS/R. Figure 1-2 identifies a Potential Borrow Area comprising approximately 400 acres abutting the eastern city limits of Mendota. Of particular concern is the proximity of the Potential Borrow Area to the City of Mendota's wastewater treatment ponds. Should this borrow location be used, there exists the potential for wastewater seepage into the borrow area, failure of any levee or other barrier between the ponds and the borrow area, and/or other hazardous situations. The EIS/R references future geotechnical studies that would be performed prior to assist USBR in determining optimal borrow sites. The City requests that it be made aware of forthcoming site investigations, consulted about potential safety concerns, and made privy to geotechnical information relevant to borrowing that may occur in the vicinity of its pond system. In this manner, potential impacts to the City's wastewater treatment system and hazardous offsite environmental issues may be avoided.

L-Mendota-3 2. Figure 1-2 indicates an isolated triangular area at the far west of the overall project area near the confluence of the Outside Canal and the Intake Canal (labeled "FCWD Canal"). To the best that we can determine, the triangular area consists of all or part of

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L-Mendota-3 cont.

Assessor's Parcel Number 013-050-21T, an approximately 8.40-acre parcel owned by the City of Mendota.

L-Mendota-4

3. Section 2.2.10 begins discussion of Environmental Commitments, which are described as "measures or practices adopted by a project proponent to reduce or avoid impacts that could otherwise result from project construction or operations" (Page 2-85, Lines 2-4). Then, the Conservation Strategy is described as "a tool built into the project description to minimize and avoid potential impacts to sensitive species and habitats" (Page 2-85, Lines 11-13). Although some of these activities are later discussed as mitigation measures, building in project components that are not otherwise required by statute, regulation, or policy in-lieu of including those same features as mitigation measures may be contrary to the holding of the 1st District Court of Appeal in *Lotus v. Department of Transportation* ((2014) 223 Cal. App. 4th 645).

L-Mendota-5

4. Page 4-26, Line 1 incorrectly references the name of the *City of Mendota General Plan Update 2005-2025*.

L-Mendota-6

5. Page 16-3, Line 17 references the Mendota population as 11,167 per the California Department of Finance, 2012. A later footnote on Page 21-3 indicates the population as 11,014 per the United States Census, 2010.

L-Mendota-7

6. Page 17-9, Lines 10-11: the portion of the sentence "located within the city of Mendota in an unincorporated area of Fresno County" does not make sense, as a location cannot be both within a city and in an unincorporated area. Also, please see Comment No. 8 below.

L-Mendota-8

7. Page 20-3, Lines 7-8 indicate that the City of Firebaugh is south of Mendota Dam; it is actually located to the northwest.

L-Mendota-9

8. Page 20-3, Line 36 begins the first of numerous references to Mendota Pool Park. However, references to the physical extent of the park, ownership of the land, and responsibility for operation of the facilities are not entirely accurate. Based on information from the EIS/R and City of Mendota records, it appears that there are at least three distinct components to Mendota Pool Park. An approximately five-acre portion is located on the west side of Bass Avenue between the Outside Canal and the Delta-Mendota Canal. That parcel is owned and maintained by the City of Mendota. To the east of Bass Avenue between the Outside Canal and the Delta-Mendota Canal is a portion that is owned by Central California Irrigation District (CCID) and maintained by the City. To the City's knowledge, it does not lease the land from CCID. Note that CCID also owns a very small (perhaps 0.25 acre) portion on the west side of Bass Avenue immediately south of the land owned by the City.

L-Mendota-10

The largest physical component of Mendota Pool Park described in the EIS/R is north of the Delta-Mendota Canal on land owned by CCID. The City does not lease this property,

L-Mendota-10 cont.

nor does it own, operate, or maintain any facilities on it. While it is possible that the City did construct the boat launch ramp located on this property, it does not currently perform any activities related to it.

L-Mendota-11

In addition to providing clarification, the intent of this comment is to ensure that potential impacts are accurately ascribed to the agency that may be impacted, and thus may be required to coordinate with the various project agencies during project development and/or operation.

L-Mendota-12

9. Page 23-24, Line 9 under **Impact UTL-4 (Alternative A)** is the first of several locations that briefly discuss impacts to the City of Mendota's water wells, and by extension, its water delivery pipelines. The EIS/R's treatment of the City of Mendota's water supply system appears to minimize the potential for impacts to the City and its residents. From the City's perspective, impacts to its well field and water delivery system are by far the most deleterious aspects of the project. The EIS/R does not adequately discuss this situation. The document notes that these three wells are the City's only source of potable water and repeatedly states (per the various project alternatives) that they would be "avoided, flood-proofed, protected, or relocated". Table 23-4 indicates that between 31,000 and 55,000 linear feet of water pipeline (per the various alternatives) would be abandoned. Presumably, this includes the City of Mendota's domestic water supply line, which is not discussed elsewhere.

Taking the information presented in the EIS/R at face value, the City of Mendota can expect that a yet-to-be-determined action will occur regarding its three municipals wells, and that its water supply pipe will be abandoned. While the City understands that this is not an intended result of the project, relocation of its wells and (presumably) its pipeline present logistical issues, most importantly including the potential for temporary interruption of service, that are not addressed in the EIS/R.

L-Mendota-13

It should also be noted that, in a similar vein to Comment No. 3 above, relocation of wells and/or pipelines (not to mention other facilities) may not be considered project components, but rather mitigation for project-related impacts. Were the project to not relocate various facilities, clearly significant impacts would result. Relocation avoids, or mitigates, those potential impacts, and should be addressed as mitigation.

L-Mendota-14

Further, regardless of the disposition of these actions as project components or mitigation measures, CEQA requires that potential impacts resulting from those actions also be addressed (*Stevens v. City of Glendale* (1981) 125 Cal. App. 3d. 986). Because no potential sites are discussed for any of the facilities that are to be relocated, such analysis cannot occur.

In short, the EIS/R discusses this issue more along the lines of a programmatic document rather than a project-level document.

L-Mendota-15

10. Page 25-9, Lines 6-14 discuss the City of Mendota's SR 33 signalization project. The improvements to the intersections of SR 33 and Belmont Avenue and SR 33 and Bass Avenue included lane widening, utility relocation, striping, and installation of four-way signalization. These projects were completed in 2011.

L-Mendota-16

11. Page 25-9, Lines 15-20 discuss the SR 180 Westside Expressway Route Adoption Study. Caltrans adopted this study on March 5, 2013, and the California Transportation Commission finalized the route adoption process on May 7, 2013.

L-Mendota-17

The City of Mendota supports the restoration of the San Joaquin River. However, the Mendota Pool Bypass and Reach 2B Improvements Project will result in numerous short- and long-term impacts to both the human and natural environments. This project-level EIS/R leaves many questions unanswered, particularly related to impacts to the City's water system and the potential for disruption to its wastewater treatment facilities. The City formally requests that the final EIS/R address these important issues. Please do not hesitate to contact me at 559.449.2700 or at joneal@ppeng.com with any questions. Thank you.

Sincerely,

Jeffrey O'Neal, AICP
City Planner

Copy (via email): City Manager
City Council

II.5.2 Responses to City of Mendota

Response to Comment L-Mendota-1
Your comments have been reviewed and considered in preparation of the Final EIS/R.

Response to Comment L-Mendota-2
As discussed in Section 2.2.4 of this EIS/R, it is estimated that up to 350 acres of land would be needed for borrow areas, including locations inside and outside the Project levees. Due to potential complications associated with City of Mendota's wastewater treatment ponds, areas adjacent to those ponds were removed from being identified as potential borrow areas in the preferred alternative (Alternative B).

Response to Comment L-Mendota-3
This parcel is identified as being used as a construction office. It has an Assessor's Parcel Number of 013-050-21 and is owned by the local government. Reclamation will coordinate closely with the City of Mendota to ensure locating a construction office on this parcel would not impact the City of Mendota, and would provide compensation as appropriate. This location may or may not be ideal for the construction office depending on construction sequencing and scheduling that would be further refined in final design.

Response to Comment L-Mendota-4
In *Lotus v. Department of Transportation* (223 Cal. App.4th 645), the First District Court of Appeals found that the EIR in question failed to comply with CEQA because it failed to evaluate the significance of the project's impacts on the environment. The EIR did not (a) describe the environmental consequences of the project actions, *i.e.*, the construction activities, (b) identify a threshold of significance for the impact, (c) evaluate the effectiveness of the avoidance and minimization measure and/or environmental protection features and explain why the environmental protection feature would maintain impacts to a less-than-significant level, and (d) identify those environmental protection features in the project's mitigation monitoring and reporting program.

The Project incorporates conservation measures and the flood risk reduction measures consistent with the SJRRP's Conservation Strategy described in the PEIS/R (SJRRP 2011a). This is consistent with State CEQA Guidelines section 15126.4, subdivision (a)(1)(A), which requires that the EIR "distinguish between the measures which are proposed by project proponents to be included in the project and other measures... [which] could reasonably be expected to reduce adverse impacts if required as conditions of approving the project."

Unlike *Lotus v. Department of Transportation*, the Project conservation measures are based on commitments made in the PEIS/R ROD (Reclamation 2012) which sets the policy for the SJRRP, and the analysis of the Project's environmental commitments differs from what was found in the court case. Each resource chapter in this EIS/R (Chapters 4 through 24) defines the significance criteria for the environmental impacts. The EIS/R then describes the potential effects of the Project and discusses the effects of the avoidance and minimization measures and other environmental commitments that would be implemented by the Project. A significance determination is made at the

conclusion of each impact discussion for each of the resource topics. Chapter 26.9 of this EIS/R then tracks all of the mitigation measures described in the EIS/R as well as the conservation measures, flood risk reduction measures, and other environmental commitments. This approach is consistent with State CEQA Guidelines section 15126.4, subdivision (a)(1)(A) and differs from what was found in *Lotus v. Department of Transportation.*

Response to Comment L-Mendota-5
Correction made. The revised information in the Final EIS/R does not change the analysis or conclusions of the Draft EIS/R.

Response to Comment L-Mendota-6
The US Census Bureau estimate for 2010 was provided in Chapter 21 to be consistent with the same year and source data as the county estimates provided in Table 21-2. The population estimate used in Section 16.1.2 was reporting estimates for a different year.

Response to Comment L-Mendota-7
Correction made in Section 17.1.2 of the Final EIS/R to indicate that this location is "near" the City of Mendota. The revised information in the Final EIS/R does not change the analysis or conclusions of the Draft EIS/R.

Response to Comment L-Mendota-8
Corrections made in Section 20.1.1 of the Final EIS/R. The revised information in the Final EIS/R does not change the analysis or conclusions of the Draft EIS/R.

Response to Comment L-Mendota-9
Text has been revised in Section 20.1.2 of the Final EIS/R to indicate that the land west of Bass Avenue is owned by the City of Mendota and the land east of Bass Avenue is owned by the Central California Irrigation District and managed by the City of Mendota. Thank you for your correction. The revised information in the Final EIS/R does not change the analysis or conclusions of the Draft EIS/R.

Response to Comment L-Mendota-10
Text has been revised in Section 20.1.2 of the Final EIS/R to indicate that the boat launch is located on Central California Irrigation District property. The revised information in the Final EIS/R does not change the analysis or conclusions of the Draft EIS/R.

Response to Comment L-Mendota-11
The text is updated in Section 20.1.2 of the Final EIS/R to identify Central California Irrigation District's ownership for a portion of the park. Thank you for your correction. The revised information in the Final EIS/R does not change the analysis or conclusions of the Draft EIS/R

Response to Comment L-Mendota-12
Sections 2.2.4 and 2.2.6 of the Final EIS/R were revised to clarify that the City of Mendota's three groundwater wells on the south side of the San Joaquin River to the east of Fresno Slough would remain in place. It further indicates that two of the wells are outside of the levee alignments and would remain unaffected. The third well is

immediately adjacent to the San Joaquin River and would be floodproofed, with the adjacent levee extending to protect the well. A new bridge may be constructed immediately adjacent to the Mowry Bridge, which holds the City of Mendota's water pipeline, for temporary construction access. The inclusion of this clarifying detail in the Final EIS/R does not change the analysis or conclusions of the Draft EIS/R.

Response to Comment L-Mendota-13

See response to comments L-Mendota-4 and L-Mendota-12. The levee alignment was chosen to avoid or minimize impacts to the City of Mendota wells, to the extent possible. Floodproofing was also anticipated in the Project design for those wells that remain in the floodplain. Therefore these features were included in the Action Alternatives and were not added later as mitigation.

Response to Comment L-Mendota-14

In *Stevens v. City of Glendale* (125 Cal. App. 3rd 986), the Second District Court of Appeals found that if a mitigation measure would cause one or more significant effects in addition to those that would be caused by the project as proposed, the effects of the mitigation measure would be discussed but in less detail than the significant effects of the project as proposed. This has been codified in State CEQA Guidelines section 15126.4, subdivision (a)(1)(D).

Section 23.3.3 of this EIS/R details the existing water resources infrastructure in the Project area and includes an analysis of this potentially impacted infrastructure, including groundwater wells, water pipelines, and the City of Mendota groundwater wells. Section 23.3.3 of the Draft EIS/R indicates that the three City of Mendota groundwater wells would be avoided, flood-proofed, protected, or relocated. It further indicates that the proposed replacement, relocation, or protection of this water supply infrastructure would not result in a substantial change in public water supply reliability or water supply resources. Section 23.3.3 of the Final EIS/R includes additional clarifying detail regarding the City of Mendota groundwater wells and water pipeline. Specifically, it indicates that the City of Mendota's three groundwater wells would remain in place. Two of them are outside of the levee alignments and would remain unaffected. The third well is immediately adjacent to the San Joaquin River and would be floodproofed, with the adjacent levee extending to protect the well. A new bridge may be constructed immediately adjacent to the Mowry Bridge, which holds the City of Mendota's water pipeline, for temporary construction access. The inclusion of this clarifying detail in the Final EIS/R does not change the analysis or conclusions of the Draft EIS/R. See also response to comment L-Mendota-12.

Response to Comment L-Mendota-15

Paragraph has been removed.

Response to Comment L-Mendota-16

Text has been revised. The revised information in the Final EIS/R does not change the analysis or conclusions of the Draft EIS/R.

Response to Comment L-Mendota-17

See response to comment L-Mendota-12. Clarifying text is included in Section 2.2.4 of the Final EIS/R regarding the City of Mendota's three groundwater wells and the City of Mendota's water pipeline. See also response to comment L-Mendota-2, which describes how no borrow would occur near the City of Mendota's wastewater treatment plant as that area has been removed from potential borrow areas in this EIS/R.

II.5.3 Gravelly Ford Water District

GRAVELLY FORD WATER DISTRICT
18811 Road 27 · Madera, CA 93638 (559)·474·1000 Fax: (559) 673· 108686

Ms. Alicia Forsythe, Program Manager
U.S. Bureau of Reclamation
2800 Cottage Way
Sacramento, CA 95825

August 7, 2015

RE: San Joaquin River Restoration Mendota Pool ByPass and Reach 2

Dear Ms. Forsythe:

L-GFWD-1 Gravelly Ford Water District has raised concerns in the past about matters that affect the District's continued ability to divert water from the San Joaquin River. While our diversion is above the Mendota Pool, the District will be impacted by decisions that affect operations to the Pool.

This is to advise that Gravelly Ford Water District Contract Diversion from the San Joaquin River is at MilePost 36.5

L-GFWD-2 The following items are of specific concern to Gravelly Ford Water District

1. Fish Screens –The issue of Fish Screens is of major significance to the District. Currently fish screens are not required on any diversions along the San Joaquin River between Friant Dam and the Mendota Pool. It is expected that fish screens would be required on all diversions, once the million dollar salmon reach this area of the River. It can only be concluded that that a requirement for such screens or other fish protective devices are a result of the San Joaquin River Restoration which means that that fish screens et al as well as their maintenance would be Restoration Project cost! GFWD has raised this issue in the past, and we were assured fish screens would not be our obligation.

L-GFWD-3

2. Diversions Channel - GFWD's existing diversion channel was operational and functional prior to the Bureau's fish flows experimenting which has caused changes to the riverbed channel conditions With the increased flows, scouring and deepening of the riverbed has been experienced. GFWD expects that provisions will be made in the riverbed to assure continued functionality of this channel. Operational maintenance of the diversion channel should be included in the environmental documentation and both the Federal and State Fish & Wildlife permit process. GFWD should be included as part of any regulatory project approvals and not be required to obtain separate approvals for any O &M operations within the river channel.

L-GFWD-4

3. Flood flows - Waters diverted into the Chowchilla Bypass are considered "flood" flows. During the occurrence of such flows, GFWD expects to be able to divert flows into the District's system at no cost to the District. Such "flood" water has been available to other diverters and at no cost.

L-GFWD-5

4. San Joaquin River – Gravelly Ford Measuring Station - There is an issue with the channel and riverbed elevation at the Gravelly Ford recorder station. The increased and variable "Restoration Project" flows have changed the configuration of the channel to the point that a new measuring weir needs to be included as part of the Project in order that riparian and contract diverters are able to receive their divertible water without having to make continual modifications to their facilities which are being required as a result of the Restoration Project Operations. Any change to this facilities are a direct result of the Project and accordingly are a Project Cost obligation.

If you have any questions on this matter, please feel free to contact me at (559) 474-1000.

Sincerely,

Don Roberts
Manager

Cc: Randall G. Houk
Columbia Canal Co

II.5.4 Responses to Gravelly Ford Water District

Response to Comment L-GFWD-1
The Gravelly Ford Water District's (GFWD) comments have been reviewed and considered in preparation of the Final EIS/R.

Response to Comment L-GFWD-2
The installation of fish screens upstream of the Project area is beyond the scope of this EIS/R. In addition, there is no requirement in the Settlement or Settlement Act for fish screens to be installed on all diversions. See MCR-1: Mendota Pool Fish Screen for a discussion of the exemption from incidental and accidental take of spring-run Chinook salmon under ESA and CESA for otherwise lawful activities.

Response to Comment L-GFWD-3
Effect from Restoration Flows upstream of the Project area is beyond the scope of this EIS/R. The release of Restoration Flows and the associated sediment transport is a SJRRP-related activity analyzed in the PEIS/R and not reanalyzed in this EIS/R as an environmental impact.

Response to Comment L-GFWD-4
The right to divert flood flows is outside of the scope of this EIS/R. The State Water Resources Control Board and State water right laws determine who has a right to divert flood flows. The SJRRP's Restoration Flows are protected under California water right law as they are part of Reclamation's appropriative water rights and would not be available for diversion.

Response to Comment L-GFWD-5
Effect from Restoration Flows upstream of the Project area is beyond the scope of this EIS/R (see response to comment L-GFWD-3). Reclamation is aware of the difficulties of measuring at Gravelly Ford and these difficulties occurred prior to the SJRRP's Restoration Flows.

II.5.5 Kings River Conservation District and Kings River Water Association

August 10, 2015

Ms. Becky Victorine, Project Manager
Bureau of Reclamation
San Joaquin River Restoration Program Office
MP-170, 2800 Cottage Way
Sacramento, CA 95825-1898
Email: Reach2B_EISEIR_Comments@restoresjr.net

Mr. Christopher Huitt, Project Manager
California State Lands Commission
100 Howe Avenue, Suite 100-South
Sacramento, CA 95825-8202
Email: CEQAcomments@slc.ca.gov

Subject: Comments on San Joaquin River Restoration Program
Mendota Pool Bypass and Reach 2B Improvements Project
Draft Environmental Impact Statement / Environmental Impact Report

Dear Ms. Victorine/Mr. Huitt:

L-KRCD KRWA-1 Please accept the following comments on the above-referenced San Joaquin River Restoration Program (SJRRP) Mendota Pool Bypass and Reach 2B Improvements Project Draft Environmental Impact Statement/Environmental Impact Report (DEIS/R) on behalf of the Kings River Water Association (KRWA) along with their member units (listed in Appendix A), and the Kings River Conservation District (KRCD). Please include these comments in the administrative record for the SJRRP Mendota Pool Bypass and Reach 2B Improvements Project DEIS/R.

The KRWA is an organization representing the 28 public districts and canal companies with Kings River water rights and the administrator of those entitlements and water release operations. The KRCD is a multi-county special district created in 1951 to manage resources within the watershed on the lower Kings River. KRCD serves constituents in an area comprising 1.2 million acres in portions of Fresno, Kings and Tulare counties. The KRWA and KRCD jointly oversee water resources in the area served by the Kings River. These two agencies partner with the California Department of Fish and Wildlife (CDFW) in the Kings River Fisheries Management Program (KRFMP) which is dedicated to improving and enhancing the Kings River watershed and fishery habitat while maintaining its beneficial uses, recognizing that a healthy river is essential to the region's well being and future quality of life.

L-KRCD KRWA-2 The Kings River is only hydrologically connected to the Mendota Pool and San Joaquin River on an infrequent and intermittent basis during flood events on the Kings River. Flood releases from the Kings River system can periodically contribute significant flow to the San Joaquin River downstream of

L-KRCD KRWA-2 cont.

Mendota Pool via the James Bypass and Fresno Slough during Wet and Normal-Wet water year types. The flood releases are typically of short duration from snowmelt events but may occur for a period of multiple months under some circumstances. The James Bypass has the design capacity to convey 4,750 cfs of flood water into Fresno Slough and the Mendota Pool. Even higher flood flows, over 5,000 cfs, have occasionally been recorded under extraordinary events. The U.S. Army Corps of Engineers (USACE) controls all flood releases on the Kings River and KRCD operates river facilities to meet USACE objective flows in portions of the Kings River.

L-KRCD KRWA-3

A fundamental premise of the SJRRP is that the Program is to have no impacts on parties other than the Friant Division contractors and their water users. Avoiding impacts to third-parties is a core principle embedded in the stipulation that resulted in the SJRRP, the legislation that implemented that stipulation, and in a number of other agreements and assurances provided as the SJRRP was being developed. The KRWA and KRCD are primarily concerned with potential anadromous fish straying and coordinated flood operations impacts and provide these comments as potentially affected third parties under both the National Environmental Policy Act (NEPA) and the California Environmental Quality Act (CEQA).

L-KRCD KRWA-4

1) In Chapter 2.2.5, Description of Alternatives – Alternative A, on page 2-33, lines 30-40, a Compact Bypass Channel is discussed in order to bypass the Mendota Pool. Lines 37-40 state "*The bypass channel and associated structures would provide downstream passage of juvenile Chinook salmon and upstream passage of adult Chinook salmon, as well as passage for other native fishes, while isolating Mendota Pool from Restoration Flows.*" This action addresses the issues of the downstream migration of smolt and the upstream migration of returning adults. The migrating fish are kept out of the Mendota Pool through the use of fish barriers and a Mendota Pool Dike at the respective downstream and upstream ends of the Mendota Pool. On pages 2-40 and 2-41, lines 40-42 and 1 respectively, the Reach 3 Fish Barrier is explained: "*A fish exclusion barrier would be included in Reach 3 near the downstream end of the Compact Bypass to prevent adult fish from migrating beyond the bypass channel up to the base of Mendota Dam, which during most flows out of Mendota Pool, would be a dead end for fish passage.*" Further, in Chapter 5.3.3 Impacts and Mitigation Measures – Alternative A, on page 5-22, lines 12-14, a proposed barrier is described as "*A fish guidance barrier would be installed in the San Joaquin River where the Compact Bypass joins the river in Reach 3 to direct upstream adult salmon into the bypass*" and page 5-24, lines 18-20 note that "*Alternative A would have a beneficial effect by facilitating upstream migration for adult salmon and by isolating or screening possible false migration pathways.*"

   In Chapter 2.2.7, Description of Alternatives – Alternative C, on pages 2-63 and 2-64, lines 27-28 and 1-2, the Mendota Dam and Short Canal are described: "*Fish passage facilities at Mendota Dam and a fish screen on the Short Canal would be built to provide passage around Mendota Dam and prevent fish from being entrained in the diversion. A fish barrier would be built downstream of the Fresno Slough Dam to keep up-migrating fish in Reach 2B.*" Further, on page 2-68, lines 6 – 8, it is noted that "*A fish exclusion barrier would be included north of*

L-KRCD KRWA-4 cont.

the Fresno Slough Dam to prevent adult fish from migrating into Fresno Slough during Kings River flood releases through the Fresno Slough Dam." Alternative D proposes a Fresno Slough Dam and fish passage facilities that are identical in function to the facilities described in Alternative C. The Fresno Slough Dam and fish passage facilities in both of these Alternatives provide a barrier that keeps migrating fish in Reach 2B and out of the Mendota Pool and Fresno Slough. They offer no false pathways for migrating fish to follow.

In Chapter 2.2.6, Description of Alternatives – Alternative B (Preferred Alternative), on page 2-54, lines 2-10, the fish screen on the Compact Bypass Channel is discussed, which will be located at the upstream end of the Mendota Pool. Lines 2-3 state "*A fish screen would be included adjacent to the head of the Compact Bypass where water deliveries would be diverted from the river to Mendota Pool, if appropriate*" and the related footnote states that the need for the Mendota Pool fish screen will be further evaluated as Project planning and design continues. Additionally, page 2-56 lines 24-26 state that "*This alternative does not include a fish barrier at the downstream end of the Compact Bypass to keep fish from migrating upstream of the Compact Bypass in Reach 3 toward the base of the Mendota Dam.*" In addition, in Chapter 5.3.3 Impacts and Mitigation Measures – Alternative B, on page 5-30, lines 31-37, states "*This alternative does not include a fish barrier at the downstream end of the Compact Bypass to keep fish from migrating upstream of the Compact Bypass in Reach 3 toward the base of Mendota Dam. A false migration pathway up to the base of Mendota Dam – of approximately 2,000 feet – would be available to fish in all years, and a false migration pathway into Mendota Pool and Fresno Slough (potentially into the Kings River system) would occur about once in 5 years when boards are taken out of Mendota Dam to pass Pine Flat flood releases into Reach 3.*"

Alternative B, which is the preferred alternative, is the only alternative that fails to provide a barrier to keep migrating fish away from the base of the Mendota Dam and out of the Mendota Pool and potentially Fresno Slough. A fish screen/barrier on the upstream end of the Compact Bypass is mandatory, must be in place to keep fish out of the Mendota Pool during water deliveries and flood releases. If a fish barrier is identified to be needed in Alternatives A, C and D to prevent fish straying into false migration pathways, why would a fish barrier not be needed in Alternative B?

The DEIS/R references that Kings River floodwater can reach Mendota Pool through the Fresno Slough about once in 5 years. In reality flood releases on the Kings River will reach the Mendota Pool on average once every 4 years. These infrequent, intermittent flood releases may occur for a period of weeks or months, and are the only time when the Kings River is hydrologically connected to the San Joaquin River. However, flood releases on the Kings River typically occur during the spring and early summer months, which coincides with the peak spring-run salmon migration periods.

A fish screen or other positive fish barrier is required to be installed on both ends of the bypass channel to keep fish in the bypass and prevent fish from entering Mendota Pool. Downstream migrating salmon must be kept out of the Mendota Pool from Reach 2B, and

L-KRCD KRWA-4 cont.

upstream migrating salmon must not be able to enter the Mendota Pool from Reach 3. Studies have shown that straying among salmon species is not uncommon. Quinn *et al* (1991) found straying rates of between 9.9% and 27.5% in fall run Chinook salmon *Oncorhynchus tshawytscha* originating from lower Columbia River hatcheries. Installation of a positive fish barrier or fish screen at the downstream end of the Mendota Dam or Mendota Pool would be supported by language in multiple sections of Chapter 5.0, Biological Resources – Fisheries, as well as language in the San Joaquin River Restoration Settlement Act.

The Mendota Dam at the Mendota Pool should not be considered a positive fish barrier from Reach 3 to the Mendota Pool. While the Mendota Dam may appear impassable under most conditions, during flood releases the boards are pulled from the Dam and it becomes readily passable by virtually any species and life stage. The SJRRP PEIS/EIR references the presence of salmon in the San Joaquin River system as late as the 1990s, and logically the only way these salmon could have reached the system beyond Reach 3 would have been through the Mendota Dam and into the Pool. Without a fish barrier at the end of the bypass channel, a significant percentage of the returning fish may be lost, to the substantial detriment of the Program. Those fish could stray into the Fresno Slough and James Bypass during (admittedly infrequent) periods when floodwater is discharging into the Mendota Pool from the Kings River. Alternative B, the preferred alternative, relies solely on the Mendota Dam to keep up-migrating fish from entering the Mendota Pool, which has proven to be an ineffective barrier and will likely lead to fish straying into false migration pathways.

Previous San Joaquin River Restoration Program documents, specifically the Mendota Pool Bypass and Reach 2B Improvements Project Initial Options Technical Memorandum dated April 2010, notes the need for fish screens and barriers to be constructed at either end of the Mendota Pool Bypass to prevent fish from entering the Pool (see Section 7.1.3). This document proposes that a fish screen be constructed at the upstream end of the Bypass to keep downstream migrating fish in the Bypass channel and a fish barrier be constructed at the downstream end of the Bypass to keep upstream migrating adults in the Bypass. It is imperative that fish screens and barriers be installed on both ends of the Bypass to prevent fish from entering the Pool and that the fish screens and barriers be designed to handle all hydrologic flow conditions. Portions of the referenced document about the Mendota Pool Bypass Fish Barrier (see Section 7.2.6) state that "*For flood operations . . . the barrier could be removed to prevent hydraulic modification, excessive debris collection, and maintain channel capacity*", but when flood flows are entering the Pool from the Kings River is precisely the time the fish barrier needs to in place and operational to prevent fish in the San Joaquin River/Mendota Pool Bypass from entering the Pool and potentially entering a false pathway.

Given the straying rates of salmon as documented by Quinn *et al* (1991) and others (McIsaac 1990, Unwin and Quinn 1993), which would represent conservative estimates

L-KRCD
KRWA-4 cont.

because the salmon being re-introduced are from another watershed, a screen or barrier to minimize or avoid fish passage from Reach 3 to the Mendota Pool, discouraging fish from migrating into the false pathway of the Fresno Slough and James Bypass during flood events, would be a necessary installation for the program to properly "restore and maintain fish populations in good condition in the main stem of the San Joaquin River", a fundamental principle of the Program. The omission of such a structure could potentially result in a third party impact to the Kings River interests, when "No Third Party Impacts" is a core aspect of the SJRRP and its implementation.

Upstream migrating salmon have the greatest chance of migrating up false pathways during flood releases from the Kings River. Alternatives A, C, and D all contain a fish barrier at the downstream end of the bypass to prevent access to false pathways into the Mendota Pool and hence the Fresno Slough. Alternative B, the preferred alternative, has a false pathway into the Mendota Pool and Fresno Slough (and potentially the Kings River) during flood releases.

Alternative B, the preferred alternative, is the only proposed alternative that fails to address the need for fish screens and barriers at both ends of the Mendota Pool Bypass. It specifically excludes a fish barrier at the downstream end of the bypass, and will only add a fish screen at the upstream end if it is "determined necessary." This is an unacceptable potential impact to the Kings River interests.

M Quinn T.P. , R.S. Nemeth, and D.O. McIsaac. 1991. Homing and straying patterns of fall Chinook salmon in the lower Columbia River. Transactions of the American Fisheries Society 120:150-156.

McIsaac, D.O. 1990. Factors affecting the abundance of 1977-1979 brood wild fall Chinook salmon, *Oncorhynchus tshawytscha* in the Lewis River, Washington. PhD. Thesis, University of Washington, Seattle, 174p.

Unwin, M.J., T.P. Quinn. 1993. Homing and straying patterns of Chinook salmon (*Oncorhynchus tshawytscha*) from a New Zealand Hatchery: Spatial distribution of strays and effects of release date. Canadian Journal of Fisheries and Aquatic Sciences, 50:1168-1175.

L-KRCD
KRWA-5

2) In Chapter 5.3.3 Impacts and Mitigation Measures – Alternative B, on page 5-31, lines 2-4, it is stated that "*Alternative B would have a beneficial effect by facilitating upstream migration for adult salmon and by isolating or screening possible false migration pathways.*"

This is a misleading statement that implies Alternative B has sufficient fish screens and/or fish barriers to prevent fish straying into false migration pathways. As noted above, Alterative B, the preferred alternative, is the only alternative considered that fails to address the need for fish screens and barriers at both ends of the Mendota Pool Bypass. It specifically excludes a fish barrier at the downstream end of the bypass, and will only add a fish screen at the upstream end if it is "determined necessary." This statement should be re-written to acknowledge that Alternative B does not prevent upstream migration of adult salmon into possible false migration pathways because sufficient isolation or screening is not provided.

L-KRCD
KRWA-6

3) The design of the required fish barrier at the downstream end of the bypass channel is a potential concern during flood releases. In Chapter 2.2.4 on page 2-28 under Maintenance, lines 23 – 26 notes that "*Fish barrier maintenance is needed to ensure that the barrier is functioning to NMFS standards and capable of passing the required flow. Fish barrier maintenance includes periodic repair or replacement of screens, in-channel sediment removal in the structure vicinity, and debris removal.*" The proposed Reach 3 Fish Barrier is described in Chapter 2.2.5, page 2-41, lines 5 – 12, as "*The exclusion barrier design would be a high-flow picket barrier, which is a flow-through structure of closely spaced bars (i.e. pickets) that prevent adult fish from traveling upstream in the river to Mendota Dam at flows up to a combined discharge of 4,500 cfs (Mendota Dam and the Compact Bypass). The design accounts for a range of flow options from routing the entire 4,500 cfs flow through the structure (flood flows from the James Bypass), to routing a 600 cfs irrigation delivery through the structure with up to 3,900 cfs being routed down the Compact Bypass, to routing no flow through the structure with up to 4,500 cfs down the Compact Bypass.*"

While a positive fish barrier is required at the downstream end of the bypass to prevent fish straying into false migration pathways, we are further concerned regarding debris removal during high flow Kings River flood releases. A significant amount of debris could be present at certain times during flood releases, and the fish barrier must be designed to remove a sufficient amount of debris to pass at least 5,000 cfs discharge from the Kings River. Chapter 2.3.2 notes that other types of barriers, such as electric barriers and acoustic barriers, were considered and eliminated, but we would encourage that these or other behavior barriers be re-evaluated as a physical barrier may be problematic regarding debris removal under high flow conditons.

L-KRCD
KRWA-7

4) Lines 32-33 on page 12-5 provide the basic flood guidelines for priority over the San Joaquin River below the Mendota Pool: "*In all cases, water from the Kings River system has priority to use available capacity in the San Joaquin River below the Mendota Pool.*" Lines 19-25 on page 12-16 further breaks down the flood guidelines: "*The existing design capacity of Reach 3 is 4,500 cfs. Reach 3 can receive flood flow from the Kings River system through the James Bypass and Fresno Slough or can receive flood flow from the San Joaquin River system through Reach 2B. According to flood management guidelines, water from the Kings River system has priority to use available capacity in the San Joaquin River below Mendota Pool. If 4,500 cfs of flow is conveyed through Fresno Slough, there would be no flood flows conveyed through Reach 2B because there would be no additional capacity in Reach 3.*"

There are concerns regarding the capacity of the reaches of the San Joaquin River directly downstream of the Mendota Pool. Per the current flood guidelines, the Kings River system has priority to use all available capacity in the San Joaquin River below the Mendota Pool (Reclamation Board 1969). Subsidence, overgrowth, and sedimentation over time has likely decreased the capacity of these reaches below that required to safely convey Kings River floodwater. All of these issues, especially overgrowth and sedimentation, will be

L-KRCD KRWA-7 cont.

exacerbated by the restoration program's increased flow rates and duration. If the capacity of the reaches downstream of the Mendota Pool decreases, then high-flow Kings River flood releases could potentially cause seepage and flooding issues to the surrounding areas. Maintenance programs and funding must be in place to maintain flood control capacities downstream of Mendota Pool. As part of future evaluation of downstream reaches, levee improvements and on-going maintenance requirements must be considered and implemented to achieve and maintain adequate conveyance capacity.

L-KRCD KRWA-8

5) A potential change in flood management guidelines is discussed in section 12.3.3 on page 12-16, lines 36-39. "*Flood management agencies have ultimate discretion in directing flood flows. If flood management guidelines are revised subsequent to implementation of the Project, there is a potential that flood flows through Reach 2B could have priority over flood flows from Fresno Slough. However, this is unlikely to occur because overall flood flow conveyance in the system would not be optimized. (If flood flow through Reach 2B was prioritized over Fresno Slough flows, Chowchilla Bypass would have 2,000 cfs of additional flood conveyance capacity.)*"

Even with the changes in conveyance that would occur with the construction of the proposed alternative, operation of the flood control project must remain consistent with historic practices and the 1969 Reclamation Board Operation and Maintenance Manual for the San Joaquin River and Chowchilla Canal Bypass Automatic Control Structures and Appurtenances document. If changes were to occur in the operation of these facilities the Kings River Watershed would be put at risk of experiencing greater flood damages than it has historically experienced.

L-KRCD KRWA-9

6) Alternative B, the preferred alternative, is the only alternative which noted that stream bed erosion would increase in Reach 2B as described on page 12-21 lines 10-36. "*The Compact Bypass design in Alternative B includes fewer grade control structures than the other alternatives, which would initiate channel bed erosion in Reach 2B to remove sediment that has been deposited in the San Joaquin River arm of Mendota Pool. The channel bed erosion in Reach 2B would result in sediment deposition in the Reach 3 channel for approximately 1 mile downstream of the Compact Bypass (RM 203). The maximum estimated water surface increase resulting from this sedimentation is approximately 0.25 feet.*"

This increase in bed erosion is unique to Alternative B, which is the preferred alternative. It is unclear where the increase in water surface of 0.25 feet occurs or where the estimate came from. If this is a long term average over a 1 mile stretch of river, we are concerned that the first few events will cause a much more severe impact as the sediment is being moved downstream. This sedimentation deposition will require levee improvements in downstream reaches to offset the expected temporary and permanent increase in the water surface level. Removal of sediment and raising of control structures should be utilized to reduce the impact of sedimentation on further reducing the capacity in the affected section of Reach 3, which will pose an issue during flood releases to the surrounding areas.

L-KRCD
KRWA-10

7) All alternatives will permanently displace recreation opportunities in the Project area, including fishing, swimming, and boating. This is caused by Project design features that will restrict public access to portions of Reaches 2 and 3. In addition, page 20-9 lines 21-22 state that "Existing regulations designed to protect salmon populations would likely be enforced in areas that have not historically had salmon."

The addition of fish screens, fish passage facilities, fish barriers, and dams will permanently displace recreation in the Project area. Some of the displacement is due to public access restrictions by these new structures, and some of the displacement is due to fishing regulations that will now apply to new areas in the Project area. The Fresno Slough and Kings River are named multiple times in Chapter 20 as probable and viable replacement locations for the displaced recreation, including page 20-2 lines 39-40, page 20-3 lines 1-6, page 20-9 lines 35-39, and page 20-13 lines 19-33. Redirecting anglers, boaters, and swimmers to the Kings River system represents a third party impact on the Kings River. The increase in recreation along the Kings River poses public safety issues and could potentially lead to overfishing, which is another third party impact.

L-KRCD
KRWA-11

In summary we have a number of potential concerns, especially regarding the preferred Alternative B, that must be addressed to avoid potential third-part impacts to Kings River interests. Thank you for your consideration of our comments. If you have any questions in regards to these comments, please direct these to:

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and

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Steven Haugen
Watermaster
Kings River Water Association

David L. Orth
General Manager
Kings River Conservation District

L15-0093
File: 300.21.08

APPENDIX A

The member units of the KRWA are as follows:

ALTA IRRIGATION DISTRICT, an irrigation district
BURREL DITCH COMPANY, a corporation
CLARK'S FORK RECLAMATION DISTRICT NO. 2069, a reclamation district
CONSOLIDATED IRRIGATION DISTRICT, an irrigation district
CORCORAN IRRIGATION COMPANY, a corporation
CRESCENT CANAL COMPANY, a corporation
EMPIRE WEST SIDE IRRIGATION DISTRICT, an irrigation district
FRESNO IRRIGATION DISTRICT, an irrigation district
JAMES IRRIGATION DISTRICT, an irrigation district
JOHN HEINLEN MUTUAL WATER COMPANY, a corporation
KINGS RIVER WATER DISTRICT, a water district
LAGUNA IRRIGATION DISTRICT, an irrigation district
LAST CHANCE WATER DITCH COMPANY, a corporation
LEMOORE CANAL & IRRIGATION COMPANY, a corporation
LIBERTY CANAL COMPANY, a corporation
LIBERTY MILL RACE COMPANY, a corporation
LOVELACE WATER CORPORATION, a corporation
PEOPLES DITCH COMPANY, a corporation
REED DITCH COMPANY, a corporation
RIVERDALE IRRIGATION DISTRICT, an irrigation district
SOUTHEAST LAKE WATER COMPANY, a corporation
STINSON CANAL & IRRIGATION COMPANY, a corporation
STRATFORD IRRIGATION DISTRICT, an irrigation district
TRANQUILLITY IRRIGATION DISTRICT, an irrigation district
TULARE LAKE BASIN WATER STORAGE DISTRICT, a water storage district
TULARE LAKE CANAL COMPANY, a corporation
TULARE LAKE RECLAMATION DISTRICT NO. 761, a reclamation district
UPPER SAN JOSE WATER COMPANY, a corporation

II.5.6 Responses to Kings River Conservation District and Kings River Water Association

Response to Comment L-KRCD KRWA-1

The Kings River Conservation District (KRCD) and Kings River Water Association's (KRWA) comments have been reviewed and considered in preparation of the Final EIS/R.

Response to Comment L-KRCD KRWA-2

The commenter is describing the hydraulic connection between the Kings River and Mendota Pool via James Bypass and Fresno Slough. There are no specific statements about the Project or the EIS/R in this comment.

Response to Comment L-KRCD KRWA-3

This comment raises concerns about impacts to Third Parties. The term "Third Parties" is a phrase commonly used in SJRRP documents, including the Settlement and the Settlement Act. In the context of this response to comment and Final EIS/R, Third Parties include landowners and agencies that have a vested interest in implementing the SJRRP.

The commenter asserts that there should be no impacts on parties other than the Friant Division contractors and their water users. Neither the Settlement nor the Settlement Act requires that the SJRRP have no impacts on Third Parties. Section 10004(d) of the Settlement Act require identification of project impacts and mitigation measures, which Reclamation is doing as part of this EIS/R.

The commenter is also concerned about the potential liability associated with harming reintroduced spring-run Chinook salmon in the Restoration Area. Section 10011(b) of the Settlement Act requires that spring-run Chinook salmon be reintroduced under the SJRRP as an experimental population under Section 10(j) of the ESA. Section 10011(c)(2) of the Settlement Act requires the Secretary of Commerce to issue a rule pursuant to Section 4(d) of the ESA that governs the incidental take of reintroduced spring-run Chinook salmon. As discussed under MCR-1: Mendota Pool Fish Screen, if spring-run Chinook salmon were to enter the Kings River watershed, Third Parties would be legally protected from incidental and accidental take of that salmon during otherwise lawful activities. NMFS issued its final rule package regarding reintroducing spring-run Chinook salmon on December 31, 2013. DFW concurred with NMFS' rule on March 17, 2014. This rule package provides an exemption to Third Parties from incidental and accidental take of spring-run Chinook salmon under the ESA and CESA for otherwise lawful activities.

Response to Comment L-KRCD KRWA-4

As described by the commenter, the Draft EIS/R includes the Reach 3 Fish Barrier at the downstream end of the Compact Bypass in Alternative A, excludes the fish barrier in Alternative B, and includes the Fresno Slough Dam Fish Barrier in Alternatives C and D. However, Section 2.2.4 of the Draft EIS/R indicates that the need for fish screens at diversion facilities would be further evaluated as Project planning and design continues. This was most clearly identified in Alternative B during the discussion of the Mendota

Pool Fish Screen, but this was also intended to apply to the South Canal Fish Screen in Alternative A, the Short Canal Fish Screen in Alternative C, and the North Canal Fish Screen in Alternative D. Section 2.2 of the Final EIS/R is revised to indicate that those screens are included in the alternative, if determined necessary.

The commenter is also correct that salmon migrated upstream past the Mendota Dam as recently as the late 1990s. Mendota Dam is equipped with a fish ladder originally constructed to facilitate upstream migration. While not a complete barrier to upstream migration, Mendota Dam is now considered to present a considerable barrier, particularly at low flow, and the fish ladder at Mendota Dam would likely require substantial modification to function properly (McBain and Trush 2002).

As described in MCR-1: Mendota Pool Fish Screen, Reclamation has completed an extensive analysis, based on the best available information, of the potential loss of fish to the Mendota Pool during water deliveries (Part VI – Appendices to the Responses). Reclamation has determined that the number of juvenile fall-run and spring-run Chinook salmon that would be lost to Mendota Pool without a fish screen is not within the range that is acceptable to the SJRRP. The number of juveniles expected to be entrained in Mendota Pool is small (on average approximately 6 to 7 percent of the annual population) when considered over a variety of water year types, but could include multiple years in a row with more than 20 percent of the annual population of juveniles entrained in Mendota Pool. The greatest entrainment is expected to occur during flood releases in February and March. Calls on Friant to satisfy the Exchange Contract in late spring and early summer months would have minimal impact to juvenile fall-run and spring-run Chinook salmon because the fish are expected to emigrate out of the area prior to mid-May. The effect on annual fish population entrainment due to May and June calls on Friant is very small. In one out of every 20 years, less than 2 percent of the annual fish population would be entrained by these deliveries to Mendota Pool (SJRRP 2016b).

Reclamation and the CSLC analyzed and disclosed the potential impacts of constructing and operating the Mendota Pool Fish Screen in the Draft EIS/R to allow the flexibility to construct and operate the feature, should the agencies determine it is needed as part of the overall Project in support of the Restoration Goal. Based on the detailed technical analysis performed by Reclamation (provided in Part VI – Appendices to the Responses), the SJRRP has determined that it is appropriate to include construction and operation of the Mendota Pool Fish Screen in the preferred alternative. The purpose of this change is to disclose the increased likelihood that the SJRRP could include this feature in the selected alternative for the Project. A final decision on the selected alternative for the Project will be made in the ROD/NOD, following public review of the Final EIS/R.

If a fish barrier is not constructed at the bottom of the Compact Bypass or at the base of the Fresno Slough Dam, only a small portion of the up-migrating adult salmon is expected to stray into Mendota Pool during flood flows. Adult salmon are expected in both the river and the flood bypasses during flood flows as the flood management agency splits the flows. In Alternative B, migration would be delayed for some fish due to the false migration pathway, but many of the up-migrating salmon in the river are expected to use the Compact Bypass when the San Joaquin River is conveying flood flows. Those

lost to Mendota Pool are expected to be within the range that is acceptable to the SJRRP, as that the number lost is not expected to impact the SJRRP's ability to meet the Restoration Goal.

For a discussion of potential Third Party impacts from spring-run Chinook salmon in the Kings River watershed, see MCR-1: Mendota Pool Fish Screen and response to comment L-KRCD KRWA-3. The Section 4(d) rule package issued by NMFS and concurred on by DFW provides an exemption to Third Parties from incidental and accidental take of spring-run Chinook salmon under the ESA and CESA during otherwise lawful activities such as agricultural activities.

Response to Comment L-KRCD KRWA-5

This sentence is a comparison of Alternative B and existing conditions and the No-Action Alternative, not a comparison of Alternative B and the other Action Alternatives. This sentence was revised in Section 5.3.3 of the Final EIS/R to indicate that fish passage is improved, compared to existing conditions and the No-Action Alternative, due to construction of the Compact Bypass. The revised information in the Final EIS/R does not change the analysis or conclusions of the Draft EIS/R. Although a false migration pathway at the base of Mendota Dam would delay migration, the Compact Bypass provides a migration route that meets fish passage criteria.

Response to Comment L-KRCD KRWA-6

As described by the commenter, Section 2.2.5 of this EIS/R describes a high-flow picket fish barrier which would require debris removal and periodic maintenance.

Other types of fish barriers were considered during the appraisal-level design, including a floating picket weir, behavioral barriers (electric barriers and acoustic barriers), and velocity barriers, but these other types of barriers were found to be inferior to the high-flow picket barrier (see Section 2.3.2 of this EIS/R.) Floating picket weirs would not be effective at higher flows; electric barriers and acoustic barriers were found to have significant draw-backs, as described below; and velocity barriers would require substantial modifications to Mendota Pool.

Electric barriers generate an electric current through the water across a channel in order to deter fish. Based on existing and previous installations, electric barriers were found to present potential unavoidable electric shock hazards for fish (target and non-target species), other animals, people, and watercraft. Often target fish species either made it past the barrier or were killed. Velocities and depths need to be consistent for the barrier to be effective, something that has proven difficult on reaches with moveable beds and those with variable flows. Velocities also need to be sufficient to sweep stunned fish out of the barrier, which may be difficult in Reach 3 with its low slope and low velocity conditions. For all these reasons, the electric barrier was not recommended.

Acoustic barriers use a sound signal contained in a bubble curtain of air to deter fish; acoustic barriers may also incorporate the use of strobes and lights to deter fish. There are few existing installations of acoustic barriers, but they have been found to be most effective on juvenile fish with minimal effectiveness on adult fish. Effectiveness has also

been found to decrease with increasing flows. Acoustic barrier technology is not capable of functioning during high flows (*e.g.*, 4,500 cfs) and therefore, the acoustic barrier was not recommended.

Because of the poor performance of electronic and acoustic barriers for the design flows, only the high-flow picket barrier is included in the alternative for analysis in the EIS/R during conceptual design.

Response to Comment L-KRCD KRWA-7

Reclamation and DWR have been conducting numerous studies in the Restoration Area to evaluate channel capacities in the San Joaquin River and flood bypasses. These channel capacity evaluations are updated annually through the SJRRP channel capacity report process (SJRRP 2016a).

As described in MCR-6: Flood Management Considerations and O&M Costs, levee evaluations along the San Joaquin River and flood bypasses are being conducted by DWR as part of the San Joaquin Levee Evaluation Project to assist the SJRRP in assessing flood risks due to levee seepage and stability associated with the release of Restoration Flows. Geotechnical evaluations have included geomorphology studies, collection of geophysical data, drilling programs along the levee crown and landside toe (including boreholes, cone penetration tests, and hand augers), and laboratory testing of soil samples. These geotechnical evaluations have been used to identify existing channel capacity, inform levee seepage and stability modeling for each reach, and to identify critical levee segments that have reduced capacity for future levee stability projects.

As described in MCR-3: Subsidence, Reclamation has been intensively monitoring subsidence within the Restoration Area since 2011 and Reclamation and DWR have performed subsidence monitoring along the Flood Control Project levees to help further refine subsidence rates in the flood bypasses. DWR has surveyed topographic ground elevations in Reach 2A, the Chowchilla Bypass, the Upper Eastside Bypass, the Middle Eastside Bypass, and the Mariposa Bypass. DWR also completed surveys in 2013 and 2014 of the levee and channel in the lower portion of Reach 3, Reach 4A, and the Middle Eastside Bypass (SJRRP 2014b). DWR, in coordination with Reclamation, will conduct a study to better understand the effects of long-term subsidence on channel capacity. This study is expected to be completed in 2016. In addition to updating the models and assessing the channel capacity to consider future subsidence, DWR has started to move forward with a study within the flood bypasses to understand how subsidence is changing sediment transport. The study is designed to better understand and quantify how subsidence-induced sedimentation will affect channel capacity and to provide information on the amount of sediment removal that may be required to maintain necessary design flow capacities.

As described in MCR-2: Seepage Management, Reclamation is currently monitoring more than 200 monitoring wells and piezometers and has identified areas vulnerable to seepage effects, developed groundwater thresholds, and has prioritized seepage control projects in the Restoration Area. The highest priority seepage projects in the Restoration Area are those located in areas that would be impacted at the lowest San Joaquin River

flows. Key areas of concern include the downstream end of Reach 2A, portions of Reach 3, and the downstream end of Reach 4A. SJRRP seepage projects are expected to be complete by 2020 in areas that would otherwise cause flow to be constrained below 1,300 cfs. Subsequent seepage projects are expected to be complete by 2025 in areas that would otherwise be affected by flows up to 2,500 cfs. All seepage projects are expected to be complete by 2030 to allow up to 4,500 cfs of Restoration Flows in the San Joaquin River.

Regarding O&M costs associated with the Flood Control Project, see MCR-6: Flood Management Considerations and O&M Costs.

Response to Comment L-KRCD KRWA-8

This paragraph was deleted in Section 12.3.3 of the Final EIS/R. The Final EIS/R was revised to indicate that the Flood Control Project is operated to minimize flood impacts throughout the flood protection area. Modification to flood management operations would require evaluation by the flood management agency from a system-wide perspective (and may require revisions to the Flood Control Manual) and is outside of the scope of this EIS/R. The revised information in the Final EIS/R does not change the analysis or conclusions of the Draft EIS/R.

Response to Comment L-KRCD KRWA-9

This discussion is consistent with the modeling information in the Project design report (Reclamation 2015a). Levee improvements in the upper portion of Reach 3 are included in Alternative B to maintain channel capacity if necessary.

Response to Comment L-KRCD KRWA-10

Section 20.3.3 of this EIS/R describes impacts to public access from access restrictions at structures (Impact REC-2) and impacts from fishing regulations being applicable to Project structures (Impact REC-3). Both of these impacts discuss displacement of recreation opportunities by the Project; however, the anticipated level of recreation pressure and fishing activity is small and is not expected to result in deterioration of existing recreation facilities and adverse physical effects on the environment at alternative fishing and recreation locations.

As discussed in Section 20.1.1 of this EIS/R, the Kings River was only one of several locations self-reported by people responding to the question on alternative fishing sites to Mendota Pool. The Fresno Slough arm of Mendota Pool, including areas near Mendota Pool Park, is often used by the same people who fish from Mendota Dam. The EIS/R is not “redirecting” anglers, boaters, and swimmers to new areas but discussing how these people often use alternative sites to the Mendota Dam area.

Response to Comment L-KRCD KRWA-11

See response to comment L-KRCD KRWA-3 regarding potential Third-Party impacts.

II.5.7 Lower San Joaquin Levee District

Lower San Joaquin Levee District
11704 West Henry Miller Avenue, Dos Palos, CA 93620
Telephone: (209) 387-4545
FAX: (209) 387-4237

August 10, 2015

Ms. Becky Victorine
Bureau of Reclamation
San Joaquin River Restoration Program Office, MP-170
2800 Cottage Way
Sacramento, CA 95825-1898

RE: SJRRP Mendota Pool Bypass and Reach 2B Improvements Project EIS/R

L-LSJLD-1

This letter is the Lower San Joaquin Levee District's comments on the San Joaquin River Restoration Program's Draft Environmental Impact Statement/Environmental Impact Report for the Mendota Pool Bypass and Reach 2B Improvements Project, dated June 2015.

The enclosed pages are those comments regarding Alternative B, which the SJRRP has determined is the preferred alternative. Comments are organized referencing the page, section and lines of the document.

Sincerely,

Reggie N. Hill

Enclosures

Draft Comments on
Draft EIS/EIR for the Mendota Pool Bypass and Reach 2B Improvements Project
August 10, 2015

General Notes

L-LSJLD-2 There is an inconsistency relative to the support documentation mentioned in the report. Certain documents in support of your determinations have reference, but then inconsistencies arise in being accurate on referencing other documents.

L-LSJLD-3 Also, there is a lack of meaningful information and details in the descriptions of the proposed alternatives. There is a lack of information on the proposed facilities, site layouts, and operations.

Section 12.0 Hydrology Flood Management

L-LSJLD-4 **Page 12-2, Section 12.1.1, lines 27-29**. The flood project is correctly titled as "The Lower San Joaquin River Flood Control Project." You are correct is stating it was constructed by the State.

L-LSJLD-5 **Page 12-2, Section 12.1.2, lines 37-41**. Correct the information in depicting the storage space available in Millerton Reservoir. The reservoir has a minimum operating level of 130,000 AF, gross pool of 520,500 AF and a spillway flood pool of 555,450 AF. The reference in your document states 524,000 AF storage availability.

L-LSJLD-6 **Page 12-3, Section 12.1.2, lines 10-28**. The correct identification for the two control structures at the bifurcation is - Chowchilla Canal Bypass Control Structure and the San Joaquin River Control Structure. **There is no Chowchilla Bifurcation Structure**, what is being incorrectly referenced is the San Joaquin River Control Structure. This needs to be corrected to be consistent with the San Joaquin River Flood Control Project description.

L-LSJLD-7 **Page 12-4, Table 12-1, Footnote b**. Reference is made to design freeboard for the channel reaches of the river and bypass. The O&M manual for the San Joaquin River Flood Control Project, Page 35, Section 3100, states "Levees constructed along streams have been provided with a freeboard of 3 feet above maximum design water surface elevation and on bypass levees the freeboard is 4 feet." Stating the Chowchilla Canal Bypass can pass flows with a freeboard of 3 feet is an encroachment into the freeboard design for those levees.

L-LSJLD-8 **Page 12-5, Section 12.1.2, lines 5-8**. The San Joaquin River Flood Control Project was constructed by the State of California Department of Water Resources, not the Corps. You reference the San Joaquin River Flood Control Project as being constructed by the State on Page 12-2, Section 12.1.1. This needs to be consistent.

L-LSJLD-9 **Page 12-5 Section 12.1.3 lines 29 - 30**. Need to cite appropriate DWR manual as McBain and Trush is not a valid reference for the intended level of flood protection.

1

L-LSJLD-10 **Page 12-5 Section 12.1.3 lines 30 - 31**. Need to note that the current capacity of Reach 2B is estimated at about 1200 cfs due to significant seepage issues.

L-LSJLD-11 **Page 12-16 Section 12.3.3 lines 15 - 17**. This section needs to be rewritten. The increase in conveyance capacity above 2500 cfs in Reach 2B is a restoration benefit only. Increased flood flows through this reach will cause more downstream seepage and sediment impacts to the City of Firebaugh, along Reach 3, and in the Eastside Bypass. Portraying this as a benefit is incorrect.

L-LSJLD-12 **Page 12-16 Section 12.3.3 lines 29 - 30**. This section needs to be rewritten. The operational strategy is to maximize the amount of flood flow in the Chowchilla Canal Bypass to minimize impacts to the City of Firebaugh and along Reach 3. Allowing more flow through Reach 2B will increase impacts to the system and adjacent land owners.

L-LSJLD-13 **Page 12-16 Section 12.3.3 lines 36 - 39**. This statement is purely hypothetical and has no merit. This section needs to be rewritten.

L-LSJLD-14 **Page 12-17 Section 12.3.3 lines 6 - 11**. This section needs to be rewritten. The flood project is operated as a complete system to minimize flood impacts, and not in a piece wise fashion as suggested in the text. Any modifications to the system that impact flood management will require an evaluation of flood operations and potential revisions to the O&M manual for the project from a system wide perspective. As an example, if there is 4500 cfs of restoration flow in the Mendota Bypass and flood flows are forecast coming from the Kings River, there needs to be clear direction in the O&M manual that the restoration flows will be diverted into the Chowchilla Canal Bypass and Friant releases will be reduced to accommodate priority Kings River flows through Mendota Pool. When Kings River diverts flows into the Mendota Pool area, all flow releases from Friant are then considered flood flows (if that has not already been determined prior to Kings River releases) and will be handled as such. Under this scenario, restoration flows must be decreased to not create any flow impacts into the Chowchilla Canal Bypass channel design capacity.

L-LSJLD-15 **Page 12-17 Section 12.3.3 lines 16 - 21**. How will the program set aside adequate funding to support the increased O&M that will be required due to increased restoration flows that will cause erosion, sedimentation, and vegetation growth?

L-LSJLD-16 **Page 12-17 Section 12.3.3 lines 26 - 28**. This period provides some insight into past hydrologic conditions, but does not account for projected increases in extreme flow events due to climate change.

L-LSJLD-17 **Page 12-17 Section 12.3.3 lines 33 - 37**. This increase from 0.5 to 2.5 percent seems minimal, but these flows can be very damaging and cause extensive erosion, sedimentation, and seepage damage at the city of Firebaugh and along Reach 3.

L-LSJLD-18 **Page 12-18 Section 12.3.3 lines 8 - 11**. The significant increase in flows for events less than the 2 percent annual exceedance will cause additional downstream erosion, sedimentation, and seepage impacts. The 2000 cfs increase from 1000 cfs to 3000 cfs at the 50 percent exceedance will cause the city of Firebaugh to monitor flows and initiate sand bagging if flows reach 4000 cfs under current conditions. The city also experiences a rise in local groundwater levels that stops percolation at the waste water treatment plan settling ponds, saturates embankments and levees, and floods recreation facilities. The document does not adequately describe potential impacts of increased flow frequency.

2

L-LSJLD-19 **Page 12-18 Section 12.3.3 lines 15 -16.** This section needs to be rewritten. The conclusion that the increase in design capacity is neutral is incorrect. The significant increase in the frequency and damage caused smaller events is not offset by a decrease in events greater than 2 percent exceedance. The channel capacity is only designed for 4500 cfs and San Joaquin River flows are diverted into the Chowchilla Canal Bypass to keep flows below this level. Flows above the 2 percent exceedance would not be routed through Reach 2B and into Reach 3, especially if Kings River flows are coming over through Fresno Slough.

L-LSJLD-20 **Page 12-18 Section 12.3.3 lines 18 -19.** How will the program set aside adequate funding to support the increased O&M that will be required due to increased restoration flows that will cause erosion, sedimentation, and vegetation growth?

L-LSJLD-21 **Page 12-21 Section 12.3.3 lines 40 -41.** See comments on Impact FLD-1 (Alternative A). The section needs significant reevaluation to adequately characterize flood control operations and management issues.

Section 21.0 Socioeconomics and Economics

L-LSJLD-22 **Page 21-12, Section 21.1.6, lines 1-3.** The paragraph needs to be rewritten. The flood project we maintain begins at River Mile 118 and ends at River Mile 227, which is 108 miles. The flood project with its levees and bypasses was designed to minimize flood damage along this length of the river. LSJLD boundaries encompass parts of Firebaugh within its City Limits, but not Mendota's City Limits. Mendota is impacted by what happens along the San Joaquin River and James Bypass as far as flood flows, but is not within the LSJLD boundaries. LSJLD boundary encompasses portions of Merced, Madera and Fresno Counties.

L-LSJLD-23 **Page 21-12, Section 21.1.6, lines 19-26.** This paragraph alludes to the intent the USBR/SJRRP will be entering into a financial assistance agreement for increased O&M for the Levee District caused by SJRRP. Initially, having an agreement was true, but now USBR is going back on their initial intent. Orally, SJRRP Program Manger Ali Forsythe has communicated the USBR will no longer be pursuing a financial assistance agreement with the Levee District. Increased O&M costs are therefore expected to be bourn by the Levee District, which was not the original understanding the Levee District was lead to believe in cooperating with SJRRP. Initially, the costs were estimated using costs associated with that time period, but those costs are now higher due to the economy of doing business, and will continue to increase over time. As stated, any loss of a revenue source is unacceptable.

L-LSJLD-24 **Page 21-17, Section 21.3.3, line 10.** There is no "Valley" in the Lower San Joaquin Levee District.

L-LSJLD-25 **Page 21-27, Section 21.3.3, lines 24-31.** The paragraph relating to Alternative B and the impacts on the Levee District, the statement of "less than substantial" impact is an incorrect approach in determining fiscal impacts to the Levee District. Any loss of revenue to the Levee District is unacceptable, no matter the amount. Lost revenue, with no offer of replacement mitigation taxes an already limited budget, and adversely impacts the responsibility of the Levee District to comply with its obligation toward public safety.

3

II.5.8 Responses to Lower San Joaquin Levee District

Response to Comment L-LSJLD-1
Your comments have been reviewed and considered in preparation of the Final EIS/R.

Response to Comment L-LSJLD-2
Supporting documentation are cited in the EIS/R where referenced.

Response to Comment L-LSJLD-3
Although detailed design documents are not included in the EIS/R, the Action Alternatives include descriptions of each of the Project features including channels, structures, fish habitat, vegetation, deliveries, and construction considerations. The EIS/R is based on the level of engineering and planning currently available and is adequate to identify potential environmental impacts of the alternatives and identify appropriate mitigation measures. See MCR-4: Project Design and Operations.

Response to Comment L-LSJLD-4
Text has been revised in Section 12.1.1 of the Final EIS/R to indicate that it is the Lower San Joaquin River Flood Control Project. The revised information in the Final EIS/R does not change the analysis or conclusions of the Draft EIS/R.

Response to Comment L-LSJLD-5
Text has been revised in Section 12.1.2 of the Final EIS/R to indicate that the storage capacity is 520,500 acre-feet. The revised information in the Final EIS/R does not change the analysis or conclusions of the Draft EIS/R.

Response to Comment L-LSJLD-6
As described in Sections 1.6.2 and 3.1.3 of the Draft EIS/R, this document uses the term "Chowchilla Bifurcation Structure" to collectively refer to both control structures. A footnote is included in Section 12.1.2 of the Final EIS/R to clarify. The revised information in the Final EIS/R does not change the analysis or conclusions of the Draft EIS/R.

Response to Comment L-LSJLD-7
Text has been revised in Section 12.1.2 of the Final EIS/R, Table 12-1, to distinguish between the required freeboard in the river reaches and in the bypass. The revised information in the Final EIS/R does not change the analysis or conclusions of the Draft EIS/R.

Response to Comment L-LSJLD-8
Text has been revised in Section 12.1.2 of the Final EIS/R for consistency. The revised information in the Final EIS/R does not change the analysis or conclusions of the Draft EIS/R.

Response to Comment L-LSJLD-9
This sentence was deleted in the Final EIS/R. Deletion of this sentence in the Final EIS/R does not change the analysis or conclusions of the Draft EIS/R.

Response to Comment L-LSJLD-10

The recommended capacity for conveyance of Restoration Flows at Reach 2B is 1,120 cfs, based on the ground elevations near the landside levee toe (SJRRP 2016a). Text was revised in Section 12.1.3 of the Final EIS/R to include this clarifying information. The inclusion of this additional information in the Final EIS/R does not change the analysis or conclusions of the Draft EIS/R.

Response to Comment L-LSJLD-11

This sentence was revised in the Final EIS/R to indicate that the increase in conveyance capacity in Reach 2B may have an indirect effect of providing flood management agencies additional flexibility in how flood flows are managed in the lower San Joaquin River system, if deemed appropriate. This sentence is caveated with a footnote that indicates the following: (1) flood management agencies have ultimate discretion in directing flood flows, (2) the Flood Control Project is operated to minimize flood impacts throughout the flood protection area, and (3) prior to use of the additional capacity in Reach 2B, the flood management agency would evaluate flood operations from a system-wide perspective. The inclusion of this additional information in the Final EIS/R does not change the analysis or conclusions of the Draft EIS/R.

Also note that seepage and levee stability projects are anticipated to be implemented in the Restoration Area between FY 2015 and FY2029, as discussed in MCR-6: Flood Management Considerations and O&M Costs and MCR-2: Seepage Management. The seepage and levee stability projects are anticipated to have a direct effect by strengthening levees in lower river reaches and by reducing seepage effects for flows up to 4,500 cfs, which will indirectly benefit the City of Firebaugh and landowners along Reach 3 when the same reaches are conveying higher-level flood flows.

Response to Comment L-LSJLD-12

Several paragraphs were deleted and text was revised in Section 12.3.3 of the Final EIS/R to indicate that current flood management operational strategies are to maximize the amount of flood flows conveyed through the Chowchilla Bypass to minimize potential flood impacts to the City of Firebaugh and to landowners along Reach 3. The inclusion of this additional information in the Final EIS/R does not change the analysis or conclusions of the Draft EIS/R.

The Project would increase the channel capacity and improve levees in Reach 2B. This has the potential to translate flood hydrographs, and possibly, flood damages downstream to lower reaches of the river. SJRRP conducted a flood risk assessment on the translation of flood risk from Reach 2B to reaches downstream, *i.e.,* to Reach 3 and Reach 4A. The objective of the analysis was to determine if damages would change based on changes in the flood hydrographs and if the likely failure points for levees used in the PEIS/R evaluation were reasonable. The analysis included a comparison of flood hydrographs at four index points in Reaches 3 and 4A, an evaluation of flood damages at these locations, and an evaluation of the updated levee data in Reach 3 and Reach 4A. The study concluded that, based on a comparison of changes to flood hydrographs, there would be little to no increase in damages – the one area that showed a slight increase in damages was likely due to perturbation effects in the model – and therefore redirected flood

impacts would be minor. Furthermore, the risk analysis also evaluated information from recently completed levee evaluations including the drilling information and seepage and stability analysis in Reaches 2A, 3, and 4A. A review of the levee evaluations concluded that the likely failure points for these levees that were used in the PEIS/R were reasonable and conservative. For additional information, see MCR-6: Flood Management Considerations and O&M Costs. MCR-6 also has additional detail on the SJRRP's commitment to maintain flows below then-existing channel capacities.

Response to Comment L-LSJLD-13

This comment is substantially the same as comment L-LSJLD-12. See response to comment L-LSJLD-12.

Response to Comment L-LSJLD-14

This comment is substantially the same as comments L-LSJLD-11 and L-LSJLD-12. See responses to comments L-LSJLD-11 and L-LSJLD-12.

Additionally, Section 1.6.3 of this EIS/R describes flow scenarios where flood flows and Restoration Flows would be conveyed through Reach 2B. This section indicates that the flood management agencies will have ultimate discretion in directing flood flows, and when both are anticipated in the river, some portion of the San Joaquin River flood flows would perform as Restoration Flows in the reach. Reclamation will not release Restoration Flows on top of flood control releases when flood control releases already meet the Restoration Administrator's flow targets.

Response to Comment L-LSJLD-15

The commenter has expressed concerns related to O&M costs for the flood system. It is unclear if the commenter is referring to the O&M costs of the Project facilities or the O&M costs for the Flood Control Project. See MCR-5: Project Funding for more information on the Project O&M costs. See MCR-6: Flood Management Considerations and O&M Costs for more information on the responsible party for O&M of the Flood Control Project.

Also note that SJRRP monitoring and maintenance efforts are included in the budget described in the Revised Framework (SJRRP 2015). Costs to implement the SJRRP's Physical Monitoring and Management Plan and Channel Capacity Advisory Group, which includes actions to ensure that the SJRRP is not impacting flood conveyance in Reach 3, are included in the "Channel Capacity Advisory Group" line item.

Response to Comment L-LSJLD-16

The San Joaquin River Restoration Daily Flow Model was developed in RiverWare based on best available information. The Daily Flow Model models the restoration reaches of the San Joaquin River system from Millerton Lake and Friant Dam near Friant, California to just below the confluence with the Merced River near Newman, California. The Daily Flow Model used as its basis of climatology the actual record of precipitation in the basin, from water years 1922 to 2003, and synthesized a future condition under which Restoration Flows were fully operational and unconstrained by channel conveyance. The model accounts for Millerton inflows, Millerton flood operations for rain events and for

snowmelt events, outflow ramping at Millerton, Madera and Friant-Kern canals diversions, the Restoration Flow schedule, inflows along the San Joaquin River and flood bypasses, diversion requests, channel flow losses, and flow routing. The Daily Flow Model includes the SJRRP-specific information needed to predict future flows under restoration conditions.

Reclamation has developed climate change projections for four climate change scenarios that are representative of more than 100 discrete climate model simulations and for a fifth "consensus scenario" that is an ensemble of the central tendency of temperature and precipitation. Key conclusions include (Reclamation 2015b):

- The consensus scenario predicts air temperatures in the basin to rise by 3.6° F (2.0° C), with the suite of four scenarios predicting a range from 1.8° to 4.7° F (1.0° to 2.6° C).
- The consensus scenario predicts runoff in the basin to decline by 6%, with a suite of four scenarios predicting a range from +25 percent to -31 percent.
- The consensus scenario predicts that reduction in runoff will be primarily from reduced number of "Normal-wet" years in favor of "Normal-dry" years. The proportion of "Dry," "Critical-high," and "Critical-low" water year types are predicted to remain relatively stable under this scenario.
- All scenarios predict the timing of peak runoff to advance, occurring slightly earlier in the year. Earlier runoff as predicted by all climate models may benefit restoration efforts as it more closely coincides the timing of natural runoff with anticipated Restoration Flow releases.

Reclamation's climate change results shows that climate change is both uncertain and variable. The climate change results indicate that runoff to the basin would, on average, decrease by 6 percent, however the variability in this climate change prediction indicates that runoff to the basin could be up to 23 percent higher or as little as 31 percent lower. If the Daily Flow Model was reanalyzed to account for climate change, the uncertainty that would be introduced into the analysis (as seen by climate change predictions for basin runoff that range +25 percent to -31 percent) would be much greater than the expected change in the results (in this case, a 6 percent decrease in runoff.)

Response to Comment L-LSJLD-17

This analysis shows that the frequency increases for 4,500 cfs flows. However, as described in the PEIS/R (and Section 2.2.10), Restoration Flows would be maintained at or below estimates of the then-existing channel capacity in the reaches that convey the flow. Erosion would be monitored and maintenance would occur, or Restoration Flows would be reduced, as necessary, to avoid erosion-related impacts. These avoidance and minimization measures implemented by the Program will reduce the risk of levee failure for flows up to 4,500 cfs. With respect to seepage damage in Reach 3 and the City of Firebaugh, see response to comment L-LSJLD-11.

Response to Comment L-LSJLD-18

The flow frequency analysis provided in Section 12.3.3 of this EIS/R describes how often flows of a certain size would occur and shows that flows below the 2 percent annual exceedance would occur more frequently under restoration conditions; it does not predict that there would be a 2,000 cfs increase in flows.

Section 12.3.3 of the Final EIS/R provides additional information on whether a given event would be larger with implementation of the Action Alternatives and result in more damages. SJRRP conducted a flood risk assessment on the translation of flood risk from Reach 2B to reaches downstream, *i.e.,* to Reach 3 and Reach 4A. The objective of the analysis was to determine if damages would change based on changes in the flood hydrographs and if the likely failure points for levees used in the PEIS/R evaluation were reasonable. The analysis included a comparison of flood hydrographs at four index points in Reaches 3 and 4A, an evaluation of flood damages at these locations, and an evaluation of the updated levee data in Reach 3 and Reach 4A. The study concluded that, based on a comparison of changes to flood hydrographs, there would be little to no increase in damages – the one area that showed a slight increase in damages was likely due to perturbation effects in the model – and therefore redirected flood impacts would be minor. Furthermore, the risk analysis also evaluated information from recently completed levee evaluations including the drilling information and seepage and stability analysis in Reaches 2A, 3, and 4A. A review of the levee evaluations concluded that the likely failure points for these levees that were used in the PEIS/R were reasonable and conservative. See MCR-6: Flood Management Considerations and O&M Costs for additional details.

As described in the PEIS/R (and Section 2.2.10 of this EIS/R), Restoration Flows would be maintained at or below estimates of the then-existing channel capacity within reaches that convey the flow. In addition, seepage projects and levee stability projects have been identified in the Restoration Area where potential seepage impacts or levee stability would otherwise cause a constraint in Restoration Flows, including areas near the City of Firebaugh. Restoration Flows would not increase in the river reaches until Reclamation, through the seepage management efforts and through the channel capacity report process, determines that such flows would not damage adjacent landowners or impact levee stability. Erosion would also be monitored and maintenance would occur, or Restoration Flows would be reduced, as necessary, to avoid erosion-related impacts. (See MCR-6: Flood Management Considerations and O&M Costs and MCR-2: Seepage Management.)

This information is included in Section 12.3.3 of the Final EIS/R. The inclusion of this additional information in the Final EIS/R does not change the conclusions of the Draft EIS/R.

Response to Comment L-LSJLD-19

This paragraph was deleted and text was revised in Section 12.3.3 of the Final EIS/R to describe the avoidance and minimization measure that would be implemented by the Program (see response to comment L-LSJLD-18). This revision in the Final EIS/R does not change the conclusions of the Draft EIS/R. Current flood management strategies are also clarified, as discussed in response to comment L-LSJLD-12.

Response to Comment L-LSJLD-20

The commenter expresses concerns related to O&M costs for the flood system. It is unclear if the commenter is referring to the O&M costs of the Project facilities or the O&M costs for the Flood Control Project. See MCR-5: Project Funding for more information on the Project O&M costs. See MCR-6: Flood Management Considerations and O&M Costs for more information on the responsible party for O&M of the Flood Control Project.

Response to Comment L-LSJLD-21

This comment is referring to comments L-LSJLD-11 though L-LSJLD-20. See response to comments L-LSJLD-11 to L-LSJLD-20.

Response to Comment L-LSJLD-22

Text has been revised in Section 21.1.6 of the Final EIS/R to include these corrections. The revised information in the Final EIS/R does not change the analysis or conclusions of the Draft EIS/R.

Response to Comment L-LSJLD-23

Reclamation will continue to work with LSJLD to better understand how future conditions may affect their overall operations. Additionally, coordination will continue in order to assess the potential changes, if any, in O&M costs that may occur as a result of implementing the SJRRP. See MCR-6: Flood Management Considerations and O&M Costs for a discussion of changes to the O&M costs for the Flood Control Project.

Response to Comment L-LSJLD-24

Text has been revised in Section 21.3.3 of the Final EIS/R to correct this typographical error. This revision in the Final EIS/R does not change the analysis or conclusions of the Draft EIS/R.

Response to Comment L-LSJLD-25

See MCR-6: Flood Management Considerations and O&M Costs. The federal government makes payment in lieu of taxes when purchasing land in a given county. The LSJLD may be able to find alternate sources of funding, some of which are described in Appendix E of the Revised Framework (SJRRP 2015). Reclamation also suggests the LSJLD embrace opportunities for multi-benefit projects that may enhance opportunities for obtaining O&M funding by combining flood control maintenance with habitat projects.

II.5.9 Lower San Joaquin Levee District (2)

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August 10, 2015

Ms. Becky Vistorine
Bureau of Reclamation
San Joaquin River Restoration Program Office
2800 Cottage Way, MP-170
Sacramento, California 95825-1898

Re: The Lower San Joaquin Levee District comments on the Mendota Pool Bypass and Reach 2B Improvement Project Draft Environmental Impact Statement/Report dated June 2015

Dear Ms. Vistorine:

Enclosed please find the above referenced document.

Very truly yours,

Linneman Law, LLP,

Thomas J. Keene

cc: Reggie Hill, Secretary/Manager
Lower San Joaquin Levee District

Enclosure

Lower San Joaquin Levee District's Comments on the Mendota Pool Bypass and Reach 2B Improvement Project Draft Environmental Impact Statement/Report dated June 2015

L-LSJLD(2)-1

Operation and Maintenance

From the perspective of the Lower San Joaquin Levee District, the principal point of concern with this Draft Environmental Impact Statement/Report, (DEIS/R) is the failure of the document to address who will be responsible for the operation and maintenance of the various improvements which are to be constructed as a part of the Mendota Pool Bypass and Reach 2B Improvement Project, (the "Project"), both during the project's design and construction, after this Project is complete and, most importantly, after the Program itself is completed. The answer to this question necessarily leads to the question of what will be the funding source or sources of the agency or agencies who assume these responsibilities. While the document at least (and at last) recognizes that there will a significant operations and maintenance cost resulting from this construction[1], it never answers either of these two questions.

The Draft Programmatic Environmental Impact Statement/Report (Draft PEIS/R) which was issued in the summer of 2012 notes that the Levee District maintains the Lower San Joaquin River Flood Control Project, (the "Flood Project"), but it then provides:

> "Increased maintenance activities and costs are required as a result of implementing the Settlement, including additional erosion management actions identified through the monitoring activities. . . Reclamation would conduct or enter into an agreement with others to conduct such additional maintenance activities." (Draft PEIS/R Page 2-28, lines 18-22)

It does not specify who the "others" might be but, from the context, the Levee District could clearly be one of those "others". The Draft PEIS/R acknowledges that Reclamation and the District had, in fact, had an agreement by which Reclamation reimbursed the District for its additional costs of Operation and Maintenance which were caused by the River Restoration Program's activities, but that one-year agreement had expired. In fact, Reclamation and the Levee District were in negotiations at the time of Draft PEIS/R for a two year agreement similar in nature to the lapsed one-year agreement.

The final Programmatic Environmental Impact Statement/Report (PEIS/R) which is dated July of 2012, includes a Master Comment Response (MCR). Section 2.8 of the MCR addresses the question of who would provide operation and maintenance services. It recognizes that the Levee District and the Central Valley Protection Board are responsible for "routine operations and maintenance" of capital improvements in the Flood Project. The MCR acknowledges that

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[1]See, for example DEIS/R page 2-27, line 26 to page 2-30, line 38.

L-LSJLD(2)-1 cont.

Reclamation was then working with the District to develop a new financial assistance agreement to offset the District's added costs of operations and maintenance. The MCR also recognizes that there might be a need to revise the District's Operation and Maintenance Manual.

> "Additional discussions with [the Army Corp of Engineers, the Central Valley Flood Protection Board, the Levee District] and Third Parties would need to occur to determine if these changes are necessary. However, [the Levee District] would continue to operate the flood management system and, in coordination with the [Central Valley Flood Protection Board], would be responsible for developing the necessary agreements and revisions." [MCR, page 2-38 to page 2-39].

Since that time, the District has made efforts to develop an agreement with Reclamation, without much of a response from Reclamation. However, as recently as June 28, 2013, Reclamation indicated that it was still interested in entering into a financial assistance agreement with the District. Finally, on October 27, 2014 the District was informed orally by Reclamation that Reclamation would not be entering into a new Cooperative Agreement and that Reclamation's attorney had determined that such an agreement would not be legal. In a letter dated October 24, 2014, the District followed up its oral request to get a written decision from Reclamation of its changed position and some indication of how it reached its conclusion that such an agreement would be illegal. When no written response was received to that letter from the District, another letter was written on April 28, 2015, asking for this same information. It went on to ask that, if Reclamation was not going to enter into a new agreement with the District was it going to enter into an agreement with someone else or was Reclamation going to start providing operation and maintenance services itself. No written response to that letter has been received to date and no indication has been received by the District indicating who would provide these services.

The DEIS/R makes it quite clear that, as these new structures are being built and as existing structures are modified to accommodate the Program, there will be an increasing need for operation and maintenance on these physical facilities. It does not say who will provide those services. Certain structures, such as the control structure on the River side of the Chowchilla Bypass, are to be modified by this Project in a way that increases the need for maintenance. The District operates that structure. Is the plan for the District to take on the added cost of operation and maintenance and increase the assessment the District levee on the landowners in the District? Similarly, the Mendota Pool is currently operated by the Exchange Contractors. Will the new control structure which will be built to regulate water going into the Pool now be operated and maintained by the Exchange Contractors? How about the new control structure which will be on the Mendota Pool Bypass itself, (which will now be a part of the River)? Will it be the responsibility of the District because it is on the River and so a part of the Flood Project, or will

L-LSJLD(2)-1 cont.

it be the responsibility of the Exchange Contractors because it is part of the Mendota Pool? Will the Exchange Contractors have to assess their water users in order to pay the cost of operating and maintaining these facilities? The Monitoring Activities discussed at page 2-31 of the DEIS/R, clearly include activities which no one is yet performing since, for example, the fish screens have not yet been installed and so not one has the responsibility to monitor them, and there is no flood plain presently in existence and so there is not need to monitor invasive species. Who will be performing those additional functions during the Project and who will perform those functions after the completion of this Project?[2] Who will pay those costs after the completion of the Program?

L-LSJLD(2)-2

Levee District Financial Viability

Chapter 21.0 does attempt, for the first time, to address the District's concern that its tax base will be reduced as land is taken out of private ownership and so can no longer the assessed by the District, (DEIS/R page 21-27). Unfortunately, it does not deal with the other half of the equation which is what will the District's costs be. Without knowing that information, it is impossible to determine whether the District will remain economically viable. Chapter 21.0 also asserts that operation and maintenance on the project, once the improvements are built will

> "generate long-term economic benefits to the region. Under Alternative B, [the preferred alternative], the total operations and maintenance budget is approximately $1.2 million (corresponding to the direct output value of the Project operations) which includes $963,000 for expenditures on goods and services and $278,000 in labor payroll that would support roughly four jobs." (Page 21-26, starting at line 32)

Where is this money coming from? Who will be the employer of these four people? Was the employer's financial condition examined in determining how much would be paid in personnel

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[2]The DEIS/R indicates that non-native species would continue to be removed during the "maintenance period", (DEIS/R page 2-59 starting at line 5). The DEIS/R also indicates that there will be a need for "long term" management of invasive plants, (DEIS/R page 2-44, starting at line 21), but it does not indicate if "long term" includes the time period after the completion of the River Restoration Program. In fact there is nothing in the DEIS/R which indicates definitively if the cost of managing the riparian habitat or any of the other costs of operation and maintenance after the completion of the Program has even been considered. Presumably the "long term" economic benefits of the Project touted in Chapter 21.0 does include the time period after the completion of the Program but even that is left vague.

L-LSJLD(2)-2 cont.

costs? Without this background information, these assertions have little or no value. However in order to make these determinations the starting point must be who the employer will be. In short, if the Bureau of Reclamation employs these four people, the personnel costs are likely to be very different that they would be if these four people are employed by the Levee District. Without a reliable income stream, the very assertion that these jobs would continue to exist after the River Restoration Program was complete is nonsense.

L-LSJLD(2)-3

Computer Models and the Derivation of Design Parameters

The Draft PEIS/R, refers repeatedly to hydraulic modeling to support the conclusion that there will be no significant additional risk of flooding as a result of the Program, (e.g. Draft PEIS/R Page 11-31, Section 11.3.4). This is in spite of the fact that the design parameters of the individual projects had not yet been determined at the time of the PEIS/R.[3] Ultimately, the PEIS/R concludes that there are potentially significant impacts from all of the alternatives considered by the PEIS/R other than the No Project Alternative, to "expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam," (Draft PEIS/R pages 11-31 to 11-32, Section 11.34.). The only mitigation measure provided in the PEIS/R with regard to the construction of improvements is to require the "project proponents for the site-specific project [to] incorporate actions into site-specific design of individual projects to reduce the predicted flood flow impacts to less-than-significant levels." (Draft PEIS/R Page 11-40, Section 11.3.4). Presumably, as a consequence of this conclusion in the Draft PEIS/R, a significant portion of Chapter 12 of the DEIS/R is given over to reciting some of these action which will be incorporated into the site-specific designs.

The analysis in the DEIS/R with regard to the possibility of people or structures to a significant risk of loss, injury or death involving flooding, (DEIS/R pages 12-16 to 12-18), is difficult to follow. It seems to say that the evaluation of additional flood risks elsewhere in the system because of the increased capacity in Reach 2, an estimate was made of flows in Reach 3 for a number of years. This data was used to calculate an average flow and annual maximum flows. This analysis led to the conclusion that there would be more small increases in the flow through the system but fewer large flood events. While a computer model was apparently used in making the estimates, there is no indication that there was computer modeling of the entire River to determine the impact of the improvements to be constructed as a part of this Project. This discussion is not persuasive.

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[3] "Because the details of the program-level actions are not known at this time, there is insufficient information available to describe specific actions that would reduce this impact to less than significant levels." (Draft PEIS/R, page 11-40, Section 11.3.4).

L-LSJLD(2)-3 cont.

As a part of this discussion, the DEIS/R provides some parameters for the design of the flood plains and the other improvements which will be constructed as a part of this Project, (e.g. DEIS/R page 2-51 starting at line 7, and page 2-55, starting at line 23). Unfortunately, after reciting those parameters, it does not indicate whether there was any further computer modeling performed in order to determine the effect of this Project on the potential for flooding. In fact, it gives almost no information as to what went into choosing the design parameters or whether, in choosing these parameters, the danger of flooding was even considered. For example, it asserts that a minimum 300-foot buffer between the existing channel and the proposed new levee is generally provided where appropriate and feasible, but that in locations where it is not, the levees would be protected from erosion by revetment, (DEIS/R page 2-20, starting at line 13). No reason for the set back being 300 feet instead of say 350 feet or 200 feet is given. Whether not having such a set back where they are not feasible will have any consequences on flood protection is not addressed.. Nor is it explained if, in determining the size of the flood plain and the design of the new levees, whether the carrying capacity of the new water way will be equal to or less than the existing water way after taking into account the loss of capacity resulting from the development of the riparian habitat once the recruited vegetation has reached maturity. Further explanations of these choices are needed in order to determine if there is or is not an increased risk of damage from flooding.

L-LSJLD(2)-4

Three Integrated Measures

The "three integrated measures that collectively minimize increases in flood risk during Settlement implementation" discussed at the bottom on page 2-100 and continuing onto page 2-101 of the DEIS/R appear in the Draft PEIS/R, and are repeated a number of times in the responses to the comments of the Levee District and the Exchange Contractors in the Final PEIS/R. The first of three measures is the Channel Capacity Advisory Group which is to determine and update estimates of Channel Capacities as needed. As the DEIS/R admits, unfortunately there is "only limited data ... currently available on San Joaquin River channel capacities and levee conditions", (DEIS/R page 2-101, line 13). Little progress has been made is establishing a base line for channel capacities in the years between the PEIS/R and the DEIS/R. This makes it almost impossible for the Channel Capacity Advisory Group to function. This need for current, reliable data is not fully addressed in the DEIS/R.

L-LSJLD(2)-5

Subsidence

After the certification of the PEIS/R, the District, in its letter of August 17, 2012, to Reclamation, raised the issue of the impact of subsidence on the River Restoration Program. In

L-LSJLD(2)-5 cont.

that letter, the Levee District urged Reclamation to consider either decertifying the PEIS/R or immediately initiating a subsequent or supplement EIR to address this issue. It went on to suggest that the construction projects should not proceed until the subsidence issue had been studied. The District is pleased to see that the DEIS/R does at least acknowledge that subsidence is an issue, (DEIS/R page 2-32, stating at line 18). Unfortunately, this issue is given very little attention in the document. It only provides that,

> "During the design process, causes of the observed subsidence, data from previously conducted studies, subsidence locations expected to require special design considerations, anticipated subsidence rates, and methods to mitigate the anticipated ground subsidence would be identified and incorporate into the design."

Whether this yet-to-be discovered data on subsidence will result in a change in the few design parameters mentioned in the DEIS-R is not addressed. It is understandable how design can adequately address changes which have occurred as the result of subsidence up until now but it is very difficult to understand how design can adequately address the ongoing changes which are likely to continue after the Project is built. Subsidence is a major hurdle which not only this Project but the entire Program needs to address. To ignore it puts the entire Program at risk of becoming a waste of money. The District still is of the opinion that the subsidence issue should be studied at the programmatic level but it also believes that subsidence should also be addressed more in fully in project level documents than is the case in the DEIS/R.

II.5.10 Responses to Lower San Joaquin Levee District (2)

Response to Comment L-LSJLD(2)-1

Although the implementing agencies responsible for the SJRRP are Reclamation, USFWS, NMFS, DWR, and DFW, Reclamation has taken the lead role in development and implementation of the Project. Reclamation is currently working on the Project design and is responsible for Project construction. As described in the Revised Framework (SJRRP 2015; Tables 4-10 and 5-11), all of the costs for the Mendota Pool Bypass in the Five Year Vision and all of the costs for the Reach 2B levee expansion in the Ten Year Vision are Federal costs. Although DWR would continue to have a lead role in SJRRP implementation, including levee stability in downstream reaches, DWR does not have the principal responsibility for Project implementation of the setback levees.

Although actual maintenance activities may be performed by others under contract (to be determined), Reclamation would be funding Project O&M. Table 5-2b of the Revised Framework identifies an O&M budget of $200,000 a year for the Mendota Pool Bypass starting in FY 2020, after construction has been completed in FY 2019. Table 5-2b also assigns this cost to the Federal government (Reclamation). In addition, Table 6-2b of the Revised Framework identifies an O&M budget of $200,000 a year for the Reach 2B Improvements starting in FY 2026, after construction has been completed in FY 2025. Table 6-2b also assigns this cost to the Federal government (Reclamation). These O&M costs are included until FY 2029, which is the end of the planning horizon for the Revised Framework. In addition, the SJRRP has committed to long-term O&M activities to be implemented in the SJRRP Restoration Area that could contribute to actions in the Mendota Pool Bypass and Reach 2B area. These activities including invasive species management ($300,000 per year) and vegetation management ($200,000 per year), both funded through FY 2029 in the Revised Framework (again, the end of the planning horizon in the Revised Framework). Although the budget has not been developed beyond FY 2029, funding for Project O&M activities is intended to continue for the life of the Project. For additional information on SJRRP funding, see MCR-5: Project Funding.

As described in Section 2.2.4 of this EIS/R and MCR-4: Project Design and Operations, O&M of the Project control structures includes annual operating maintenance for control gates, lubricating the fittings, greasing and inspecting the motors, replacing parts and equipment, in-channel sediment removal in the structure vicinity, and cleaning the trash rack. Although the budget has not been developed beyond 2029, funding for Project O&M is intended to continue for the life of the Project. Reclamation anticipates that the San Joaquin River Restoration Fund would serve as the long-term funding source for all SJRRP O&M activities, including O&M activities that are part of this Project. The long-term collections (post FY 2029) in the San Joaquin River Restoration Fund would be comprised of the Friant Surcharge collections and Sales of Water and Property. Reclamation estimates these sources to result in an average of $6.2 million per year. These funds would be available for use as they are collected (the current restrictions on the expenditure of these funds are lifted in FY 2020). Reclamation recognizes that the roughly $400,000 O&M estimate for both the Mendota Pool Bypass and Reach 2B levees would be subject to inflation over time, however, the collections in the San Joaquin River Restoration Fund are more than sufficient to cover these costs. Reclamation remains

cognizant of all of the SJRRP long-term O&M funding needs and is working to ensure that all long-term O&M funding needs remain within the estimated $6.2 million per year in collections. In addition, Federal appropriations would likely also be available for any extraordinary O&M activities. For additional information on Project funding see MCR-5: Project Funding.

Regarding O&M costs associated with the Flood Control Project, see MCR-6: Flood Management Considerations and O&M Costs.

Response to Comment L-LSJLD(2)-2

Reclamation would be acquiring all lands in fee title or as an easement and therefore, there would be some loss of tax base as the Federal government does not pay taxes. As mentioned by the commenter, Section 21.3.3 of this EIS/R discusses the effects on tax revenues for the LSJLD (and for Fresno and Madera counties). Although Reclamation understands the challenge a loss in tax revenues presents for the LSJLD, fundamentally, the LSJLD, the CVFPB, and the State are responsible for implementing routine O&M or capital improvements to the Flood Control Project. In addition, the SJRRP is taking on a variety of actions in the Restoration Area through the Physical Monitoring and Management Plan that could reduce the LSJLD's O&M actions and costs to some extent. Reclamation would like to work with the LSJLD to find ways to coordinate on these actions and help reduce costs to the extent possible. See response to comment L-LSJLD(2)-1 and MCR-5: Project Funding regarding Project O&M costs. See MCR-6: Flood Management Considerations and O&M Costs regarding O&M costs associated with the Flood Control Project.

As described in Section 21.3.3 of this EIS/R, the Project is anticipated to support an estimated four jobs for Project O&M. Project O&M will be funded by Reclamation. See MCR-5: Project Funding regarding Project O&M costs.

Response to Comment L-LSJLD(2)-3

As discussed in MCR-4: Project Design and Operations, the EIS/R is based on a 15 to 30 percent level of design for the Project. The hydrologic, hydraulic, and sediment transport modeling used as the basis for the Project design is described in detail in Appendix C of the Project design report (Reclamation 2015a). The design report includes a discussion of sediment transport through the bypass, effects to floodplain habitat, and effects to flood conveyance in Reach 3. As described in Section 2.2.4 of the Draft EIS/R, a 300-foot buffer was chosen based on an assessment of the sediment transport conditions in the Project design. Additional clarifying details are included in the Project description (Sections 2.2.4 and 2.2.6 of the Final EIS/R) based on the most recent design and hydrologic, hydraulic, and sediment transport modeling. The inclusion of this additional information in the Final EIS/R does not change the analysis or conclusions of the Draft EIS/R.

As indicated in Section 12.3.3 of this EIS/R, flows from the San Joaquin River Restoration Daily Flow Model developed in RiverWare were used for the flood frequency analysis referenced by the commenter. The San Joaquin River Restoration Daily Flow Model was developed in RiverWare based on best available information. The

Daily Flow Model models the restoration reaches of the San Joaquin River system from Friant Dam to just below the confluence with the Merced River. The Daily Flow Model uses as its basis of climatology the record of precipitation in the basin, from water years 1922 to 2003. Future conditions were developed assuming Restoration Flows were fully operational and unconstrained by channel conveyance. The Daily Flow Model accounts for Millerton inflows, Millerton flood operations for rain events and for snowmelt events, outflow ramping at Millerton, Madera and Friant-Kern canals diversions, the Restoration Flow schedule, inflows along the San Joaquin River and flood bypasses, diversion requests, channel flow losses, and flow routing. This model includes the SJRRP-specific information needed to predict future flows under restoration conditions.

SJRRP conducted a flood risk assessment (see MCR-6 for the analysis) on the translation of flood risk from Reach 2B to reaches downstream, *i.e.,* to Reach 3 and Reach 4A. The objective of the analysis was to determine if damages would change based on changes in the flood hydrographs and if the likely failure points for levees used in the PEIS/R evaluation were reasonable. The analysis included a comparison of flood hydrographs at four index points in Reaches 3 and 4A, an evaluation of flood damages at these locations, and an evaluation of the updated levee data in Reach 3 and Reach 4A. The study concluded that, based on a comparison of changes to flood hydrographs, there would be little to no increase in damages – the one area that showed a slight increase in damages was likely due to perturbation effects in the model – and therefore redirected flood impacts would be minor. Furthermore, the risk analysis also evaluated information from recently completed levee evaluations including the drilling information and seepage and stability analysis in Reaches 2A, 3, and 4A. A review of the levee evaluations concluded that the likely failure points for these levees that were used in the PEIS/R were reasonable and conservative. For additional information, see MCR-6: Flood Management Considerations and O&M Costs.

Response to Comment L-LSJLD(2)-4

Reclamation and DWR have been conducting numerous studies in the Restoration Area to evaluate channel capacities in the San Joaquin River and flood bypasses. These channel capacity evaluations are updated annually through the SJRRP channel capacity report process (SJRRP 2016a).

As described in MCR-6: Flood Management Considerations and O&M Costs, levee evaluations along the San Joaquin River and flood bypasses are being conducted by DWR as part of the San Joaquin Levee Evaluation Project to assist the SJRRP in assessing flood risks due to levee seepage and stability associated with the release of Restoration Flows. Geotechnical evaluations have included geomorphology studies, collection of geophysical data, drilling programs along the levee crown and landside toe (including boreholes, cone penetration tests, and hand augers), and laboratory testing of soil samples. These geotechnical evaluations have been used to identify existing channel capacity, inform levee seepage and stability modeling for each reach, and to identify critical levee segments that have reduced capacity for future levee stability projects.

As described in MCR-3: Subsidence, Reclamation has been intensively monitoring subsidence within the Restoration Area since 2011 and Reclamation and DWR have

performed subsidence monitoring along the Flood Control Project levees to help further refine subsidence rates in the flood bypasses. DWR has surveyed topographic ground elevations in Reach 2A, the Chowchilla Bypass, the Upper Eastside Bypass, the Middle Eastside Bypass, and the Mariposa Bypass. DWR also completed surveys in 2013 and 2014 of the levee and channel in the lower portion of Reach 3, Reach 4A, and the Middle Eastside Bypass (SJRRP 2014b). DWR, in coordination with Reclamation, will conduct a study to better understand the effects of long-term subsidence on channel capacity. This study is expected to be completed in 2016. In addition to updating the models and assessing the channel capacity to consider future subsidence, DWR has started to move forward with a study within the flood bypasses to understand how subsidence is changing sediment transport. The study is designed to better understand and quantify how subsidence-induced sedimentation will affect channel capacity and to provide information on the amount of sediment removal that may be required to maintain necessary design flow capacities.

As described in MCR-2: Seepage Management, Reclamation is currently monitoring more than 200 monitoring wells and piezometers and has identified areas vulnerable to seepage effects, developed groundwater thresholds, and has prioritized seepage control projects in the Restoration Area. The highest priority seepage projects in the Restoration Area are those located in areas that would be impacted at the lowest San Joaquin River flows. Key areas of concern include the downstream end of Reach 2A, portions of Reach 3, and the downstream end of Reach 4A. SJRRP seepage projects are expected to be complete by 2020 in areas that would otherwise cause flow to be constrained below 1,300 cfs. Subsequent seepage projects are expected to be complete by 2025 in areas that would otherwise be affected by flows up to 2,500 cfs. All seepage projects are expected to be complete by 2030 to allow up to 4,500 cfs of Restoration Flows in the San Joaquin River.

SJRRP studies have provided a substantial amount of information that is used in the analysis of the then-existing channel capacities in the river reaches and flood bypasses. These data are used to support the design of the site-specific projects in Reach 2B, Reach 4B, and at the Arroyo Canal diversion in Reach 3, as well as the levee, seepage projects and other site-specific project designs in Reaches 2A through 4B.

Response to Comment L-LSJLD(2)-5

See MCR-3: Subsidence for a discussion of Reclamation's and DWR's ongoing action to evaluate subsidence in the Restoration Area. With respect to Project structures, Reclamation is designing new Reach 2B levees and water control structures, such as the Mendota Pool Control Structure and the Compact Bypass Control Structure, to account for 5 feet of subsidence. This is equivalent to the current rate of subsidence for 25 years. This design criterion is considered conservative, because in 2040 (25 years from now) the Sustainable Groundwater Management Act will have required Groundwater Sustainability Agencies to reach sustainable levels of groundwater withdrawal in critically-overdrafted State groundwater basins. This presumably means that subsidence will have stopped in the Project area by 2040. The Project area is in a critically-overdrafted basin. To account for subsidence, Reclamation is designing additional freeboard on levees, additional height of control structures and intake facilities, and additional stoplogs or concrete walls to maintain the same low flow elevation after years

of subsidence on control structures. These factors will allow the Mendota Pool Bypass and Reach 2B project structures to remain operable and effective for many decades to come.

II.5.11 San Joaquin Valley Air Pollution Control District

San Joaquin Valley
AIR POLLUTION CONTROL DISTRICT

HEALTHY AIR LIVING™

August 10, 2015

Becky Victorine
Bureau of Reclamation
San Joaquin River Restoration Office, MP-170
2800 Cottage Way
Sacramento, CA 95825-1898

Agency Project: Draft Environmental Impact Statement/Environmental Impact Report – The Mendota Pool Bypass and Reach 2B Improvements Project

District CEQA Reference No: 20150534

Dear Ms. Victorine:

L-SJVAPCD-1

The San Joaquin Valley Unified Air Pollution Control District (District) has reviewed the Draft Environmental Impact Statement/Environmental Impact Report (Draft EIS/EIR) for the project referenced above. The Bureau of Reclamation is the Federal Lead Agency under the National Environmental Policy Act (NEPA). The California State Lands Commission serves as the lead agency for compliance with the California Environmental Quality Act (CEQA). The Mendota Pool Bypass and Reach 2B Improvements Project is a component of Phase 1 of the San Joaquin River Restoration Program which seeks to restore flows to the San Joaquin River from Friant Dam to the confluence of the Merced River, and restore a self-sustaining Chinook salmon fishery in the river while reducing or avoiding adverse water supply impacts associated with restoration flows. The Project includes the construction, operation, and maintenance of the Mendota Pool bypass and improvements in the San Joaquin River channel in Reach 2B. The project study area includes the Mendota Pool which is formed by the Mendota Dam and Reach 2B. Reach 2B extends from the Chowchilla Bifurcation Structure to the Mendota Dam. The Chowchilla Bifurcation Structure consists of two structural components: the river control structure that spans the San Joaquin River and the bypass control structure at the head of the Chowchilla Bypass. The Bifurcation Structure is used to route flood flows down the Chowchilla Bypass.

L-SJVAPCD-2

The District offers the following comments:

1. **NEPA:** Based on information provided to the District, construction emissions of NOx

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L-SJVAPCD-2 cont.

and VOC are expected to exceed the *de minimis* threshold of 10 tons/year NOx and 10 tons/year VOC. Construction emissions of PM10 dust, PM10 exhaust, PM2.5 dust and PM2.5 exhaust are not expected to exceed the *de minimis* threshold of 100 tons/year each.

L-SJVAPCD-3

General Conformity: On-road construction vehicle emissions will exceed the General Conformity NOx de minimis threshold, and also, in certain years, exceed the VOC de minimis threshold. As a result, a General Conformity Analysis must be performed.

Table S-3 Summary of Impacts and Mitigation Measures, page 32, of the Executive Summary provides the following:

- **Impact:**
  - AQ-3: Create excess amounts of construction related criteria air pollutants that exceed SJVAPCD thresholds of Significance or cause or contribute to exceedances of the AAQS"
- **Significance before mitigation:** Significant
- **Mitigation Measures:**
  - AQ-1A: Reduce criteria exhaust emissions from construction equipment
  - AQ-1B: Reduce criteria exhaust emissions from material hauling vehicles
  - AQ-1C: Offset project construction emission through a SJVAPCD Voluntary Emission Reduction Agreement
- **Significance after mitigation/conservation measure:** Less than significant

In general, all emissions are subject to the General Conformity rule. When exceeding a de minimis threshold, the District requires that the emissions be mitigated to "net zero", i.e. not to the *de minimis* threshold. The District will not be able to provide a letter of concurrence for conformity until the VERA is in place to mitigate any emissions above the de minimis threshold to "net zero".

L-SJVAPCD-4

2. **CEQA:** Based on information provided to the District, construction emissions of criteria pollutants are expected to exceed District significance thresholds of 10 tons/year NOx, 10 ton/year ROG (VOC), and 15 tons/year PM10. Therefore, under CEQA, the proposed project would have a significant impact on air quality.

   The VERA undertaken under NEPA for NOx and VOC would also mitigate those impacts under CEQA. However, PM10 and PM2.5 would remain significant under CEQA. Therefore, the District recommends implementing a Voluntary Emission Reduction Agreement (VERA) for PM10 and PM 2.5 for CEQA.

L-SJVAPCD-5

3. **Voluntary Emission Reduction Agreement (VERA):**

   The District recommends the Bureau of Reclamation engage in immediate discussions with the District regarding adoption of a development mitigation contract, also known as a Voluntary Emission Reduction Agreement (VERA), prior to the

L-SJVAPCD-5 cont.

finalization and certification of the environmental document. This process will allow the environmental document to appropriately characterize the project's emissions and demonstrate that the project's NOx and VOC emissions impact on air quality will be fully mitigated to "net zero" to comply with General Conformity under NEPA as a result of the implementation of the adopted VERA. The District encourages such discussion as well for CEQA

L-SJVAPCD-6

4. Based on information provided to the District, the proposed project does not meet the definition of a development project. Therefore, the District concludes that the proposed project is not subject to District Rule 9510.

L-SJVAPCD-7

5. The District has reviewed the health risk assessment (HRA) from construction activities. In addition to a "No Build" alternative, the Draft EIS/EIR considered four (4) alternatives, A, B, C, and D. Alternatives A and B include a bypass of the Mendota Pool. Alternatives C and D include the construction of a dam on the Fresno Slough. Alternative B is the preferred option. The entire project is a construction project lasting 9 to 13 years (for Alternative B). Emissions from maintenance will be minimal.

L-SJVAPCD-8

The District has the following comments on the health risk assessment (HRA).

1) A receptor flagpole height of 1.8 meters was used. The San Joaquin Valley Air Pollution Control District (the "District") does not normally use flagpole heights. When the District does use flagpole heights, the height is never above 1.5 meters.

L-SJVAPCD-9

2) For HRAs, discrete receptors for sensitive populations such as schools, hospitals, residents, etc. are modeled. A grid of receptors such as that modeled in this analysis is not used.

L-SJVAPCD-10

3) All sources were modeled as volume sources. Typically, construction areas would be modeled as elevated area sources. Truck travel routes would be modeled as a series of volume sources forming an approximation to a line source.

L-SJVAPCD-11

4) It does not appear that idling emissions from the haul trucks or the offroad construction equipment were included in the analysis.

L-SJVAPCD-12

5) Age Sensitivity Factors (ASFs) were used in calculating risk although the District did not have guidance at that time for using ASFs. Such policies are now in place including an increase in the significance threshold for cancer risk from 10 in a million to 20 in a million. The new procedures also require use of Version 2 of the Hot Spots Analysis and Reporting Program (HARP 2) because the Office of Environmental Health Hazard Assessment (OEHHA) guidelines include other changes as well as the use of ASFs.

L-SJVAPCD-13

6) Truck haul routes outside of the project study area may have been modeled. District policy requires that only the emissions from truck traffic within the boundaries of the project and that are not on public highways be included. The modeling for this project may have exaggerated the truck travel impacts.

L-SJVAPCD-14

7) It appears that sources were modeled at 1 g/s. To obtain the risk, the predicted concentrations would have had to be multiplied by the source's actual emission rate in g/s. Then, the actual predicted concentration would have been multiplied by the unit risk of 4.1453E-4 to obtain the cancer risk. Normally, the actual emission rates are modeled. The series of calculations required in this analysis are not outlined. The emissions for individual sources, the concentrations predicted by individual sources, and the risks associated with individual sources are not given. Thus, verifying the risks reported is not feasible. It is also not clear that a 70-year cancer risk was calculated. At the time that this HRA was completed, the District did not allow risks to be calculated for a 9- to 13-year exposure period.

L-SJVAPCD-15

8) Given that such high risks are reported, there should be a substantial discussion of mitigation measures. Since the project is significant, the use of all feasible mitigation measures must be considered before approving the project based on overriding considerations.

L-SJVAPCD-16

This HRA should be redone using the District's guidance. Computing resources could be conserved by using area sources, limiting the length of haul roads to the project area, and eliminating all receptors that are not required by District guidance. It is incumbent upon the project proponent to provide a more accurate estimate of risk even if the project is ultimately approved based on overriding considerations.

L-SJVAPCD-17

6. The proposed project, or portions of the project, may be subject to the following District rules: Rule 2010 (Permits Required), Rule 2201 (New and Modified Stationary Source Review), Regulation VIII, (Fugitive PM10 Prohibitions), and Rule 4102 (Nuisance). In the event an existing building will be renovated, partially demolished or removed, the project may be subject to District Rule 4002 (National Emission Standards for Hazardous Air Pollutants).

   The above list of rules is neither exhaustive nor exclusive. To identify other District rules or regulations that apply to this project or to obtain information about District permit requirements, the applicant is strongly encouraged to contact the District's Small Business Assistance Office at (559) 230-5888.

   More information regarding compliance with District rules and regulation can be obtained by visiting the District's website:

   - Complete listing of all current District rules and regulation: http://www.valleyair.org/rules/1ruleslist.htm;

L-SJVAPCD-17 cont.

- Information on controlling fugitive dust emissions: http://www.valleyair.org/busind/comply/PM10/compliance_PM10.htm

L-SJVAPCD-18

7. The District recommends that a copy of the District's comments be provided to the California State Lands Commission, the State lead agency.

If you have any questions or require further information, please contact Georgia Stewart by phone at (559) 230-5937 or by e-mail at georgia.stewart@valleyair.org.

Sincerely,

Arnaud Marjollet
Director of Permit Services

Georgia Stewart

For: Chay Thao
Program Manager

AM: gs

II.5.12 Responses to San Joaquin Valley Air Pollution Control District

Response to Comment L-SJVAPCD-1
Your comments have been reviewed and considered in preparation of the Final EIS/R.

Response to Comment L-SJVAPCD-2
The commenter is describing the information provided in Section 4.3.3 of the Draft EIS/R. There are no specific comments or questions on this information.

Response to Comment L-SJVAPCD-3
As described in Section 4.3.3 of this EIS/R, Mitigation Measure AQ-1C, mitigation includes purchasing offsets to net zero.

Response to Comment L-SJVAPCD-4
Section 4.3.3 of the Final EIS/R provides updated Project construction emissions. Based on recent geologic investigations, Reclamation anticipates that borrow would be taken primarily from within the setback levees for the new floodplain, and minimal if any borrow material would be needed from outside of the setback levees. Therefore, the air quality impacts for the Project were reanalyzed using more moderate assumptions for off-site hauling distances. This has allowed for a more accurate representation of the Project's construction related criteria pollutant emissions of CO, NOx, VOC, SOx, PM_{10} and $PM_{2.5}$. As described in Impact AQ-1, the updated Project construction emissions estimates for CO, SOx, PM_{10} and $PM_{2.5}$ are not anticipated to exceed the SJVAPCD's CEQA significance thresholds. Based on these re-evaluated emissions estimates, the Project would have a significant impact for NOx and VOC, and Mitigation Measure AQ-1A, AQ-1B, and AQ-1C will be implemented to reduce NOx and VOC impacts to less-than-significant levels. The updated PM_{10} and $PM_{2.5}$ emissions are below the SJVAPCD's CEQA significance thresholds, and the PM_{10} and $PM_{2.5}$ impacts would be less than significant with no mitigation required. Therefore the SJVAPCD's recommendation of a Voluntary Emission Reduction Agreement for PM_{10} and $PM_{2.5}$ is not applicable.

Response to Comment L-SJVAPCD-5
Reclamation has initiated meetings with the SJVAPCD in 2016 regarding the Voluntary Emission Reduction Agreement, and will include the commitment to implementing the agreement in the ROD.

As discussed in Response to comment L-SJVAPCD-4, note that the air quality impacts for the Project were reanalyzed using the assumption that local borrow would be sufficient and that all levee fill would come from local borrow sites. The air quality analysis presented in the Final EIS/R was updated accordingly. This has allowed for a more accurate representation of the Project's NO_X and VOC emissions.

Response to Comment L-SJVAPCD-6
Text has been revised in Chapter 4 of the Final EIS/R, accordingly.

Response to Comment L-SJVAPCD-7
The commenter is describing the information provided in the Draft EIS/R. There are no specific comments or questions on this information.

Response to Comment L-SJVAPCD-8

The health risk assessment was revised as appropriate for the Final EIS/R based on the SJVAPCD's comments (see Section 4.3.3 of the Final EIS/R, Impact AQ-3). A receptor height of 1.5 meters was used in the updated Final EIS/R analysis per the SJVAPCD's comment, and the significance threshold for health impacts to sensitive receptors was changed to an incremental increase in cancer risk greater than 20 in a million based on the latest update to the District's Risk Management Policy (SJVAPCD 2015). The result of the revised assessment is that the Maximum Carcinogen Risk at Receptor and the Chronic Hazard Index both increased for the resident child and both decreased for the school child in the Final EIS/R compared to the results presented in the Draft EIS/R. As a result of the revised assessment, the impacts described in the Final EIS/R are less than significant for the school child and less than significant after implementation of Mitigation Measures AQ-3A and AQ-3B for the resident child. This is a decrease in significance from the analysis in the Draft EIS/R.

Response to Comment L-SJVAPCD-9

See response to comment L-SJVAPCD-8. Only discrete receptors for sensitive populations were evaluated, and a grid was not used for the health risk assessment analysis in the updated Final EIS/R.

Response to Comment L-SJVAPCD-10

See response to comment L-SJVAPCD-8. Modeling construction equipment operations with a grid of volume sources is an appropriate method for evaluating impacts from exhaust emissions. Per the California Office of Environmental Health Hazard Assessment's (OEHHA) risk assessment guidance, "emissions that are to be modeled as area sources are typical of fugitive sources characterized by non-buoyant emissions containing negligible vertical extent." Exhaust emissions from construction equipment are not characteristic of fugitive sources and are more appropriately characterized by volume sources which include plume rise. The treatment of construction equipment emissions as volume sources is also consistent with the South Coast Air Quality Management District's Localized Significance Threshold Methodology (SCAQMD 2008).

Response to Comment L-SJVAPCD-11

See response to comment L-SJVAPCD-8. Idling emissions from haul truck and off-road construction equipment were not explicitly modeled with separate calculations, but are accounted for using the load factor assumptions and operating durations used in the emissions calculations.

Response to Comment L-SJVAPCD-12

See response to comment L-SJVAPCD-8. Health risk calculations and thresholds for evaluating significance were updated in the Final EIS/R according to the most recent *Update to the District's Risk Management Policy to Address OEHHA's Revised Risk Assessment Guidance Document* (SJVAPCD 2015).

Response to Comment L-SJVAPCD-13
See response to comment L-SJVAPCD-8. Per SJVAPCD comments and SJVAPCD's *Guidance for Air Dispersion Modeling* (SJVAPCD 2006), delivery truck trips outside of the Project areas were excluded from the health risk assessment. Truck activity associated with the movement of concrete and borrow material between Project areas are included in the health risk assessment modeling analysis for the Final EIS/R. This activity is included in the impact analysis as these truck movements are anticipated to occur on and in the immediate vicinity of Project construction areas constituting the boundaries of the Project.

Response to Comment L-SJVAPCD-14
See response to comment L-SJVAPCD-8. AERMOD modeling was conducted using unit emissions of 1 gram per second for each source grouping. For large scale modeling projects, this approach provides flexibility in the modeling process. Detailed discussions and descriptions of this modeling approach and the lifetime cancer risk calculations, assumptions, and methodologies have been added to Appendix 4-A and Appendix 4-B (Health Risk Assessment Methodology Appendix).

Response to Comment L-SJVAPCD-15
As discussed in response to comment L-SJVAPCD-8, the revised health risk assessment resulted in findings of less than significant for the school child and less than significant after implementation of Mitigation Measures AQ-3A and AQ-3B for the resident child. See response to comment L-SJVAPCD-8 for more information. Section 4.3.3 of this EIS/R includes discussion of the applicable mitigation measures (AQ-3A and AQ-3B).

Response to Comment L-SJVAPCD-16
See response to comments L-SJVAPCD-8 through L-SJVAPCD-15.

Response to Comment L-SJVAPCD-17
The list of these rules are similar to what was identified in Section 4.2.3. District Rule 4002 is also described in that section of the Final EIS/R.

Response to Comment L-SJVAPCD-18
The CSLC has received, reviewed, and considered these comments.