II.6.5 Wonderful Orchards

Wonderful orchards.

August 10, 2015

Becky Victorine
U.S. Bureau of Reclamation
2800 Cottage Way, MP-170
Sacramento, CA 95825

Christopher Huitt, Senior Environmental Scientist
California State Lands Commission
100 Howe Ave., Suite 100 South
Sacramento, CA 95825

VIA EMAIL TO Reach2B_EISEIR_Comments@restoresjr.net

Re: Comments on Draft Mendota Pool Bypass and Reach 2B Channel Improvements Project Environmental Impact Statement/Environmental Impact Report

Dear Ms. Victorine:

O-WO-1

Wonderful Orchards (formerly Paramount Farming Company), on behalf of Wonderful Nut Orchards who owns New Columbia Ranch ("Wonderful"), located on the east side of Reach 2B of the San Joaquin River upstream of the Mendota Pool between River Miles 205 and 216 submits the following comments. Wonderful holds and exercises rights to divert the water of the San Joaquin River and its sloughs for use on the New Columbia Ranch. The Mendota Pool Bypass and Reach 2B Channel Improvements Project ("Project") includes the construction, operation, and maintenance of the Mendota Pool Bypass and improvements in the San Joaquin River channel in Reach 2B. The purpose of the Project is to provide increased channel capacity and floodplain and riparian habitat in Reach 2B in support of achieving the Restoration Goal, including conveyance of at least 4,500 cubic feet per second ("cfs") from Reach 2B downstream to Reach 3. The Draft Environmental Impact Statement/Environmental Impact Report for the Project (the "DEIS/DEIR") identifies Alternative B (Compact Bypass with Consensus-Based Floodplain and Bifurcation Structure) as the Preferred Alternative.

Wonderful will be directly affected by each of the Project alternatives in a number of ways and therefore submits the following comments on the DEIS/DEIR for the Project.

1. Land Use Planning and Agricultural Resources

O-WO-2

Impacts LU-1 through LU-3 relate to the loss of agricultural land caused by the Project and are characterized as significant and unavoidable impacts. Each Project Alternative will result in the permanent loss of over 1,000 acres currently devoted to high-value agricultural production. Under Alternative B, the Preferred Alternative, Wonderful anticipates that permanent losses to productive

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farmland on the New Columbia Ranch will total approximately 560 gross acres at a minimum and an additional approximately 1,060 gross acres of Wonderful acreage is identified as potential borrow areas, which could substantially increase the impacts to our land uses.

The only mitigation measure evaluated in the Draft is the "minimization" of impacts LU-1 through LU-3. The Final EIS/EIR must identify whether other potential mitigation measures for these impacts were considered and indicate why they were rejected. If no other mitigation measures were considered for these significant impacts, Reclamation should attempt to develop additional mitigation measures, and thoroughly explain why any such measures have been rejected. Specifically, Reclamation must analyze the feasibility of purchasing agricultural conservation easements or donating in-lieu mitigation fees to mitigate for the impacts of the Project on agricultural lands. See *Masonite Corp. v. County of Mendocino* (2013) 218 Cal.App.4th 230, 241-42.

O-WO-3 Similarly, Mitigation Measure LU-5 cannot mitigate Impact LU-5 to a less than significant level. Impact LU-5 finds impacts to existing land use plans to be potentially significant because nearly all of the land in the Project area is zoned for agricultural use. As the DEIS/DEIR makes clear, the Project will take a significant amount of agricultural land out of production, conflicting with the predominant zoning designation in the Project area. Without any explanation, Reclamation asserts that "notifying affected planning agencies of conflicts with current land use plans" can reduce Impact LU-5 to a less than significant level. It is unclear how notification alone can effectively mitigate the effects of this impact, and Reclamation must support its determination in the Final EIS/EIR with substantial evidence.

O-WO-4 Furthermore, Reclamation's finding that impacts to agricultural land productivity due to seepage (Impact LU-4) will be less than significant is not sufficiently supported. Reclamation's finding appears to be premised on the implementation of seepage-related measures discussed in Section 2.2.4 of the DEIS/DEIR. Yet groundwater seepage will only be addressed during levee design and through the SJRRP's seepage management activities in separate environmental analyses. DEIS/DEIR at ES-30. If Reclamation intends to rely on seepage management measures to reduce the Impact LU-4 to a less than significant level, it must thoroughly analyze those measures in ***this*** environmental analysis.[1] *Banning Ranch Conservancy v. City of Newport Beach* (2012) 211 Cal.App.4th 1209, 1220-23 (explaining CEQA's prohibition of piecemealing projects).

O-WO-5 Finally, Reclamation's determination that Impact LU-6 is less than significant ignores both the context of the Project and the intense adverse effects that would result from increased disease in the Project area. As the DEIS/DEIR acknowledges, approximately 4,212 acres of land are currently in agricultural production in the Project area. Most of this acreage is planted to grapes and nut crops. The DEIS/DEIR observes that additional riparian vegetation and floodplain area could transmit diseases to fruit and nut crops, but downplays the seriousness of these diseases by asserting that existing crops may already act as carriers for diseases. Nothing in the DEIS/DEIR demonstrates that fruit and nut crops in the Project area already carry diseases, or that farmers in the Project area engage in management practices that might increase the susceptibility of their crops to disease. Without such evidence, Reclamation's less than significant finding is inappropriate.

O-WO-6 Reclamation also wrongly premises its less than significant finding on the fact that disease is only one of many factors affecting agricultural productivity. It may be true that disease plays a

[1] In addition, Wonderful hereby incorporates by reference its prior comment letters submitted to Reclamation regarding groundwater seepage issues, copies of which are attached hereto as Attachment A.

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O-WO-6 cont.

comparatively small role in productivity when such factors are analyzed on a global scale. But when diseases are introduced into a new area, they frequently become the ***most*** important factor in agricultural productivity. Here, Reclamation intends to introduce over a thousand acres of additional hosts for orchard and vineyard diseases in an area overwhelmingly devoted to agriculture. Reclamation cannot credibly assert that the introduction of new hosts for such diseases is a less than significant impact. Accordingly, Reclamation must reexamine its finding for Impact LU-6.

2. Hydrology – Flood Management

O-WO-7

The DEIS/DEIR concludes that the Project will have a less than significant impact with respect to the exposure of people or structures to a significant risk of loss, injury, or death involving flooding. The less-than-significant finding is predicated upon the assumption that an increase in the frequency of smaller, low-risk flood events will be offset or partially offset by a decrease in larger, high-risk flood events. *See* DEIS/DEIR at 12-18; 12-21. It is not clear from the DEIS/DEIR how Reclamation determined that the decreasing frequency of high-risk events would result in an offset of more frequent low-risk events such that the effect could be characterized as "neutral" and "less than significant."

As a practical matter, numerous low-risk flood events have the potential to stress physical groundwater seepage projects to the point that they become less effective. Furthermore, it is not clear to Wonderful that the decrease in high-risk flood events associated with the Preferred Alternative will actually offset the increased frequency of low-risk flood events to a less than significant level, nor that sufficient scientific evidence or modeling has been conducted by Reclamation to support the assertion that high-risk flood events will decrease. Wonderful accordingly requests that the Final EIS/EIR include a more thorough explanation of how the determination of a decrease in high-risk flood events was determined and how the increase in low-risk events will be offset by the decrease in high-risk events, including greater discussion of the potential impacts of lower-risk events on landowners like Wonderful. The Final EIS/EIR should also more thoroughly analyze the type and degree of monitoring and maintenance efforts to repair levee erosion from Restoration flows, and provide a clear explanation of how such maintenance will keep levee erosion from having a significant impact on the environment.

O-WO-8

The DEIS/DEIR also notes that the Lower San Joaquin Levee District ("LJSLD") is responsible for state flood control facilities within the Project vicinity, but is not responsible for the operation and maintenance of privately owned levees. DEIS/DEIR at 12-11. The DEIS/DEIR does not sufficiently address how Reclamation and the SJRRP will work with private levee owners to ensure that the Project does not have a significant impact on hydrology and flood management. It is also unclear whether LSJLD will have the responsibility for newly constructed levees contemplated by the Project.

O-WO-9

Wonderful continues to be concerned about the intended division of responsibilities for levee construction, operations, and maintenance in Reach 2B. Clarification of which agencies will be responsible for constructing, operating, and maintaining the contemplated setback levees and existing levees and the funding (construction funding and future replacement, repair, operations and maintenance costs) sources for such activities must be clearly stated in the Final EIS/EIR. Wonderful therefore requests that the Final EIS/EIR include a more detailed description of the entities that will be responsible for maintaining new levees associated with the Project. It should also more thoroughly delineate how Reclamation will work with private levee owners to avoid significant impacts to the environment.

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O-WO-10 Reclamation further observes that, with the exception of the No-Action Alternative, each Project Alternative poses a less-than-significant risk of substantially altering existing drainage patterns or substantially increasing the rate or amount of surface runoff in a manner which would result in flooding on or off-site (Impact FLD-3). The DEIS/DEIR asserts that the construction of seepage control measures, along with surface drainage ditches, will reduce potential effects of this impact to "negligible levels." This conclusion is wholly unsupported. There is no discussion in the DEIS/DEIR of where surface drainage ditches will be located or how many will be needed to reduce the impact of landward side ponding to a less than significant level. Furthermore, it is unclear how seepage control measures, which are designed to prevent increases in groundwater table levels due to the implementation of Restoration Flows, will prevent surface flooding on the landward side of levees. Without more support, Reclamation's analysis of Impact FLD-3 cannot and will not be sufficient to support certification of a Final EIS/EIR.

O-WO-11 Finally, and relatedly, Reclamation's decision to not analyze the impacts of contemplated seepage management projects in the DEIS/DEIR appears to be improper piecemealing of the Project. DEIS/DEIR at ES-30; 13-22 – 13-23. The DEIS/DEIR makes it clear that seepage management projects will be constructed concurrently with the setback levees contemplated by each of the Project Alternatives. DEIS/DEIR at 13-22 – 13-23. Accordingly, seepage management projects are effectively part of the same course of action as the Project itself, and should be analyzed in the Final EIS/EIR for the Project. *Banning Ranch Conservancy v. City of Newport Beach* (2012) 211 Cal.App.4th 1209, 1222.

O-WO-12 Significant subsidence has occurred in areas nearby and downstream of Reach 2B which have significantly altered the flood control and in-channel capacities of various stretches of the San Joaquin River and the Chowchilla Bypass, Mariposa Bypass and Eastside Bypass. The impacts of conveying 4,500 cfs in Reach 2B, in light of reduced capacities elsewhere, must be addressed by Reclamation. Wonderful asks Reclamation to conduct updated technical studies and modeling and issue updated channel capacities to properly reflect these significant changed circumstances and ensure landowners within the SJRRP area are not impacted by Program flows due to reduced capacities in other reaches or systems. Reclamation should conduct these updated technical studies as soon as possible. Without such studies, neither Reclamation nor affected parties such as Wonderful can adequately evaluate the impact of existing subsidence on the Project and the potential impacts of the Project.

3. Hydrology – Groundwater[2]

O-WO-13 The Draft finds that impacts to groundwater levels will be less than significant (Impact GRW-3). Reclamation predicates this finding on the construction of seepage control measures (DEIS/DEIR at 13-23), but fails to fully explain such measures or analyze their impacts in this environmental document. *Id.* at ES-30; 13-22—13-23. Given this improper piecemealing of the Project to exclude analysis of seepage control measures, Reclamation's less than significant finding for Impact GRW-3 is improper. *Nelson v. County of Kern* (2010) 190 Cal.App.4th 252, 272. Accordingly, Reclamation must either thoroughly analyze the effects and impacts of proposed seepage measures in the Final EIS/EIR or revise its finding for Impact GRW-3.

[2] Wonderful incorporates by reference its prior comment letters on the groundwater impacts of the SJRRP into this comment letter, copies of which are attached hereto as Attachment A.

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4. Hydrology – Surface Water

O-WO-14 There are numerous ways in which the discussion of impacts on Surface Water could be improved. First, the DEIS/DEIR's discussion of water rights (see p. 14-28) does not include any discussion of riparian rights or pre-1914 appropriative rights, such as those held by Wonderful. The DEIS/DEIR must include a discussion of these types of water rights, and the Project's impacts on such rights, in order to be complete. In particular, the expansion of the floodplain area in Reach 2B may interfere with Wonderful's existing points of diversion along the River at Lone Willow Slough and near River Mile 209 and potentially require construction of additional diversion and conveyance facilities.[3]

O-WO-15 Second, it is unclear how Reclamation determined that the Action Alternatives will result in a less than significant impact to channel instability within Reach 2B (Impact GEM-2). Channel bed erosion "is anticipated to be up to 7 to 8 feet deep near the upstream end of the Compact Bypass," resulting in sediment deposition up to 7 feet thick near the downstream end of the bypass. DEIS/DEIR at 14-43. The evaluation of this impact conclusory states that this erosion will be controlled by the Compact Bypass bifurcation structure as well as grade control structures in the bypass channel, but does not indicate how such structures will do so or provide any way of evaluating whether the DEIS/DEIR's finding of a less-than-significant impact is actually supported by substantial evidence.

O-WO-16 Third, Impact GEM-3 appears to be significant because of the potential for bend cutoff immediately downstream from the Chowchilla Bifurcation Structure. *Id.* at 14-44. Although levees will be set back 300 feet from the river, erosion at this bend will have a greater environmental impact than mere levee erosion. Indeed, it is difficult to understand how rapid bend cutoff, left unmitigated, would **not** have a significant effect on the environment. Moreover, if bend cutoff does occur as rapidly as the DEIS/DEIR indicates it might, it is unlikely that erosion protection techniques will be implemented in time to avoid impacts on neighboring lands. Accordingly, Reclamation should reconsider whether the finding of a less-than-significant impact for Impact GEM-3 is truly supportable.

In short, the DEIS/DEIR's discussion of the Project's impacts on surface water quality and geomorphology of the river leaves much to be desired. This section of the DEIS/DEIR should be substantially revised—and the impacts more robustly analyzed—before Reclamation certifies a Final EIS/EIR.

5. Public Health and Hazardous Materials

O-WO-17 Each Project alternative could have a potentially significant impact in terms of the exposure of people to increased risk of diseases. *Id.* at 19-30. Wonderful is particularly concerned about the potentially significant impact of exposing people to an increased risk of West Nile Virus (Impact HAZ-5). Reclamation indicates that wetted portions of the San Joaquin River present a risk of mosquito activity, and that the risk will primarily fall on SJRRP construction and maintenance personnel. Wonderful believes that the risk of West Nile Virus-carrying mosquitos will also impact agricultural workers who work on lands adjacent to the River, and that the increased risk of mosquito-borne diseases will increase substantially as the floodplain channel is expanded and full restoration flows begin moving through Reach 2B. Accordingly, the amount of analysis for this impact is deficient in that it only addresses the impact as it relates to construction of the Chowchilla

[3] A map of the existing points of diversion for the New Columbia Ranch is attached hereto as Attachment B.

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O-WO-17 cont.

Bifurcation structure rather than the impact of restoring the floodplain channel and expanding the San Joaquin River channel to support restoration flows.

Given this deficiency in analyzing Impact HAZ-5, it does not appear that Mitigation Measures HAZ-5A, HAZ-5B, and HAZ-5C can mitigate the full extent of the increased risk of West Nile Virus to a less than significant level. Workers using mosquito repellent and eliminating standing water in buckets and cans cannot mitigate the impacts from a substantial increase in floodplain habitat and a river channel that will be expanded to nearly three times its current size. Accordingly, Reclamation must reevaluate its analysis of Impact HAZ-5 and either adopt more robust mitigation measures or adopt a statement of overriding considerations in conjunction with the Final EIS/EIR.

6. Socioeconomics and Economics

O-WO-18

The DEIS/DEIR concludes in impact ECON-1 that the Project will have a less than substantial impact with respect to the change in agricultural production values. The less-than-substantial finding is predicated upon the assumption "the direct economic effect on farmers would be negligible because privately-owned farmland would be purchased and property owners compensated at fair market value for their land, which is generally based on revenue potential for agricultural properties." DEIS/DEIR at 21-25. It is not clear from the DEIS/DEIR if only the revenue generating capability of the land will the single factor of determine value or if Reclamation will use this in combination with comparable sales in determining the fair market value of a property. The Final EIS/EIR should consider both methods of determining value in order to capture the true value of this unique combination of reliable water and good soils.

Thank you for considering and responding to the above comments. Wonderful appreciates Reclamation's ongoing cooperation and communication with landowners in the San Joaquin River Restoration Program area. Should you have questions, please do not hesitate to contact me.

Sincerely,

Kimberly Brown
Senior Director, Water Resources

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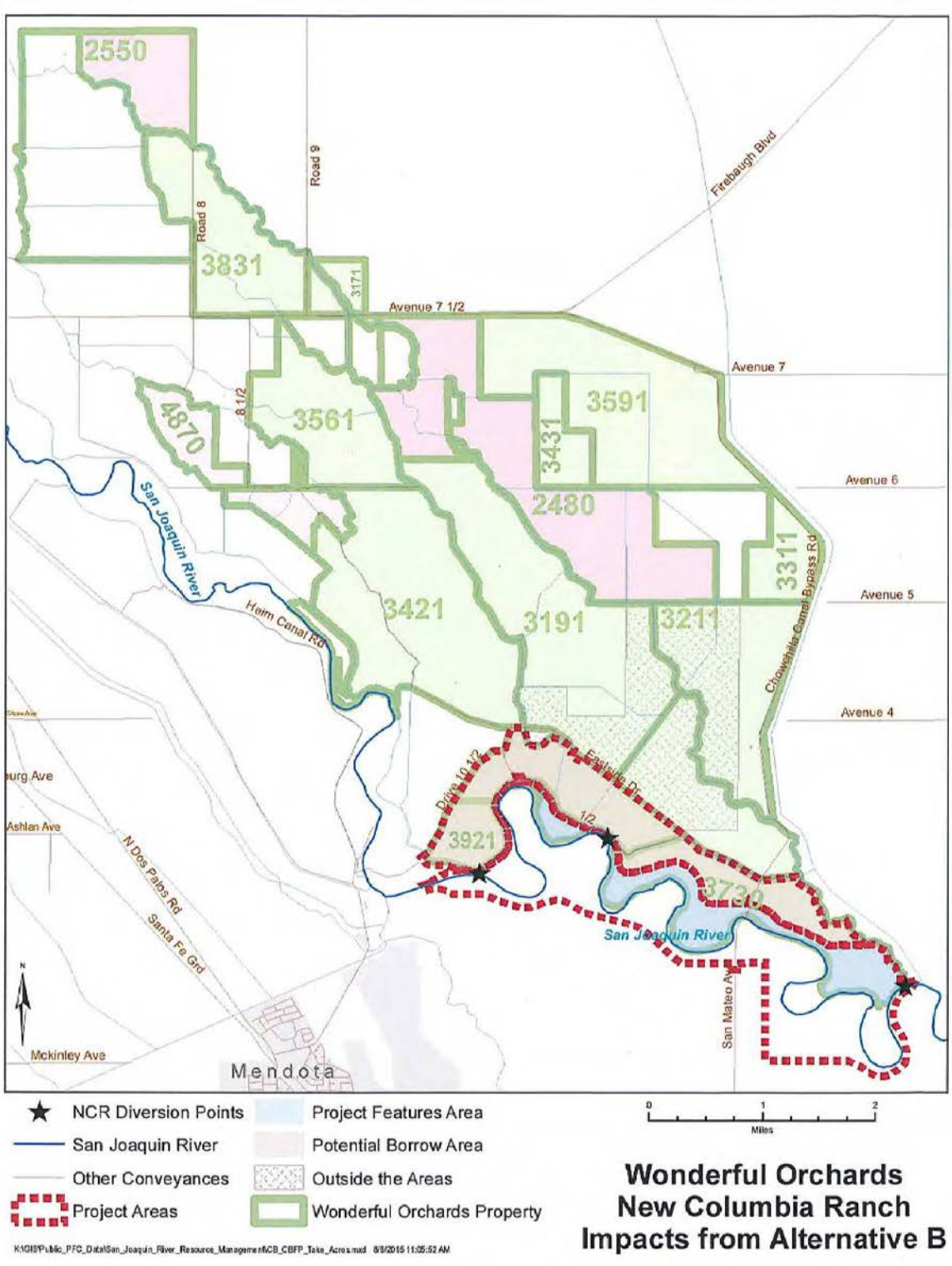
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Firebaugh Blvd
Avenue 7 1/2
Avenue 7
Avenue 6
Avenue 5
Avenue 4
San Joaquin River
Heim Canal Rd
Chowchilla Canal Bypass Rd
Drive 10 1/2
Eastside Dr
1/2
Ashlan Ave
N Dos Palos Rd
Santa Fe Grd
San Mateo Ave
Mckinley Ave
Mendota
NCR Diversion Points
San Joaquin River
Other Conveyances
Project Areas
Project Features Area
Potential Borrow Area
Outside the Areas
Wonderful Orchards Property
0
1
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Miles
Wonderful Orchards
New Columbia Ranch
Impacts from Alternative B

Wonderful orchards.

June 15, 2015

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

VIA EMAIL TO FrameworkComments@restoresjr.net

June 15, 2015

Re: Comments on SJRRP 2015 Revised Framework for Implementation

Dear Ms. Forsythe:

Wonderful Orchards (formerly Paramount Farming Company) owns New Columbia Ranch, located on the east side of Reach 2B of the San Joaquin River upstream of the Mendota Pool, and also holds rights to the water of the San Joaquin River and its sloughs and exercises those rights to divert flows. Wonderful Orchards will be directly affected by the ongoing implementation of the San Joaquin River Restoration Program ("SJRRP" or "Program") in a number of ways and therefore submits the following comments on the Draft 2015 Revised Framework for Implementation of the San Joaquin River Restoration Program ("Draft Framework"). The Draft Framework is an update and revision to the Third Party Working Draft Framework for Implementation dated June 19, 2012 ("2012 Framework") and is intended to establish a realistic schedule for the Framework's core actions.

First, the Draft Framework's discussion of seepage management projects appears to conflict with previous Program documents that outlined ways to address seepage impacts. Wonderful Orchards has long been concerned about groundwater seepage as a result of increased San Joaquin River flows that could cause crop waterlogging and root zone salinity. In 2014, Reclamation issued a Seepage Management Plan that discussed numerous projects with the potential to reduce or avoid SJRRP-induced seepage impacts along the San Joaquin River. Reclamation specifically mentioned nine different projects that it could implement to reduce seepage impacts on adjacent landowners, including cut-off walls, seepage plugs, interceptor drains and ditches, building up the land surface, and conveyance improvements. The Draft Framework's Five Year Vision, however, analyzes the costs of implementing groundwater seepage projects only in terms of "interceptor lines, fee simple acquisition, and seepage easements." (Draft Framework, at 4-20:4). Wonderful Orchards strongly prefers the construction of seepage management projects that will obviate any need for seepage easements or outright acquisitions of privately owned property adjacent to the River.

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Wonderful Orchards accordingly requests that the final Framework for Implementation include a commitment to the Seepage Management Plan and incorporate a thorough discussion of the costs of physical seepage projects such as seepage plugs and cut-off walls. In particular, Wonderful Orchards asks that Reclamation confirm that it still intends to construct physical projects such as those identified in the Seepage Management Plan to minimize groundwater seepage caused by restoration flows and maintain, expand and repair as necessary with Program funding.

Second, Wonderful Orchards continues to be concerned about the intended division of responsibilities for levee construction, operations, and maintenance in Reach 2B. The Draft Framework's discussion of the Ten Year Vision with respect to Reach 2B levees indicates that setback levees are necessary to permit flows of up to 4,500 cfs. Unfortunately, the Draft Framework does not indicate which agencies will be responsible for constructing, operating, and maintaining the contemplated setback levees. At a minimum, the final Framework for Implementation should indicate which agencies will be responsible for setback levee construction. It should also discuss which agencies may ultimately become responsible for levee operations and maintenance, including capital funding and ongoing operations and maintenance costs which are critical for a successful Program and to ensure there are no impacts to landowners or other third parties.

Furthermore, the discussion of land acquisition for the Reach 2B setback levees is inadequate. The Draft Framework states that land acquisition costs are currently estimated at $37.21 million, and that while the bulk of the acquisitions will occur early in the Ten Year Vision, some acquisitions could occur during the Five Year Vision. The final Framework for Implementation should discuss more thoroughly how Reclamation developed this cost estimate for land acquisition. It should also indicate, at least generally, which parcels may need to be acquired to construct setback levees, and delineate whether those parcels will be purchased during the Five Year Vision or the Ten Year Vision. Although Wonderful Orchards understands that definitive statements regarding these issues cannot be made until the environmental review process is complete, some preliminary discussion in the final Framework for implementation would be helpful for planning purposes.

Perhaps most importantly, the Draft Framework fails to grapple with the uncertainties of federal and state appropriations necessary to fund the core actions identified in the Draft Framework and does not adequately address the lack of progress on mandated improvements. Throughout the Draft Framework, Reclamation notes that federal and state appropriations will be necessary to implement the SJRRP. While some appropriations will be available during the Five Year Vision, Reclamation anticipates that these funds will be exhausted by Fiscal Year 2017. Although the Draft Framework claims that reliance on appropriations will be reduced during the Ten Year Vision, it still identifies a need for up to $55 million in federal appropriations, with uncertain funding levels from the state. Significant federal appropriations are also required for implementation of the Fifteen Year Vision.

As Reclamation is well aware, legislative appropriations are highly uncertain, and there is no guarantee that Congress or the California legislature will continue to fund the SJRRP. Indeed, the current Speaker of the House has questioned the value of the SJRRP and supported legislation that would have temporarily halted the SJRRP. In light of the uncertainty

surrounding future appropriations of funding for the SJRRP, Wonderful Orchards respectfully requests that the final Framework for Implementation include a more detailed discussion of other potential sources of funds and a commitment to halt Program flows should the funding not be secured or specific Program components not completed. Wonderful Orchards further requests that the final Framework for Implementation attempt to prioritize which SJRRP projects it will construct in the event that anticipated appropriations are not available in future years. In attempting to address these contingencies, Reclamation and the SJRRP must ensure that landowners are not materially and adversely affected by SJRRP activities.

Thank you for considering and responding to the above comments. Should you have questions, please contact me at any time.

Sincerely,

Kimberly M. Brown
Senior Director, Water Resources

PARAMOUNT
FARMING

SENT VIA E-MAIL

November 03, 2014

Alexis R. Phillips-Dowell, Senior Engineer
Department of Water Resources, South Central Region Office
3374 East Shields Avenue
Fresno, CA 93726
aphillips@water.ca.gov

Re: Comments on the Draft Channel Capacity Report for the 2015 Restoration Year

Dear Ms. Phillips-Dowell:

Paramount Farming Company, as agent for Paramount Land Company LLC and Paramount Pomegranate Orchards LLC (Paramount) submits the following comments on the Draft Technical Memorandum and Channel Capacity Report for the 2015 Restoration Year (2015 Draft Report). The Draft Report is issued as part of the San Joaquin River Restoration Program (SJRRP) to determine and update estimates of then-existing channel capacities along the San Joaquin River.

Paramount owns New Columbia Ranch, located on the east side of Reach 2B of the San Joaquin River, upstream of the Mendota Pool and also holds rights to the water of the San Joaquin River and its sloughs and exercises those rights to divert flows. Paramount will be directly affected by the SJRRP in a number of ways and appreciates the opportunity to submit the following comments.

The Program Environmental Impact Statement/Environmental Impact Report (PEIS/R) for the SJRRP included in-channel flow limits based on estimated in-channel capacities along the San Joaquin River. The PEIS/R in-channel flow limit for Reach 2B was 810cfs. Based on various technical studies and analysis, the Draft Report for the 2014 Restoration Year (2014 Report) increased the recommended then-existing channel capacity in Reach 2B to 1,120cfs. Five studies were conducted, however two studies, the In-channel Capacity Study completed in 2013 and the Middle Eastside Geotechnical Assessment, generated the basis for the 2014 recommendation. The Draft Report utilizes these same two studies and maintains the capacity recommendation of 1,120cfs. *See* Draft Report, Section 8.0. There have been no additional studies completed to refine the 2014 Report recommendations, however significant subsidence issues have become apparent in various reaches of the SJRRP areas since 2013, which could significantly reduce existing channel capacities. Paramount asks Reclamation to conduct updated technical studies and issue updated channel capacities to properly reflect these significant changed circumstances and ensure landowners within the SJRRP area are not impacted.

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As expressed in our comment letter regarding the 2014 Report, Paramount is specifically concerned about the impacts of the increased then-existing channel capacity in Reach 2B on its adjacent property. In particular, the presence of a flow at 1,120cfs in Reach 2B for an extended period of time and under varying hydrologic conditions may cause adverse impacts to Paramount's property through ponding and groundwater seepage. In order to avoid these impacts, Reclamation must comply with its Physical Monitoring and Management Plan, Seepage Management Plan and the thresholds established by such plans. Reclamation should address comments prior to finalizing any updates to these critical plans or thresholds.

Paramount has concerns over certain current SJRRP monitoring well seepage thresholds near its planted acreage on New Columbia Ranch. The seepage thresholds for several SJRRP monitoring wells located in close proximity to Paramount almond orchards are set at 6 feet. Paramount has engaged SJRRP consultants and staff to request a review of these thresholds as they do not meet the SJRRP established Ag threshold standard for almonds of 10 feet despite the close proximity to almond acreage. Although no seepage thresholds have been reached on the monitoring wells near the New Columbia Ranch, operating at the increased 1,120 cfs capacity could cause triggers of seepage thresholds and seepage thresholds should be corrected to ensure protection of the nearby crops, in Paramount's case, its almond orchards.

We understand the intent of the SJRRP is to not cause adverse impacts to landowners and the 2015 Draft Report acknowledges that the SJRRP will limit flows "to levels that do not result in material adverse impacts due to groundwater seepage, which may be more limiting than levee seepages and stability."

Paramount agrees Reclamation must continue to operate to avoid impacts to property adjacent to the River and to restrict SJRRP releases when Reclamation anticipates that the groundwater level thresholds identified in the Seepage Management Plan will be reached. It also, however, requests a review and revision of certain seepage thresholds near New Columbia Ranch and recommends conducting updated technical studies which incorporate changed circumstances, such as subsidence, to determine existing channel capacity to ensure proper triggers are in place to recognize the potential to impact landowners. Thank you for considering and responding to the above comments. Should you have questions, please contact me at anytime.

Sincerely,

Kimberly M. Brown
Senior Director, Water Resources

Cc: Katrina Harrison, kharrison@usbr.gov

PARAMOUNT
FARMING

November 4, 2013

VIA CERTIFIED MAIL

Alexis R. Phillips-Dowell, Senior Engineer
Department of Water Resources, South Central Region Office
3374 East Shields Avenue
Fresno, CA 93726

Re: Comments on the Draft Technical Memorandum and Channel Capacity Report for the 2014 Restoration Year

Dear Ms. Phillips-Dowell:

Paramount Farming Company, as agent for Paramount Land Company LLC and Paramount Pomegranate Orchards LLC (Paramount), submits the following comments on the Draft Technical Memorandum and Channel Capacity Report for the 2014 Restoration Year (Draft Report). The Draft Report is issued as part of the San Joaquin River Restoration Program (SJRRP) to determine and update estimates of then-existing channel capacities along the San Joaquin River.

Paramount owns New Columbia Ranch, located on the east side of Reach 2B of the San Joaquin River, just upstream from the Mendota Pool and downstream from the historic Whitehouse Gauging Station near the head of Lone Willow Slough. Paramount also holds rights to the water of the San Joaquin River and its sloughs and exercises those rights to divert flows. Paramount will be directly affected by the SJRRP in a number of ways and has previously submitted comment letters on documents related to the Program. Paramount recognizes its ongoing relationship with the Bureau of Reclamation and is committed to the continued collaboration and open communication of this relationship. Please accept the following comments on the Draft Report.

The Program Environmental Impact Statement/Environmental Impact Report (PEIS/R) for the SJRRP included in-channel flow limits based on estimated in-channel capacities along the River. The limit for Reach 2B was 810 cfs. *See* Draft Report, p. 24. Based on various technical studies and analysis, the Draft Report increases the recommended then-existing channel capacity in Reach 2B to 1,120 cfs. *See* Draft Report, p. 37. In making this recommendation for Reach 2B, the Draft Report relies on the *San Joaquin River In-Channel Capacity Analysis* completed by Tetra Tech in February 2013. *Id.* at 25-29.

Paramount is concerned about the impacts of the increased then-existing channel capacity in Reach 2B on its adjacent property. In particular, the presence of a flow at 1,120 cfs in Reach 2B for several continuous weeks may cause adverse impacts to Paramount's property through ponding and groundwater seepage. In order to avoid these impacts, Reclamation must comply

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with its Physical Monitoring and Management Plan, Seepage Management Plan and the thresholds established by such plans.

The Draft Report acknowledges that the SJRRP will limit flows "to levels that do not result in material adverse impacts due to groundwater seepage, which may be more limiting than levee seepages and stability." Draft Plan, pgs. 6, 36. Paramount agrees that Reclamation must continue to operate to avoid impacts to property adjacent to the River and to restrict Program releases when Reclamation anticipates that the groundwater level thresholds identified in the Seepage Management Plan will be reached. In that respect, the thresholds of the Seepage Management Plan supersede the estimated then-existing channel capacities identified in the Draft Report. Reclamation must reduce Program flows to address material seepage impacts identified in the Physical Monitoring and Management Plan and the Seepage Management Plan.

Thank you for considering and responding to the above comments. Should you have questions, please contact myself or Kimberly Brown.

Sincerely,

William D. Phillimore
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September 16, 2011

VIA MAIL AND E-MAIL

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

Re: Comments on the Draft Program Environmental Impact Statement/ Environmental Impact Report for the San Joaquin River Restoration Program

Dear Ms. Forsythe:

Paramount Farming Company, as agent for Paramount Land Company, LLC and Paramount Pomegranate Orchards ("Paramount") submits the following comments on the San Joaquin River Restoration Program ("SJRRP" or "Project") Draft Program Environmental Impact Statement/ Environmental Impact Report ("PEIS/R"). Paramount owns New Columbia Ranch, located on the east side of Reach 2B of the San Joaquin River, just upstream from the Mendota Pool and downstream from the historic Whitehouse Gauging Station near the head of Lone Willow Slough. Paramount will be directly affected by the SJRRP in a number of ways, including potential threats to quantities of water derived under Paramount's SJR rights and flood flow diversions, potential impacts to the rate of delivery and quantity of supplies to Paramount's Columbia Canal Company lands receiving water under the Exchange Contract, potential for groundwater seepage, increased risk of flooding, the possibility of land acquisition for levee and floodplain modifications in Reach 2B, the possibility for trespass on Paramount's private property, an increased risk of additional species habitation at or near Paramount's property by virtue of the restored river flows, and the possibility that a Mendota Pool Bypass may be routed through Paramount's property.

Paramount previously submitted comment letters on the Bureau of Reclamation's ("Reclamation") petitions to the State Water Resources Control Board ("SWRCB") in connection with the SJRRP for temporary water transfers in 2010 through 2012, and has also submitted comment letters on the Environmental Assessments associated with those temporary transfers. Paramount also submitted a comment letter in response to the April 2010 Technical Memorandum on the Reach 2B Improvements Project. Finally, Paramount sent at least one detailed letter regarding its water rights and requesting an agreement with Reclamation that would protect those rights. To Paramount's disappointment Reclamation has remained unresponsive to Paramount's proposal. Please accept the following comments on the PEIS/R.

1. Comments Regarding Hydrology – Flood Management

Chapter 11 of the PEIS/R addresses potential impacts of the SJRRP on hydrology –flood management. Paramount submits the following comments on the analysis and conclusions contained in Chapter 11:

- The PEIS/R understates the risk of flood damage in Reach 2B from *project*-level activities such as the re-operation of Friant Dam, and does not provide sufficient analysis or mitigation for these potentially significant impacts. Reaches 2B and 4B1 on the San Joaquin River have the least amount of existing channel capacity of all reaches within the study area, and accordingly these reaches will likely be more susceptible to flooding and damage from Interim and Restoration flows. This is illustrated in Table 11-1 on page 11-17 of the PEIS/R, which notes that Reach 2B has an estimated channel capacity of 2,500 cubic feet per second ("cfs") and Reach 4B1 has a capacity of 1,500 cfs, compared to all other reaches of the river with capacities of 4,500 cfs or more, however the estimated 2B channel capacity should be corrected to reflect the existing channel capacity of 1,300cfs (described more fully in the next paragraph) and not an artificially high channel capacity. The Project is to be operated to avoid or mitigate impacts and should therefore manage flows at all times below 1,300cfs until, and only if, channel modifications are made that improve the channel capacity. The Project description in Chapter 2 of the PEIS/R is careful to point out that under all of the proposed Alternatives except for the No-Action Alternative, Restoration flows will only be released "*without exceeding then-existing channel capacities*" (emphasis added), which is, and should be stated clearly, 1,300 cfs for Reach 2B. (*E.g.* PEIS/R at p. 2-20, Table 2-5, and p. 11-43 [noting that the project-level risk of flooding will be "less than significant" because "Interim and Restoration flows would be constrained to then-existing channel capacities"]).

  It is apparent from Chapter 11 and Appendices H and I of the PEIS/R that Reach 2B should be considered *at least* the same, if not more, at risk of flooding than Reach 4B1. As stated above, although the "design capacity" for Reach 2B is stated as 2,500 cfs in Table 11-1, the PEIS/R notes that "historical operations typically route up to 1,300 cfs to the Reach 2B, with the remaining flow going to the Chowchilla bypass." (PEIS/R pp. 11-17, 11-18). This is because "*significant seepage has been observed at flows above 1,300 cfs*" (emphasis added), despite the fact that the Friant Dam Flood Control Manual specifies that Reach 2B could accommodate up to 2,500 cfs. (PEIS/R p. 11-8, and App. H, p. 7-11). Thus, as noted on page 3-41 of Appendix I, the "existing capacity of Reach 2B is approximately 1,300 cfs." In order to avoid significant project-level impacts to Reach 2B, project-level water releases to that reach must remain below 1,300 cfs. (*See* PEIS/R p. 11-43. App. H pp. 7-7 and 7-8, and App. I p. 3-41).

  It is suggested on page 7-11 of Appendix H that the Flood Control Manual specifications of 2,500 cfs and the actual channel capacity of 1,300 cfs were incorporated together into the model that was used for the PEIS/R analysis, "using either a split flow rating curve or by directly entering the split flow hydrograph as

internal boundary conditions." To the extent that the analysis of potential flooding impacts is based on anything above 1,300 cfs for Reach 2B, the model is flawed, misleading, and must be revised. Moreover, to the extent that the definition of "in-channel flows" on page 11-43 of the PEIS/R ("flows that maintain a water surface elevation at or below the elevation of the landside levee toe") means that project-level releases to Reach 2B will be above 1,300 cfs, the PEIS/R clearly acknowledges there will be a high potential for significant seepage impacts, and "Impact FLD-6" must be revised to a "significant impact" in order to properly address, analyze, and mitigate the potential impacts. (*See e.g.* Table 13-73 at p. 13-106 [noting that predicted flow levels during spring months will be higher than 1,300 cfs]). Any assumption of flows above 1,300 cfs must be corrected or additional analysis and mitigation measures must be incorporated into the PEIS/R to address the potentially significant impacts.

- The PEIS/R acknowledges that the potential impacts of many program-level actions, including the potential construction of levees and berms in Reach 2B and the provision of a larger floodplain, are uncertain and unknown at this time. (*See e.g.* PEIS/R p. 11-40). Due to this uncertainty, Paramount will submit its comments in response to the 2B project-specific analysis of those potential actions.

- The PEIS/R concludes on page 11-49 that "regular maintenance activities within the Restoration Area maintain levee access for inspection and maintenance," and therefore the potential *impacts* on such inspection and maintenance caused by project-level actions would be less than significant. This is a circular argument: that no impacts will occur to inspection and maintenance activities because inspection and maintenance activities regularly occur. Additionally, the proposed levee improvements may require additional access, inspection and maintenance than existing levees, which needs to be fully analyzed in the PEIS/R. Some of the proposed actions include levees that cover a larger area, have different functions, and may be subject to different flow rates and water levels when compared to existing levees, and it cannot be assumed that historic and current inspection and maintenance activities are sufficient to meet the needs of these proposed Project levees. Paramount's property includes a large section of privately-owned and maintained levees along Reach 2B. Particularly because Reach 2B is a vulnerable reach of the river, as discussed above, Paramount requests that Reclamation execute an agreement with Paramount similar to the agreement that it is currently negotiating with LSJLD. (*See* PEIS/R p. 11-49). A financial assistance agreement will ensure that any additional costs associated with Paramount's levee maintenance activities are provided for, and will keep this impact to a less-than-significant level.

2. Comments Regarding Impacts to Hydrology – Groundwater

Chapter 12 of the PEIS/R addresses potential impacts to groundwater supplies. Paramount submits the following comments on the analysis and conclusions contained in Chapter 12:

- The actions identified in Appendix D, "Physical Monitoring and Management Plan," should be incorporated into the Project as an enforceable mitigation measure, because those actions are specifically designed to reduce or avoid the Project's potential impacts to groundwater to a less-than-significant level. (*See e.g.* PEIS/R p.12-120 [discussing Impact GRW-3]).

- The conclusion on pages 12-118 and 12-119 of the PEIS/R, that higher groundwater levels in Reach 2 would have less-than-significant impacts, should be revised to reflect the potential for "significant seepage" in Reach 2B, based on the historic observations noted elsewhere in the PEIS/R, particularly on pages 11-8 and Appendix H, p. 7-11. (*See also* p. 12-35 ["Seepage problems were also reported along the Chowchilla Bypass below the bifurcation structure on both sides of the channel in 2006"]).

- Project activities must occur in a manner that preserves and protects the overlying groundwater rights of landowners adjacent to the San Joaquin River.

3. Comments Regarding Impacts to Hydrology – Surface Water Supplies and Facilities Operations

Chapter 13 of the PEIS/R addresses potential impacts of the SJRRP on surface water supplies and facilities operations. Paramount submits the following comments on the analysis and conclusions contained in Chapter 13:

- Pages 13-72 through 13-79 of the PEIS/R describe potentially significant impacts on the diversion capacities of exiting pumping facilities. The PEIS/R concludes that these would be program-level impacts caused by future construction activities in specific areas, and proposes a program-level mitigation measure that would provide for "alternative equivalent pumping capacity," relocations of existing facilities, and "alternate temporary or permanent river access to avoid diversion losses," as needed. Paramount supports this proposed mitigation measure so long as it carries over into future project-level studies associated with construction activities in Reach 2B.

- Tables 13-73 and 13-74, on pages 13-106 and 13-107 of the PEIS/R, depict the anticipated change in flows at the "head of Reach 2B" of the San Joaquin River. These tables show the "existing conditions" in Reach 2B as having very little flow, particularly in dry years. (*See also* p. 3-2 [Reach 2B is "dry in most months"]). Footnote 2 of Table 13-73 and footnote 3 of Table 13-74 even state that "this reach is typically dry during all or part of the year in the existing conditions or No-Action Alternative simulations." This is inaccurate. A portion of the Mendota Pool spans over half the length of Reach 2B, and in the absence of the proposed Project there would be water in the San Joaquin River year-round in that reach. The discussion in the PEIS/R should be revised to indicate that water is always present in the majority of Reach 2B, and the PEIS/R should discuss what percent of change the SJRRP will cause to these historical water levels.

- Page 13-130 describes the significant proposed reductions in flood flows that will be released from Friant Dam and enter the Chowchilla Bypass. These flows would be cut

by more than half in most months. This proposal ignores the fact that landowners along the Chowchilla Bypass are exercising water rights. (*See e.g.* SWRCB Permit No. 19615, and Paramount's Statement of Diversion and Use submitted to the SWRCB on June 29, 2011). Moreover, the PEIS/R in Chapter 11, at page 11-8, indicates that the Chowchilla Bypass "is constructed in highly permeable soils, and much of the initial flood flows infiltrate and recharge groundwater." Neither Chapters 11, 12, nor 13 address the negative impacts on groundwater supplies that will likely be caused by the reduction of flood-flow releases into the Chowchilla Bypass. This project-level impact should be more closely addressed, analyzed, and mitigated.

Thank you for considering and responding to the above comments. Paramount sincerely hopes that the Bureau of Reclamation and the Department of Water Resources will be responsive to and cooperative with Paramount, which faces a host of potential impacts from the proposed Project. Should you have questions, please contact myself or Kimberly Brown using the above contact information.

Sincerely,

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July 7, 2011

VIA U.S. MAIL AND E-MAIL

Michelle Banonis
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Sacramento, CA 95825-1898
InterimFlows@restoresjr.net

Re: Comments on San Joaquin River Restoration Program, Supplemental Environmental Assessment for Water Year 2012

Dear Ms. Banonis:

Paramount Land Company, LLC, and Paramount Pomegranate Orchards ("Paramount") own New Columbia Ranch on the San Joaquin River, just upstream from the Mendota Pool and downstream from the historic Whitehouse Gauging Station near the head of Lone Willow Slough, which is within the project area described in the San Joaquin River Restoration Project, Supplemental Environmental Assessment for Water Year 2012 ("Supplemental EA"). Paramount appreciates the opportunity to submit these comments on the Supplemental EA. Please note that Paramount is concurrently preparing comments on the Draft Program Environmental Impact Statement/Report for the San Joaquin River Restoration Program, which will further address the potential for impacts on Paramount's property and water rights.

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

As an initial matter, Paramount notes that the Supplemental EA addresses the continuation of the Bureau of Reclamation's ("Reclamation") San Joaquin River operations that were in place during Water Year 2010 and 2011. To the extent that Reclamation intends to extend these operations each year until full restoration flows are released in 2014, the National Environmental Policy Act ("NEPA") requires Reclamation to address the effects of these extended operations in a comprehensive environmental document and not on a segmented annual basis. 40 C.F.R. 1508.25(a).

2. ***The Proposed Restoration Program Could Impact Paramount's Water Rights.***

Paramount has explained to Reclamation in various communications that it has prior existing water rights at New Columbia Ranch, and that Reclamation is contractually

obligated to supply water for diversion in Reach 2B. Reclamation must protect and uphold these rights and obligations, and the San Joaquin River Restoration Program may not create additional restrictions or costs on Paramount's ability to exercise its rights.

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

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

Although the proposed project and Paramount's water rights are in apparent conflict, the Supplemental EA does not even mention the issue. Paramount reminds Reclamation that the State Water Resources Control Board conditioned Reclamation's Interim Flow regime as subject to prior rights. Order WR 2009-0058-DWR, pp. 5, 10 (Oct. 1, 2009); Order WR 2010-0029-DWR, pp. 6, 17. Reclamation may not cut off or improperly limit Paramount's access to water through the proposed project or the final implementation of the San Joaquin River Restoration Program. So far the Interim Flow regime has not interfered with Paramount's rights because Paramount did not divert in 2009 and has successfully diverted in the usual manner in 2010-2011, but Paramount submits this comment to reiterate that the proposed project may not interfere with Paramount's rights.

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

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

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

The Supplemental EA acknowledges that the proposed project could result in elevated seepage in the project area and that such seepage has the potential to impact crops, water salinity, and levee stability. Although the Supplemental EA indicates that Reclamation will monitor groundwater levels to reduce seepage impacts, it does not state how

2

Reclamation will protect property owners or mitigate damages if these impacts do occur. Paramount asserts that Reclamation is responsible for any seepage impacts to its crops, private levees, groundwater wells, or other structures on its property that the proposed project flows may cause. In addition Interim Flows that exceed current channel capacity and result in impacts to crops, private levees, groundwater wells, or other structures must also be mitigated by Reclamation should they occur.

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

The Supplemental EA states that the proposed project will not result in agricultural impacts, either on a project level or cumulative level. *See, e.g.*, Supplemental EA at p. 3-2. These statements completely ignore the impacts on Paramount's agricultural operations caused by the take of prime agricultural land and water resources.

Paramount appreciates the opportunity to submit these comments and would be willing to discuss options for Reclamation to pursue the San Joaquin River Restoration Program without interfering with Paramount's rights and interests. By reference, Paramount also hereby joins in the comments submitted by the San Joaquin River Resource Management Coalition (RMC).

Sincerely,

William D. Phillimore
Executive Vice President

3

II.6.6 Responses to Wonderful Orchards

Response to Comment O-WO-1
Your comments and the attachments to your comment letter have been reviewed and considered in preparation of the Final EIS/R.

Response to Comment O-WO-2
As discussed in Section 16.3.3 of this EIS/R, agricultural conservation easements and/or funds have been incorporated in the mitigation measures for impacts to land use planning and agricultural resources. Specifically, Mitigation Measure LU-1 states, in part, Reclamation will "either (1) acquire agricultural conservation easements for designated Farmland/Important Farmland at a 1:1 ratio to be held by land trusts or public agencies who will be responsible for enforcement of the deed restrictions maintaining these lands in agricultural use, or (2) provide funds to a land trust or government program that conserves agricultural land sufficient to obtain easements on comparable land at a 1:1 ratio." Consistent with the findings in *Masonite Corporation v. County of Mendocino* (215 Cal.App.4th 230), conservation easements and in-lieu fees are considered feasible mitigation measures.

In addition, in response to your concerns, borrow areas on permanent crops have been removed from Alternative B, the preferred alternative. Based on recent geologic investigations, Reclamation anticipates that borrow would be taken primarily from within the setback levees, and minimal if any borrow material would be needed from outside of the setback levees. Any borrow material outside of the setback levees would be taken from fallow or row-crop ground to avoid the more significant effects to permanent crops.

Response to Comment O-WO-3
Section 16.3.3 of this EIS/R discusses potential impacts to agricultural land use planning. Adverse effects would be minimized by Reclamation when notifying Fresno and Madera County planning agencies of any inconsistencies in designations and applicable polices for affected areas. There are a few factors that reduce the potentially significant impact to local land use policies to less-than-significant levels. First, in some alternatives (Alternatives A, B, and D), the Project may include agricultural uses on the floodplain, not necessitating a change in the zoning designation. Second, Reclamation is not subject to local land use planning and zoning designations and therefore, Reclamation would not take action to mitigate this impact beyond notification to the local agency. Lastly and most important, zoning designations are intended to prevent generally incompatible land uses from being located adjacent to each other. Agricultural lands and riverine/riparian habitat are generally compatible land uses and the two are currently located next to each other in the Project area. Therefore, no conflicting land uses would occur, which continues with the underlying purpose of the zoning designations.

Also, General Plans typically have a 5-year review cycle by the counties. Reclamation would coordinate with County planning agencies and provide the appropriate information needed to facilitate land use zoning updates to the Fresno and Madera County General Plans. In addition, see response to O-WO-2 regarding agricultural conservation easements.

Response to Comment O-WO-4

The seepage management measures that would be implemented in Reach 2B area are part of this Project and are included in the Action Alternatives and incorporated into the levee design, as described in Section 2.2.4 of the EIS/R. The EIS/R impact analysis assesses seepage effects resulting from the Project, which is the area adjacent to the Reach 2B levees where a variety of the seepage management measures would be implemented (*e.g.*, cutoff walls, inceptor drains or ditches, seepage wells, seepage berms, *etc.*). Construction effects are described for the Project (*e.g.*, clearing and grubbing, earthwork, *etc.*). Long-term effects from the seepage management measures are also described (see Sections 13.3.3 and 16.3.3 of this EIS/R). The environmental analysis of the seepage management measures has not been "piecemealed" or segmented from other aspects of the Project, but instead the impacts are presented contiguously. This Project-specific information is considered in evaluating Impact LU-4 (Degradation of Agricultural Land Productivity due to Seepage). See MCR-2: Seepage Management.

The SJRRP is implementing several programs to address seepage and levee stability concerns in the Restoration Area. Seepage and levee stability issues in Reach 2B are all addressed as part of this Project and this environmental analysis. Seepage and levee stability issues in Reach 4B are anticipated to be addressed as part of the ongoing Reach 4B, Eastside and Mariposa Bypasses Project and its environmental analysis. Seepage projects in all other reaches (Reach 2A, 3, 4A, and 5) are anticipated to be addressed as part of the seepage project program, described in the Seepage Project Handbook appendix (Appendix L) of the Seepage Management Plan (SJRRP 2014a), with separate environmental analysis. Levee stability projects in all other reaches (Reach 2A, 3, 4A, and 5) are anticipated to be addressed as part of the levee stability program described in the Channel Capacity Reports (SJRRP 2016a), with separate environmental analysis. This approach is not piecemealing, as each component project is split by geographic area, is distinct, has independent utility, and was analyzed at a programmatic level in the PEIS/R for the SJRRP as a long-term management actions (Section 2.4.3 of the PEIS/R).

Since seepage projects are being implemented in different locations over time, the Restoration Flows are limited in various reaches of the Restoration Area to account for agricultural seepage limitations and to reduce the risk of levee failure. The Seepage Management Plan (SJRRP 2014a) addresses how seepage is monitored, how thresholds are determined, and contains an operations plan with the intent of reducing or avoiding SJRRP-induced seepage impacts along the San Joaquin River and the Eastside and Mariposa Bypasses from Friant Dam to the confluence with the Merced River. The Channel Capacity Reports (latest report is SJRRP 2016a) address monitoring and analysis of then-existing channel capacities for the purposes of reducing flood risk; these reports also identify further limitations on Restoration Flows based on agricultural seepage. See MCR-6 Flood Management Considerations and O&M Costs for further discussion of then-existing channel capacities.

Response to Comment O-WO-5

Section 16.3.3 of this EIS/R discusses the potential for an increased incidence of disease which could diminish agricultural productivity. Impact LU-6 discusses how some

riparian plants can host organisms that cause disease in fruit and nut crops, how increased incidence of disease in orchards can be caused by many issues, and how disease is one of many factors affecting agricultural productivity. As described in the EIS/R, the existing orchards and vineyards within the setback levees for the future floodplain would be removed and riparian and floodplain habitat would be restored by the Project. For example, Alternative B would use both active and passive restoration in the floodplain, including planting and seeding a variety of native plant species in future wetland, riparian, and upland areas (see Section 2.2.6 of the Final EIS/R for a list of potential revegetation species).

Impact LU-6 discusses why riparian vegetation would likely be a less important source of disease-causing organisms and would not substantially reduce agricultural productivity by increasing disease. Many factors affect the incidence of disease in vineyards and orchards, with riparian vegetation being potentially one in a complex life-cycle for individual diseases. The occurrence of vineyard and orchard disease in the San Joaquin Valley is documented in the scientific literature. For example, almond leaf scorch disease (caused by the bacterium *Xylella fastidiosa*) has been present in California's almond growing regions since the 1940s (USDA 2008), and Pierce's disease in grapes (caused by the same organism) was first reported in the 1880's in California (Tumber 2012) and in Fresno and Madera counties by at least 2010 (DFA 2010). For Pierce's disease, USDA (2005) found that host plant species can influence the population of the glassy winged sharp shooter, a concerning vector for this disease, and that orchard species (pomegranate, navel orange, and lemon) had significantly higher numbers of the insects than riparian areas (164, 153, and 142 times, respectively). Therefore, there are many other influences besides the presence of riparian vegetation on loss of agricultural production due to disease.

There is existing riparian vegetation adjacent to the orchards in the Reach 2B area. The increase in riparian vegetation by the Project represents a small risk for increased disease and decreased regional agricultural production values. The level of orchard monitoring, type of cultivars, pruning efforts, irrigation operation, weed management, post-harvest orchard clean-up, and application of fungicides, bactericides, insecticides, and biological controls are significant factors in the incidence and control of disease in orchards.

In addition, the levees built for the Project would be located between the remaining orchards adjacent to the Project Area and future riparian areas. The levees would be built to Corps' standards and would only be vegetated with grasses, as opposed to existing conditions where riparian vegetation occurs on and outside the levees. The levees for the Project are expected to be 100 to 200 feet wide and would have parallel access roads and potentially other levee associated features (e.g., seepage controls) that would increase that width. The levee area represents a buffer between remaining orchards and riparian vegetation that would further reduce the risk of orchard diseases associated with riparian vegetation.

The analysis of Impact LU-6 concludes with a less-than-significant finding as future floodplain conditions, where new vegetation would be introduced and other vegetation

would be removed, are compared to existing conditions and the No-Action Alternative, where riparian vegetation currently exists adjacent to orchards and vineyards.

Response to Comment O-WO-6

See response to comment O-WO-5. The impact analysis in Section 16.3.3 of the EIS/R discusses factors associated with incidence of disease (*i.e.,* the risk of contracting the disease), which is a complex issue. Once contracted, disease clearly affects agricultural productivity. While the impact analysis presented in the EIS/R discusses the relative risk of increased crop diseases, it would be speculative to assume that increases in riparian acreage would cause a significant decline in agricultural productivity. The analysis acknowledges that many factors affect disease incidence in orchards and vineyards and that it is a complex process. Because the impact analysis compares future floodplain conditions to existing conditions and No-Action Alternative without assuming that future riparian areas or nearby fruit and nut orchards would be diseased, the discussion cannot be simplified to a comparison of the effects of disease versus an absence of disease on agricultural productivity.

Response to Comment O-WO-7

The flow frequency analysis provided in Section 12.3.3 of this EIS/R describes how often flows of a certain size would occur under restoration conditions and finds that, with Restoration Flows, the size of smaller events (less than a 2 percent annual exceedance probability or 50-year event) would increase but for larger, less frequent, flood events the flow would decrease.

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. 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.

Higher flow events are expected to decrease, in part, because the amount of water that is stored at Millerton Lake throughout the year is reduced by the release of Restoration Flows, and in certain years, Millerton Lake is expected to have more flood storage available than it would otherwise have without the release of Restoration Flows. This would reduce the frequency of larger flood events. Please see Chapter 11 of the PEIS/R for a more detailed analysis regarding changes in flood flows with implementation of the SJRRP.

Section 12.3.3 of the Final EIS/R provides additional information on whether a given flood 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. The inclusion of this additional information in the Final EIS/R does not change the conclusions of the Draft EIS/R.

See MCR-2: Seepage Management for a discussion of seepage management measures in the Project area. Physical groundwater seepage projects are designed to be effective under restoration conditions. The current design for the Compact Bypass includes bentonite slurry cut-off walls. The cutoff walls would be about 3 feet wide and would extend 15 to 20 feet below grade and about 8 feet above grade. A bentonite slurry cut-off wall may be constructed to control groundwater seepage elsewhere on the floodplain, although other seepage control measures may also be used, such as drainage ditches, interceptor lines, or seepage easements. The seepage control measures used in the Reach 2B improvements area would be finalized based on site evaluations, suitability of site conditions, feasibility, and landowners and stakeholder input.

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 within the 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. 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, as necessary, to avoid erosion-related impacts. See MCR-6: Flood Management Considerations and O&M Costs and MCR-2: Seepage Management.

Response to Comment O-WO-8

Reclamation would purchase the land (in fee or in easement) within the future floodplain area and replace the previously privately-owned levees with new levees designed to Corps standards. Levee design would be based on Corps Engineer Manuals: *Design and Construction of Levees Engineering and Design Manual* (Manual No. 1110-2-1913)

(Corps 2000a), *Slope Stability* (Manual No. 1110-2-1902) (Corps 2003), *Design Guidance for Levee Underseepage* (Engineering Technical Letter No. 1110-2-569) (Corps 2005), and *Guidelines for Landscape Planting and Vegetation Management at Floodwalls, Levees, & Embankment Dams* (Manual No. 1110-2-301). Long-term monitoring and maintenance of the levees would be consistent with the Program's Physical Monitoring and Management Plan and the maintenance activities described in Section 2.2.4 of this EIS/R. Although actual maintenance activities may be performed by others, Reclamation would be funding construction and O&M of the setback levees.

Response to Comment O-WO-9

This comment raises similar issues as comment O-WO-8. See response to comment O-WO-8. Although actual maintenance activities may be performed by others under contract, Reclamation would be funding construction and O&M of the setback levees. The responsibility for O&M of the levees that are not modified by the Project would not change.

Response to Comment O-WO-10

The seepage management measures that would be implemented in Reach 2B area are part of this Project and are included in the Action Alternatives and incorporated into the levee design, as described in Section 2.2.4 of this EIS/R. Inspection trenches and drainage trenches are also included in the Action Alternatives. The EIS/R impact analysis accounts for the area adjacent to the levees where a variety of seepage management measures (*e.g.*, cutoff walls, inceptor drains or ditches, seepage wells, seepage berms, *etc.*) and drainage trenches would be implemented The current seepage management design for the Compact Bypass includes bentonite slurry cut-off walls in the levees. The cutoff walls would be about 3 feet wide and would extend 15 to 20 feet below grade and about 8 feet above grade. A bentonite slurry cut-off wall may be constructed elsewhere on the floodplain, although other seepage control measures may also be used, such as drainage ditches, interceptor lines, or seepage easements. The seepage control measures used in the Reach 2B improvements area would be finalized based on site evaluations, suitability of site conditions, feasibility, and landowners and stakeholder input.

The EIS/R is based on a 15 to 30 percent level of design for the Project. Reclamation will continue to coordinate with and seek input and feedback from stakeholders, as it has done in the past, throughout the final design process

See response to comment O-WO-4 and MCR-2: Seepage Management regarding potential surface flooding due to levee underseepage and see response to comment O-WO-8 regarding level of flood protection provided by the setback levees.

Response to Comment O-WO-11

This comment raises similar issues as comment O-WO-4. See response to comment O-WO-4 and MCR-2: Seepage Management. Seepage projects implemented in the Project area are analyzed in this document.

Response to Comment O-WO-12

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.

The SJRRP has established a Channel Capacity Advisory Group and has evaluated and published then-existing channel capacity estimates for the river reaches, Eastside Bypass, and Mariposa Bypass in the annual Channel Capacity Reports (most recently in January 2016; SJRRP 2016a). The release of Restoration Flows is a SJRRP activity, not a Project-related activity. As described in the PEIS/R (and in Section 2.2.10 of this EIS/R), Restoration Flows would be maintained at or below estimates of the then-existing channel capacity in the reaches that convey the flow. Because the reaches are connected, flows through Reach 2B would be less than 4,500 cfs until downstream river seepage and levee stability projects are completed and Reclamation, in compliance with the commitments it made in the PEIS/R ROD (Reclamation 2012) and consistent with the requirements in its water rights order, has determined that the non-damaging channel capacity is 4,500 cfs.

Response to Comment O-WO-13

This comment raises similar issues as comment O-WO-4. See response to comment O-WO-4 and MCR-2: Seepage Management.

Response to Comment O-WO-14

Section 14.2.2 of the Draft EIS/R discusses the California Water Code as it relates to water rights. Riparian rights are mentioned briefly in Section 1.6.3 in context with the Lone Willow Slough Diversion. Section 2.2.4 of the Final EIS/R includes additional information regarding the relocations and floodproofing of existing infrastructure, including lift pumps and canals. The inclusion of this additional information in the Final EIS/R does not change the conclusions of the Draft EIS/R. Potential impacts to these utilities are discussed in Section 23.3.3 of this EIS/R (see Impact UTL-7).

Response to Comment O-WO-15

Mendota Dam and Pool have reduced the sediment transport ability of Reach 2B, and over time, sediments have deposited in the San Joaquin River arm of Mendota Pool changing the slope in the lower portion of Reach 2B. The design intent of the Compact Bypass channel (in Alternative B) is to mimic the natural slope of the Reach 2B channel upstream of Mendota Pool. This is accomplished by setting the sill elevation of the Compact Bypass Control Structure at a specific elevation. Grade control structures would also be included in the bypass channel downstream of the control structure, as needed, to lower the equilibrium slope locally, creating a “stair step” in the bypass channel. The grade control structures would stabilize the bed and banks of a channel by reducing slopes locally and by lowering water in a controlled manner.

The channel bed erosion described in Impact GEM-2 (Alternative B) would occur as the excess sediments deposited in the San Joaquin River arm of Mendota Pool are transported through the bypass channel. This type of erosion is expected to occur until the equilibrium slope, set by the sill elevation of the Compact Bypass Control Structure, is achieved. Sediment transport modeling has been done to verify this, as discussed in the Project design report (Reclamation 2015a). The Compact Bypass Control Structure and the grade control structures are hardened engineering features in the channel that would prevent further downcutting beyond the equilibrium slope of the channel set at the natural slope of the Reach 2B channel upstream of Mendota Pool. In addition, the channel would

include riparian vegetation, rock vanes, woody materials, or revetment to protect against bank erosion and to increase channel stability. Channel stability would be controlled as described above and therefore impacts to channel stability were found to be less than significant.

Response to Comment O-WO-16

Erosion protection would not be implemented as a "repair" in response to lateral erosion, but instead would be implemented proactively, at the time of construction, to reduce the potential that lateral erosion would occur and to minimize adverse effects if lateral erosion does occur. (The EIS/R is describing potential effects, not predicting that lateral erosion would occur.) The erosion protection (*e.g.*, revetment, bioengineering, or other erosion protection techniques) would be implemented during construction in all areas where the 300-foot buffer between the river channel and levees could not be provided. The significance determination considers the historical lack of lateral erosion, even under the much higher flows during the pre-Friant Dam period, the likelihood that additional riparian vegetation that would tend to protect against bank erosion would establish along the reach, and the inclusion of erosion protection during construction.

Response to Comment O-WO-17

Impact HAZ-5 indicates that work in the wetted portions of the river that contain mosquito habitat (*e.g.*, areas of still standing water) may increase the risk of exposure to mosquitos. (Mosquito larvae need to develop in still, standing water otherwise the breathing tubes for the larvae submerge and they are drowned.) Mitigation measure HAZ-5A would be implemented in the Project area by construction workers and maintenance staff (*e.g.,* from above the Chowchilla Bifurcation Structure to below Mendota Dam). This measure includes good housekeeping, use of mosquito repellants, coordination with mosquito abatement districts, and additional mosquito vector controls, as needed.

With Restoration Flows and implementation of the Project, a portion of the San Joaquin River arm of Mendota Pool would be changed from stagnant backwater to an active river channel, reducing the amount of standing water in the main channel throughout the year (including summer months). A reduction in the amount of standing water reduces the amount of potential mosquito breeding habitat. Areas in the expanded floodplain could experience some standing water prior to infiltration, however, as described in Section 2.2.4 of this EIS/R, floodplain and channel grading would connect low-lying areas on the floodplain to the river to prevent fish stranding. This would also reduce the amount of area that could otherwise have standing water. It is important to note that the Reach 2B setback levees would not be full from levee to levee, and the floodplain would substantially inundate for only a few weeks in half of the years. This can be seen in the inundation mapping in the Project design report (Reclamation 2015a).

Response to Comment O-WO-18

Section 21.3.3 of this EIS/R, Impact ECON-1, discusses the change in agricultural production values as a result of Project implementation. The decline in agricultural production values is estimated for the Action Alternatives and compared to regional agricultural activity in Fresno and Madera counties. The direct economic effect on

agricultural landowners in the Project area is mentioned to inform the reader that landowners would be compensated for their land. Land acquisition costs are not included in the estimates for the annual change in agricultural production values.

The land acquisition process for the Project will be consistent with existing federal standards and processes. Consistent with Federal law, Reclamation complies with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, the Uniform Appraisal Standards for Federal Land Acquisitions, and the Department of Justice Title Standards for land acquisition actions. Appraisers to date have taken a comparison sales approach to determine the fair market value of properties, based on the highest and best use of a property.

II.7 Comments from Individuals and Responses

II.7.1 Fox, Dennis

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

Subject: Bypass and Reach 2B

Dear Ms Victorine:

I-Fox-1 I do have questions as would the Bard for the necessity for a bypass a sort of 2B or not 2B as the question:

- O Would not the salmon be imprinted on the main stem if from a local hatchery or redd?

I-Fox-2
- Could the local structure at Memdota, termed a weir, have an extended ladder system which would allow salmon passage but would deter predators?

I-Fox-3
- The vegetation necessary for shading has not been grown

I-Fox-4
- The weeds that infest the mains stem and tributaries have not been removed

I-Fox-5
- If any streambed is to be constructed it should best be of a C$ Rosgen classification with allowance for the pool riffle system

I-Fox-6
- There should be some woody debris in place also to keep down the poached salmon syndrome.

I-Fox-7
- Subsidence will cause some areas to be sloughs, rather than free flowing.

I-Fox-8 I mention the use of mini fish ladders as a result of the Fresno State study that the sand and gravel mining operations have left some ponds adjacent to the upper valley reach and they are prime habitat for predators of salmon smolts. The conclusion that the ponds should be filled in is not practical for

I-Fox-9 where would you get materiel to fill the ponds in and at what cost. As this upper reach is not connected

I-Fox-10 with the rest of California's aquatic areas, liberal regulations regarding predator take in this isolated area would seem most efficient. As the program does not see this as being possible to bring to the Fish and

I-Fox-11 Wildlife Commission for two years, the major hindrance to salmon restoration in the San Joaquin is now highlighted.

Sincerely,

Dennis Fox

Dennis Fox
918 Blossom St
Bakersfield, Ca 93306

6613664093

II.7.2 Responses to Fox, Dennis

Response to Comment I-Fox-1
The Salmon Conservation and Research facility, located on the San Joaquin River downstream of Friant Dam, is providing a local source for fish releases until a self-sustaining population has been achieved. The hatchery salmon would imprint on the San Joaquin River water. Juvenile salmon from a redd in the San Joaquin River would also imprint on the San Joaquin River water.

Response to Comment I-Fox-2
The Settlement requires construction of a bypass around Mendota Pool. Building a fish ladder at Mendota Dam without bypassing the Pool would not fulfil the purpose and need of the Project. The Fresno Slough Dam alternatives (Alternatives C and D) would include a fish ladder at Mendota Dam with Mendota Pool contained further south and only in Fresno Slough. The Compact Bypass alternatives (Alternatives A and B) would bypass the dam and Pool, and the bypass channel would be the fish passage facility. For the preferred alternative (Alternative B), a fish ladder would also be constructed at the Compact Bypass Control Structure to allow fish passage to continue while water is delivered to Mendota Pool. A fish ladder which is designed for native fish to pass upstream would also pass predator fish. However, salmonids, in general, like fast flowing, cool water and many predatory fish, such as bass, prefer warmer backwaters. Therefore, fish ladders are designed with attraction flows, which are less suitable for many predatory fish.

Response to Comment I-Fox-3
Vegetation that provides shading for fish habitat would either be actively or passively established (i.e., either planted and irrigated to establish plants or allowed to generate and establish from upstream and wind-blown seed sources). The Rearing Habitat Design Objectives (SJRRP 2014d) have recommendations for shading in side channels and the floodplain. Therefore, shading is included in the long-term design. Until this vegetation has established, the habitat can support food prey items (*i.e.*, invertebrates) for rearing juveniles in the main channel.

Response to Comment I-Fox-4
Section 2.2.6 of the Final EIS/R was updated to indicate that the SJRRP has an existing invasive species management plan. The SJRRP's *Invasive Vegetation Monitoring and Management Environmental Assessment* (SJRRP 2012) describes the methods that would be followed for Reach 2B invasive species removal. This update in the Final EIS/R does not change the conclusions of the Draft EIS/R.

Response to Comment I-Fox-5
The Compact Bypass channel would be a multi-stage channel designed to facilitate fish passage at low flows, channel stability at moderate flows, and contain high flows. The low-flow channel is designed to be slightly sinuous. Since the release of Interim and Restorations flows, pools, riffles, and glides have developed in Reach 2B and these aquatic features are also expected to develop in the bypass channel.

Response to Comment I-Fox-6
To increase habitat complexity, the current design for the bypass channel includes vegetation and placement of large woody debris. See Section 2.2.6 of the Draft EIS/R. Additional information about the floodplain and riparian habitat can also be found in the revisions to the Final EIS/R in Section 2.2.6.

Response to Comment I-Fox-7
Subsidence is expected in the Project area, but generally this affects lowering of global elevations. See also MCR-3: Subsidence.

Response to Comment I-Fox-8
The comment is discussing the need for fish ladders over gravel pits from sand and mining operations to reduce predation. The Project area does not have similar features.

The Project would use floodplain and channel grading to create inundation depth diversity on the floodplain and to connect low-lying areas on the floodplain to the river. This heterogeneity in the aquatic habitat is expected to be beneficial. From a fisheries perspective, the creation of side channels/low flow areas would provide an ample supply of food for fish. In addition, over the long-term it is expected that the species composition in Reach 2B and the bypass channel would gradually change to favor native fish. The release of Restoration Flows would change aquatic habitat conditions to be more suitable to native fishes than prior conditions, which was more suitable for predatory fish

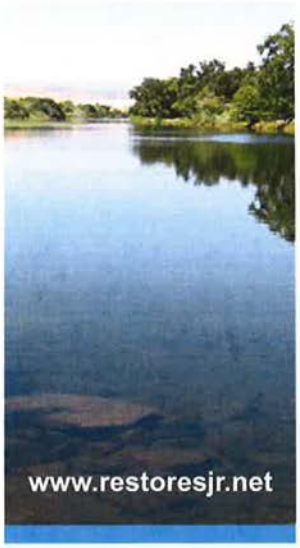
Response to Comment I-Fox-9
See response to comment I-Fox-8.

Response to Comment I-Fox-10
The removal of large predators has not always been a successful approach. This will often allow for an abundance of smaller predators to inhabit the area, where they prey upon a higher number of native fish. By bypassing Mendota Pool, the opportunity for successful outmigration is expected to be higher.

Response to Comment I-Fox-11
See response to comments I-Fox-8 and I-Fox-10.

II.7.3 Iger, Rick

SAN JOAQUIN RIVER RESTORATION PROGRAM



PUBLIC COMMENTS
Mendota Pool Bypass and Reach 2B Channel Improvements Project
Draft Environmental Impact Statement/Environmental Impact Report

Written comments can be submitted at the public meeting, mailed to Rebecca Victorine, Bureau of Reclamation, Mid-Pacific Region MP-170, 2800 Cottage Way, Sacramento CA 95825 faxed to 916-978-5469 or emailed to Reach2B_EISEIR_Comments@restoresjr.net by close of business on August 10, 2015. Thank you.

☐ Fresno July 8 ☒ Los Banos July 9 ☐ Sacramento July 10

(Please print clearly)

Name Rick Iger

Organization and Address 10315 Hinderhill Drive
Bakersfield, CA 93312

Phone (661) 303-6607

Email riger@ppeng.com

Comment here: July 9, 2015 (Date)

I-Iger-1 On the preferred alternative design please consider designing control structure conveying water to the exchange contractors to a greater capacity than 2,500 cfs. There are current and near future diversions which can take water from the Mendota Pool including plans to reverse the Delta-Mendota Canal at flows over 1,000 cfs.

I-Iger-2 Also consider a "soft plug" design in the control weir so during high flow releases from Millerton the flows can by-pass the weir without washing it out.

All comments become part of the public record.

II.7.4 Responses to Iger, Rick

Response to Comment I-Iger-1

The fundamental purpose of the Project is to implement those portions of the Settlement and the Settlement Act applicable to Reach 2B and the Mendota Bypass. The ability to deliver more than 2,500 cfs is not included as part of the purpose and need for the Project.

Response to Comment I-Iger-2

Reclamation is currently working on design of the levees next to the future Mendota Pool Control Structure. As the levees would have water on both sides during deliveries to Mendota Pool, a clay core is needed. This condition to keep the levees from breaching during regular operations may not allow a “soft plug” design. Reclamation will continue to coordinate with the local community and hold public meetings as the design progresses and encourages your participation.