STATE OF CALIFORNIA
CALIFORNIA ENVIRONMENTAL PROTECTION AGENCY
STATE WATER RESOURCES CONTROL BOARD

DIVISION OF WATER RIGHTS

ORDER WR 2010-0029-DWR

IN THE MATTER OF PERMITS 11885, 11886 AND 11887 (APPLICATIONS 234, 1465 AND 5638) OF U.S. BUREAU OF RECLAMATION

TEMPORARY TRANSFER OF WATER AND CHANGE PURSUANT TO WATER CODE SECTIONS 1725 AND 1707

SOURCE: San Joaquin River

COUNTIES: Fresno, Madera, Tulare, Kern, Merced, Stanislaus, Contra Costa, Alameda, San Joaquin and Sacramento

---

ORDER APPROVING TEMPORARY TRANSFER AND CHANGE

BY THE DEPUTY DIRECTOR FOR WATER RIGHTS:

1. BACKGROUND

The purpose of the proposed temporary transfer and change is to implement on an interim basis the provisions of the 2006 Stipulation of Settlement (Settlement) in *Natural Resources Defense Council et al. v. Rodgers et al.*, and the San Joaquin River Restoration Settlement Act (Settlement Act), Public Law No. 111-11, § 10001 et seq., 123 Stat. 991, 1349 (2009). The Settlement addresses restoration of fish habitat in the San Joaquin River below Friant Dam and ends an 18-year legal dispute over the operation of Friant Dam. The parties that entered into the Settlement include the United States Departments of the Interior and Commerce, Friant Water Users Authority (a public agency serving 20 member water districts), and the Friant Defenders (a coalition of environmental organizations led by the Natural Resources Defense Council). The San Joaquin River Restoration Program (SJRRP) was established to implement the Settlement. Congress provided federal authorization for implementing the Settlement in the Settlement Act.

The Settlement establishes two primary goals: (1) to restore and maintain fish populations, including salmon, in good condition in the mainstem of the San Joaquin River below Friant Dam; and (2) to reduce or avoid adverse water supply impacts to the Friant Division long-term contractors that may result from the restoration program. The restoration program involves a series of projects to improve the river channel in order to restore and maintain healthy salmon populations. Flow restoration is to be coordinated with channel improvements. At the same time, the Settlement limits water supply impacts to Friant Division long-term water contractors by providing for new water management measures, including the recirculation and recapture of released water and the creation of a recovered water account.

The Settlement provides for releases of both interim flows and restoration flows. The purpose of the interim flows is to collect relevant data on flows, temperatures, fish needs, seepage losses, and water recirculation, recapture and reuse. The interim flow program began on October 1, 2009 pursuant to State

Water Resources Control Board (State Water Board) Order WR 2009-0058-DWR, which approved temporary transfer petitions for a one-year period. The present order is intended to provide temporary authorization to continue the interim flow program during the 2011 Water Year (WY). The interim flow program will be terminated in 2013 upon initiation of the long-term restoration flow program. Data obtained during the interim phase will be utilized to determine appropriate water right conditions for operating the long-term restoration program.

2. SUBSTANCE OF PETITIONS

On July 2, 2010, the U.S. Bureau of Reclamation (Reclamation) submitted petitions for transfer and change pursuant to Water Code sections 1725 and 1707 with the State Water Board, Division of Water Rights (Division). The petitions request authorization to change the method of operation of the Friant Division of the Central Valley Project (CVP) in order to implement on an interim basis the provisions of the Settlement and the Settlement Act. Reclamation seeks to (1) add points of rediversion, (2) add to the place of use, and (3) add preservation and enhancement of fish and wildlife resources as an authorized purpose of use under Permits 11885, 11886, and 11887.

A maximum of 389,355 acre-feet (af) of water will be transferred during the period October 1, 2010 to September 30, 2011. Reclamation plans to transfer up to 32,569 af from October 1, 2010 through December 1, 2010. Depending on the forecast for the 2011 WY type, up to 356,787 af would be transferred from February 1, 2011 through September 30, 2011. No transfer will occur from December 2, 2010 through January 31, 2011.

The petitions propose temporary changes to the points of rediversion and place of use under Reclamation's permits. The petitions also request the temporary addition of preservation and enhancement of fish and wildlife resources as an authorized purpose of use under the subject permits. Water will be released to the natural watercourse of the San Joaquin River for this instream dedication, but due to capacity issues, both natural and artificial conveyance means may be utilized to facilitate flow throughout the designated stretch of the river.

Reclamation proposes to dedicate water released from Millerton Reservoir for instream use from Friant Dam to the confluence of the Merced and San Joaquin Rivers, and use instream conveyance of water in order to meet existing Reclamation obligations in lieu of making such deliveries from the Delta-Mendota Canal. Water will be used by Reclamation concurrently for instream beneficial use and for existing delivery obligations within the existing authorized places of use under Permits 11885, 11886, and 11887.

Water previously stored or that would otherwise be delivered for consumptive use in the Friant service areas would be released from Millerton Reservoir through the downstream San Joaquin River channel. Water would then be rediverted at and near Mendota Dam for delivery through various canals and to flow through Mendota Dam. Water would flow past Sack Dam. Water would thence be conveyed through the Sand Slough Control Structure to and through the East Side Bypass. Water in the East Side Bypass would thence flow through the Mariposa Bypass and thence the San Joaquin River and would also continue to flow through the East Side Bypass to Bear Creek. Water would be diverted along the East Side Bypass at designated locations both north and south of the Mariposa Bypass. Water in Bear Creek would thence continue to flow into the San Joaquin River.

Reclamation proposes to temporarily amend the place of use for instream beneficial uses to include the San Joaquin River from Friant Dam to the San Joaquin River near Vernalis, and thence to the Sacramento-San Joaquin Delta (Delta) channels at the Jones and Banks Pumping Plants. Implementing the transfer could increase flows entering the Delta from the San Joaquin River. (Final Environmental Assessment (EA)/Initial Study (IS) for the WY 2010 Interim Flows Project (WY 2010 EA/IS), p. 2-12.) Reclamation seeks to temporarily redivert the transfer water at the Jones and Banks Pumping Plants and at the San Luis Dam for potential delivery within the existing place of use to meet demands of the Friant Division of the CVP. However, recirculation of recaptured water to the Friant Division could require

mutual agreements between Reclamation, Department of Water Resources (DWR), Friant Division long-term contractors, and other south-of-Delta CVP/State Water Project (SWP) contractors. (WY 2010 EA/IS, p. 2-12.)

The transferred water will be placed to use within Fresno, Madera, Tulare, Kern, Merced, Stanislaus, Contra Costa, Alameda, San Joaquin and Sacramento Counties.

The petitions include proposed conditions for approval: (1) maintaining the 5 cfs requirement at Gravelly Ford to meet the obligations of the Holding Contracts; (2) maintaining sufficient Millerton Lake storage and available San Joaquin River channel capacity to meet the requirements of the San Joaquin River Exchange Contract; (3) conditioning release of transfer water on implementation of the Invasive Species Monitoring and Management Plan in Appendix F of the WY 2010 EA/IS; (4) conditioning release of transfer water on implementation of the 2009-2013 Interim Flow Release Program, Water Quality Monitoring Plan in Appendix E of the Supplemental EA for the WY 2011 Interim Flows Project (WY 2011 Supplemental EA); and (5) conditioning release of transfer water on implementation of the Seepage Monitoring and Management Plan in Appendix D of the WY 2010 EA/IS. The requested conditions are included in this order.

3. COMPLIANCE WITH THE CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA)

Reclamation filed the petitions for a temporary transfer and change under Water Code sections 1707 and 1725 et seq. Water Code section 1729 exempts temporary changes involving a transfer of water from the requirements of CEQA (Pub. Resources Code, § 21000 et seq.). The State Water Board will issue a Notice of Exemption.

In 2009 Reclamation, as the lead agency under the National Environmental Policy Act, and DWR, as the lead agency under CEQA, prepared the WY 2010 EA/IS or the 2010 Interim Flows Project. The EA/IS evaluated potential environmental consequences associated with the estimated change in flow in the San Joaquin River as a result of the 2010 Interim Flows Project. Reclamation and DWR adopted a Finding of No Significant Impact (FONSI) and Mitigated Negative Declaration, respectively, mitigation measures, and a Mitigation Monitoring Plan for the project.

On June 11, 2010, Reclamation released a Draft Supplemental EA and Proposed FONSI for the WY 2011 Interim Flows Project. On September 21, 2010, it completed the Final WY 2011 Supplemental EA and signed the FONSI. The Final WY 2011 Supplemental EA relies in part on analyses and conclusions presented in the Final WY 2010 EA/IS. The Final 2011 Supplemental EA incorporates the Final 2010 EA/IS by reference.

In its petitions, Reclamation requested that the change petitions be conditioned on compliance with certain mitigation measures identified in the Final WY 2010 EA/IS for the 2010 Interim Flows Project. These conditions include establishing the pattern of flow releases based on Tables 2-1 and 2-2 of the 2010 EA/IS, the maximum release rates at Friant Dam based on Table 2-3 of the 2010 EA/IS, monitoring flows in accordance with the Flow Monitoring and Management Plan, Appendix E of 2010 EA/IS, compliance with the Invasive Species Monitoring and Management Plan in Appendix F of the 2010 EA/IS, implementation of the Seepage Monitoring and Management Plan in Appendix D of the 2010 EA/IS, and implementation of the Water Quality Monitoring Plan in Appendix E of the 2010 EA/IS. (Petition, pp. 3, 7.) Including those measures will help to avoid or reduce any unreasonable effects on fish and wildlife and to avoid injury to legal users of water. Accordingly, the requested mitigation measures are included in this order.

4. CRITERIA FOR APPROVING THE PROPOSED TEMPORARY TRANSFER AND CHANGE

Water Code section 1707 authorizes the use of the temporary transfer provisions of Water Code section 1725 et seq. for a change for the purposes of preserving or enhancing wetlands habitat, fish and wildlife resources, or recreation in, or on, the water. Pursuant to Water Code sections 1707 and 1725, Reclamation applied for a temporary transfer and change for the purpose of preserving and enhancing fish and wildlife resources. Before approving Reclamation's petitions, the State Water Board must make the following required findings under Water Code section 1707:

a. The proposed change will not increase the amount of water Reclamation is entitled to use.

b. The proposed change will not unreasonably affect any legal user of water.

In addition, the State Water Board must make the following required findings before approving a temporary change under Water Code section 1725 et seq.:

a. The proposed transfer involves only the amount of water that would have been consumptively used or stored in the absence of the temporary change.

b. The proposed change would not injure any legal user of water, during any potential hydrologic condition that the Board determines is likely to occur during the proposed change, through significant changes in water quantity, water quality, timing of diversion or use, consumptive use of water or return flows.

c. The proposed change would not unreasonably affect fish, wildlife, or other instream beneficial uses.

(Wat. Code, §§ 1726, subd.(e), 1727, subd. (b).)

With respect to the "no injury" inquiry under both statutes, the State Water Board must evaluate whether the change will adversely affect the rights of others to the water. In the case of a CVP water supply contractor who claims an injury due to reductions in the amount of water available to it, for example, the contractor must show that it has a right to the water under its contract with Reclamation and that the redirection of the transferred water will interfere with that contractual right. (*State Water Resources Control Bd. Cases* (2006) 136 Cal.App.4th 674, 738-743, 805.) It is not enough for the contractor to show that it will receive less water than it historically received. (*Id.*, p. 805.)

4.1 No injury to any legal user of water

Reclamation asserts that the proposed transfer will not result in injury to any legal user of water. In the petitions, Reclamation addressed whether there would be any legal injury to San Joaquin River Holding Contractors, San Joaquin River Exchange Contractors (Exchange Contractors), Friant Division CVP Water Service Contractors, other South-of-Delta Water Service Contractors, Eastside Division Water Service Contractors, and water for fish hatchery purposes. Sections 10004(g) and 10004(j) of the Settlement Act specifically provide that, except as provided in the Settlement Act, nothing in the act shall modify the rights and obligations of the parties to any contracts. In its supplement to its petitions (page 12), Reclamation indicates that the proposed transfer would not affect or expand existing obligations or increase demand for CVP water supplies. Reclamation concluded that there would be no injury. The Exchange Contractors/RMC's objection did not identify injury to any legal entitlement[1] to water.

[1] Although the objection claims potential injury to Paramount Farming's water supplies, no information was provided to document a legal basis of right and injury thereto. As of June 30, 2010, the State Water Board had no record of water right for Paramount Farming. Furthermore, Paramount is not a Reclamation contractor. (Reclamation September 2, 2010 email from Alicia Gasdick to Kathy Mrowka.)

Reclamation and the Exchange Contractors entered into the Second Amended Contract for Exchange of Waters, Contract Ilr-1144, dated February 14, 1968. Under the terms and conditions of that contract, Reclamation is obligated to supply the Exchange Contractors with water delivered through the Delta-Mendota Canal (DMC) or by other means. Reclamation delivers water to the Exchange Contractors at the Mendota Pool via the DMC. Under the contract, Reclamation can deliver water to Mendota Pool to fulfill contract obligations through the DMC or through the San Joaquin River at its discretion.

In its petitions, Reclamation states that Millerton Reservoir operations will be conducted so that the availability of deliveries and releases for the Exchange Contractors' water supply will be the same as in the absence of the proposed changes. It contends that necessary deliveries from the DMC will be made pursuant to the terms and conditions of its Exchange Contract. Reclamation stated that the WY 2010 EA/IS concluded that based upon CalSim modeling results, the proposed transfer would not affect water delivery quantities to contractors outside the Friant Division, including the San Joaquin River Exchange Contractors. (Petition Supplement, p. 10.) Reclamation also indicated that all water that is subject to the transfer petitions would have remained in storage at Millerton Reservoir or would have been diverted into the Madera and Friant-Kern Canals for consumptive use in the Friant Diversion service area of the CVP. Absent the proposed action, the only non-flood flows that Reclamation would release at Friant Dam are flows to maintain 5 cubic feet per second (cfs) at Gravelly Ford and any flows made pursuant to the Exchange Contract. No other non-flood flow releases are made for use by any other entity downstream of Friant. These non-flood flows will remain unchanged under the proposed action. (Petition Supplement, p. 10.)

In order to ensure that the Exchange Contractors will not be affected by the proposed transfer, Reclamation proposes the following permit condition. The State Water Board will condition the transfer accordingly. In addition, in a separate term, the State Water Board shall make it clear that this approval does not modify contractual obligations of Reclamation to the Exchange Contractors, nor does it alter the requirements of the Settlement Act.

> Reclamation shall maintain sufficient Millerton Lake storage and available San Joaquin River channel capacity in order to make releases of available storage from Millerton Lake as required under the terms and conditions of the San Joaquin River Exchange Contract, Ilr-1144, as amended February 14, 1968, to the extent such releases would be made in the absence of the transfer.

Reclamation evaluated water supply impacts in a Water Operations Model, which was circulated as an Appendix to the 2010 EA/IS for this project and referenced in the petitions. Millerton Lake is operated as a single-year reservoir, with no annual carryover, and is fully exercised (i.e., full to minimum storage) in virtually all years. This operational scenario would not change if the transfer is approved. (WY 2010 EA/IS, p. 4-93.) Only minimal variation in seasonal Millerton Lake water level fluctuations is expected, and fluctuations in reservoir levels would remain within historical operational scenarios. (WY 2010 EA/IS, p. 4-93.) Reclamation evaluated whether substantial changes in water supply would occur for five geographic subareas and concluded that the additional instream flows would result in less than significant impacts to water supply in each of the subareas. (WY 2010 EA/IS, pp. 4-93 to 4-150.)

The releases from Millerton Reservoir pursuant to the petition would be in addition to the quantity of releases otherwise required under the San Joaquin River Holding Contracts. The Order includes a condition regarding maintenance of the existing 5 cfs requirement at Gravelly Ford in addition to the newly proposed instream flow regime. Reclamation requested inclusion of a condition to this effect in its petitions. (Petition Supplement, p. 7.)

Given that the proposed changes will not result in less natural flow in the source than without the project, the evidence supports the conclusion that the proposed project will not injure the rights of any legal user entitled to the use of that natural flow. Similarly, as discussed above, in evaluating whether the proposed change will adversely affect a person who holds a contractual right to a water supply, the contractor must show that the redirection of the transferred water will interfere with the contractual right. (*State Water Resources Control Bd. Cases*, *supra*, 136 Cal.App.4th at 738-743, 805.) Absent specific information

identifying particular legal users of water and the potential injury to their water rights, the State Water Board concludes that Reclamation has presented sufficient information to conclude that the proposed temporary transfer will not cause injury to the Exchange Contractors/RMC or other legal users of water.

Nonetheless, although the State Water Board concludes that the proposed changes will not injure any legal user of water, as discussed herein, the Board will condition its approval to avoid injury.

4.2 Water that would have been consumptively used or stored

Water Code section 1725 requires the State Water Board to find that the transfer would involve the amount of water that would have been consumptively used or stored by the permittee in the absence of the proposed temporary change. Diversion and use of water is limited to the water that is available under the terms and conditions of Reclamation's permits, and all water that is subject to the transfer petitions would have remained in storage at Millerton Reservoir or would have been diverted into the Madera and Friant-Kern Canals for consumptive use in the Friant Diversion service area of the CVP in the absence of the transfer. Reclamation evaluated Millerton Lake daily operations and monthly operations downstream of Friant Dam in the WY 2010 EA/IS and identified the impacts of modifying its operations in a manner that is consistent with the water right permits. There is no evidence to indicate that water will not be available to meet the requirements of downstream water users and other water right holders to the extent Reclamation is required to provide such water.

4.3 No Unreasonable effect on fish, wildlife, or other instream beneficial uses

In its petitions, Reclamation states that the proposed transfer would not significantly affect fisheries resources. (Petition Supplement, pp. 13-14.) According to Reclamation, the proposed transfer would augment streamflow and provide generally high-quality water. Any flow modifications would be in coordination with the United States Fish and Wildlife Service (USFWS) and National Marine Fisheries Service (NMFS) as applicable. Recapture of transfer requirements would occur only in compliance with regulatory requirements, including the USFWS and NMFS biological opinions or other requirements.

5. PUBLIC NOTICE OF THE PETITIONS

The State Water Board issued notice of the petitions on July 8, 2010. Any objections[2] were required to be submitted by August 9, 2010. A one-week extension (until August 16, 2010) for submitting objections was granted when requested by interested persons. Protests were filed by: (1) the Exchange Contractors[3] and the San Joaquin River Resource Management Coalition (RMC); (2) the San Luis and Delta-Mendota Water Authority (Authority); and (3) California Fisheries and Water Unlimited (CFWU). Comment letters were received from Paramount Farming Company (Paramount), Lower San Joaquin Levee District (Levee District) and the Department of Fish and Game (DFG).

---

[2] Water Code section 1727, subdivision (f) allows water users that may be affected by a proposed temporary change and other interested party to file a written comment with the State Water Board. The State Water Board's regulations allow any interested person to file an objection. (Cal. Code Regs., tit. 23, § 804, subd. (b).) In making their comments or objection, some interested persons used the protest form available on the Divison's website. This order may use the term "comment," "objection," or "protest," as used by the interested person, but essentially the documents serve the same purpose.

[3] The Exchange Contractors are comprised of four agencies: the Central California Irrigation District (CCID), the San Luis Canal Company, the Firebaugh Canal Water District, and the Columbia Canal Company.

6. OBJECTIONS AND COMMENTS ON THE PETITIONS

6.1 Exchange Contractors/RMC

6.1.1 Injury to prior rights

The Exchange Contractors receive water from the CVP by virtue of their contracts with Reclamation. Pursuant to these agreements, the Exchange Contractors forego diversion under their senior water rights on the San Joaquin River in exchange for delivery of an equal amount and supply from the CVP from sources other than the San Joaquin River. The water is delivered via the Delta-Mendota Canal (DMC). The RMC members include landowners and water users along the San Joaquin River.

The protest states that, pursuant to Article 7 of the Settlement, no adverse third party impacts were to occur as a result of implementation of the SJRRP. The Exchange Contractors/RMC further elaborate on provisions of the Settlement Act that they say reflect the commitment that there will not be impacts to third parties.

The relevant inquiry before the State Water Board in considering the proposed change is whether the change would injure any legal user of water. Article 7 of the Settlement memorializes the settling parties' belief that the implementation of the Settlement will not have a material adverse effect on third parties.[4] Section 10004 of the Settlement Act generally provides that nothing in the Act "shall modify or amend the rights and obligations" of the parties to any existing water service, repayment, purchase, or exchange contract or under the Exchange Contract held by the Exchange Contractors. (Settlement Act, § 10004(g), (j).) Nor shall implementation of the Settlement result in involuntary reduction in contract water allocations to CVP long-term contractors, other than Friant Division long-term contractors. (*Id.*, § 10004(f).) Nothing in the Settlement Act, however, preempts state law. (*Id.*, § 10006(b).) This Order is protective of existing contract rights, to the extent that such rights are exercised in accordance with applicable law, including any requirements imposed at the Delta pumps. Thus, the scope of the State Water Board's "no injury" inquiry is consistent with provisions of the Settlement Act prohibiting interference with contractual rights.

The Exchange Contractors assert that they experienced the following injuries as a result of the Water Year 2010 operations under Order WR 2009-0058-DWR:

6.1.1a Water quality

Objection:

The DMC and portions of the Mendota Pool experienced water quality degradation as a result of reduced deliveries from the DMC to the Mendota Pool in April 2010. Under normal operations, all demands in the Mendota Pool are met through deliveries from the DMC. In April 2010, Reclamation met demands using surplus SJRRP flows into the Mendota Pool. Consequently, little or no fresh water was introduced into the lower DMC. This degraded water quality resulted in: (i) High Electrical Conductivity (EC) water quality was delivered to water users taking direct deliveries from the lower DMC and Mendota Pool, (ii) DMC pumpers were precluded from pumping into the DMC for credit to supplement their water supply. There is a water quality limitation of 700 EC. When this level is exceeded, no pumping is allowed; and (iii) Mendota Pool pumpers were cut off of their water supply due to water quality thresholds being exceeded. This resulted in a loss of water supply.

[4] Section 7 of the Settlement states, in part: "The Parties neither intend nor believe that the implementation of this Settlement will have a material adverse effect on any third parties or other streams or rivers tributary to the San Joaquin River."

Response:

Water flowing through Mendota Pool can be separated into two elements: (1) water dedicated pursuant to Water Code Section 1707, which flows through the north east side of Mendota Pool (opposite the DMC) relatively unchanged regarding total dissolved solids (TDS) or EC (a surrogate for TDS), and (2) the DMC flows having EC up to 1,000 µmhos, which tend to blend poorly or stagnate in the vicinity of the DMC. (Contact Report of Kathy Mrowka, August 25, 2010.) During 2010, high EC in the DMC and near the DMC outlet (San Joaquin River at Mendota Pool) occurred when Reclamation was not using the DMC to provide water obtained from the San Joaquin-San Francisco Bay Delta (Delta)[5] to its contractors. CCID, San Luis Canal Company and Columbia Canal Company received the higher quality water San Joaquin River water identified in (1) above. The only member of the Exchange Contractors with a diversion facility in the area where elevated salinity may have occurred is Firebaugh Canal Water District (Firebaugh). Firebaugh takes water from the San Joaquin River at Mendota Pool near Fresno Slough. (Contact Report of Kathy Mrowka, September 28, 2010.) The objection does not indicate whether Firebaugh experienced any appreciable change in water quality that would result in legal injury. As discussed below, however, this order imposes a condition requiring the development of additional information regarding water quality effects on Mendota Pool and other locations, and possible response mechanisms.

Reclamation's actions under Order WR 2009-0058-DWR did not cause the water quality impairment. The Exchange Contractors/RMC have not identified any legal obligation to them that would require Reclamation to make deliveries from the DMC if instead sufficient water is available from the San Joaquin River to meet the needs of the contractors at Mendota Pool. Nor have they identified any legal obligation that would require Reclamation to provide Delta water for blending poor quality return flow discharges of persons located in the San Joaquin River watershed.

The Exchange Contractors indicate that water users taking direct deliveries from the DMC and Mendota Pool received water elevated with respect to salinity. Further, the Exchange Contractors indicate that DMC and Mendota Pool Pumpers were harmed because they were precluded from continuing to pump high EC water into the DMC and Mendota Pool while EC thresholds were exceeded in the DMC and Mendota Pool.

The Exchange Contractors/RMC have not demonstrated that they will not receive the water quality to which they are entitled under their contracts or other water rights. Accordingly, the State Water Board will not require Reclamation to provide flows for dilution purposes when it is not otherwise operating the DMC. However, the State Water Board notes that Reclamation temporarily assisted in addressing the water quality impairment issue during April of 2010. Additional information would be useful in order to address any similar future events to ensure that there is no injury. Accordingly, Reclamation will be required to evaluate the contribution of Interim Flows to high salinity conditions in the DMC, Mendota Pool, and Fresno Slough and identify possible response mechanisms.

6.1.1b Water supply

Objection:

The Exchange Contractors allege potential impact to their water supplies, as described in a letter from Paramount. The referenced letter from Paramount is a July 23, 2010 comment letter on the 2011 Supplemental EA[6]. The letter makes general reference to prior rights of Paramount, but does not provide specific information regarding such rights. Paramount asserts that it 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

[5] The DMC is generally used to convey water south from the pumps in the South Delta to Mendota Pool.

[6] As discussed below in Section 6.5, Paramount also submitted a comment letter, but not a protest, to the State Water Board on the proposed temporary change.

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 could not be diverted by downstream water users. The ultimate effect of this recharacterization would be to reduce Paramount's available water supply.[7]

Response:

Reclamation manages storage in Millerton Lake in accordance with the Army Corps of Engineers Reservoir Operations Manual. Millerton Lake has a dedicated flood management pool of up to 170,000 af during the October through March flood season. (Final FONSI/MND, p. 3-119.) In preparation for potential winter flood events, water is released from storage to make room for flood flows. This is referred to as "flood flows", but in actuality it is controlled reservoir releases. This is different than: (1) uncontrolled flows during actual flood events, and (2) inflow routed through the reservoir in a regulatory manner. Reclamation limited its petitions to the transfer of water that has been stored in Millerton Lake under its permits. As discussed above, however, it is not enough for interested persons to claim that they will receive less water than they historically received; they must demonstrate that they have a legal entitlement to the amount of water claimed. The Exchange Contractors/RMC and Paramount have not documented both that they have a contract with Reclamation for these reservoir releases and that they will receive less water than allowed under such contract. Therefore, there is no basis to support a finding of injury to a legal user of water.

Nor does the public interest support a condition requiring water users to be able to continue to divert historical diversions above any legal entitlements. To the contrary, the public interest in this action supports operation of the interim flows project in accordance with the Settlement, the Settlement Act, and in keeping with Fish and Game Code 5937. In accordance with Fish and Game Code 5937, Reclamation must allow sufficient water to pass through the Friant Dam to maintain fish populations in good condition in the main stem of the San Joaquin River below Friant Dam.

6.1.2 Compliance with terms of Order 2009-0058-DWR

The Exchange Contractors/RMC assert that Reclamation failed to meet the terms of Order WR 2009-0058-DWR, to the detriment of landowners downstream of Friant Dam. The State Water Board will consider these claims to the extent that Reclamation's purported failure to comply with terms and conditions adopted for the protection of legal users of water and fish, wildlife and instream uses could lead to adverse impacts resulting from this year's proposed change. Information is provided below to address concerns that the parties have raised. The Exchange Contractors/RMC's examples of failure to comply with Order WR 2009-0058-DWR include:

6.1.2a Flow monitoring

Objection:

Order WR 2009-0058-DWR required Reclamation to monitor river stage and flow conditions at seven locations between Friant Dam and the Merced River. The flow ratings for monitoring stations 2 through 6 are inaccurate and not reliable for use in operations.

Response:

On August 30, 2010, State Water Board staff reviewed the Reclamation web site to determine whether flow ratings had been posted for the monitoring stations. Daily flow data were available for all but one station, San Joaquin River near Washington Road. It is apparent that this monitoring station is in working condition, though, because data from this gage are cited in the Exchange

[7] Paramount also asserts that, as an overlying landowner, it has the right to any increased groundwater under its property resulting from the interim flow project. In making its assertion, Paramount does not claim that any injury to its rights as a groundwater user and the State Water Board will not consider the issue further.

Contractors/RMC objection (see Exchange Contractors/RMC's Objection Tabs 2 and 3). The Exchange Contractors/RMC noted that the DWR established the gage, but had not yet established a stage versus flow curve. (see Exchange Contractors/RMC's Objection Tab 2, p. 2) Though this allows reporting of stage data, it does not allow reporting of flow data. DWR operates most of the stream gages required by Order WR 2009-0058-DWR and has evaluated the actions needed to complete the monitoring network. (San Joaquin River Restoration Project, Stream Gage Installation and Operation and Maintenance Project Initial Study and Final Mitigated Negative Declaration, DWR, February 2009.) DWR will be providing oversight on any gages operated by Reclamation or the U.S. Geological Survey. (*Id.*) It appears Reclamation made a good faith effort to comply with the Order WR 2009-0058-DWR, although additional work is needed to report flow using the Washington Road gage.

The State Water Board emphasizes the need to maintain all of the monitoring stations. This order includes a requirement to report any non-working flow monitoring stations, maintain records in accordance with U.S. Geological Survey standards, and timely submit a plan for restoration of any non-working station.

6.1.2b Seepage

Objection:

Order WR 2009-0058-DWR, Condition 8, required Reclamation to establish a Seepage Monitoring and Management Plan (SMMP). Reclamation was to install monitoring wells, establish groundwater elevation thresholds and only release interim flows consistent with the SMMP. While some wells were installed, others still need to be installed. None of the wells have established elevations. Reclamation did communicate that they were establishing shallow groundwater depth thresholds (as opposed to elevation thresholds) at 6 feet below ground surface. This alternative threshold approach does not meet the existing permit condition of determining threshold elevations and is not sufficient to protect landowners from seepage or the agencies and landowners that depend on the levees from flooding from river flows, since they cannot be used in predictive models. Also, the SMMP was not fully implemented in that Reclamation allowed the groundwater depth threshold of 6 feet to be exceeded.

Reclamation did not timely install monitoring wells and equipment in Water Year 2010. Also, Reclamation did not perform site field level assessments at the 25 seepage-impacted locations reported to Reclamation by CCID.

Response:

Condition 8 of Order WR 2009-0058-DWR required installation of groundwater monitoring wells at 10 river locations. The condition requires implementation of the SMMP. Implementation requires installation of an unspecified number of monitoring wells to evaluate seepage impacts and establishment of groundwater elevation thresholds to determine when impacts to agricultural lands or levee stability are imminent. Flow releases were to be made in accordance with the SMMP.

Reclamation installed 93[8] seepage monitoring wells in the properties along the San Joaquin River and monitors 5 additional wells owned by CCID. (Reclamation email from Alicia Gasdick to Kathy Mrowka, September 9, 2010.) Reclamation plans to install an additional 19 wells in fall 2010 in response to landowner concerns and to provide calibration data for regional groundwater models. (Ibid.) As stated in the SMMP, access limitation and information from monitoring, analysis and trouble spots identified by local landowners determines the final location of groundwater transects and wells developed with the specific intent of monitoring potential groundwater seepage.

[8] Reclamation installed 64 wells, nine piezometers, five hand-auger soil borings, in addition to re-monitoring 15 wells from the 2002 Pilot Project, and monitoring five CCID wells. Reclamation surveyed all 64 wells, including the top of casing and ground surface elevations.

As part of the SJRRP, monitoring wells were installed on public lands at several transects along the San Joaquin River in the Restoration Area to identify groundwater level responses to river flows. Groundwater levels observed in these wells are used in determining when to reduce flow releases from Friant Dam, as occurred in April 2010. Following installation of each monitoring well, groundwater elevation thresholds were developed by Reclamation in consideration of nearby land uses, known groundwater and subsurface conditions, and other available information. In general, groundwater depth thresholds are classified in three ranges: an acceptable level at which groundwater levels are not expected to affect agricultural production; a potential buffer zone indicating an increased likelihood that seepage could affect agricultural production without flow modification; and a threat zone representing groundwater levels that affect agricultural production. (2011 Supplemental EA pp. 2-16, 2-17.) The threat zone is determined based in part on the rooting depth associated with any crops located near the monitoring well. (*Id.*, p. 2-17.)

Reclamation manually measures groundwater elevations in the majority of the wells weekly. Wells in Reach 1 and Reach 5 are manually measured monthly. More than 30 monitoring wells contain dataloggers recording hourly data. Five wells with dataloggers are telemetered in real-time to CDEC and available on the Internet. Also, Reclamation posts a weekly groundwater report to the SJRRP website with data for key wells. (Reclamation email from Alicia Gasdick to Kathy Mrowka, September 9, 2010.)

As of the week ending April 17, 2010, manually monitored groundwater wells showed three wells above the acceptable thresholds but within the buffer zone and one well in the threat zone. Reclamation discussed this well with the landowner and both parties agreed to let groundwater levels in the well potentially rise to 5 feet below ground surface. (2011 Supplemental EA, p. 2-20.)

The objection indicates that Reclamation allowed the groundwater depth threshold of 6 feet to be exceeded in multiple instances within CCID's boundaries. The objection indicates that the threshold was exceeded at either 21 or 25 wells. (Exchange Contractors Objection, tab 2, pp 8, 9, 19.) CCID states that the groundwater at 13 of the sites has risen to the level that could damage the crops grown.

In evaluating this issue, it is useful to know how flow is routed. The Sand Slough Control Structure is used to divert flows from the San Joaquin River to the Eastside Bypass. If water remains in the San Joaquin River, it must flow from Reach 4A to Reach 4B via the San Joaquin River Headgates. The headgates have not been opened for many years, including during the 1997 floods. (2010 Final EA/IS, p 3-121.)

On February 1, 2010, the WY 2010 SJJRP flows resumed. The Exchange Contractors provided data on the depth to groundwater on April 7, 2010 and June 28, 2010. (Exchange Contractors Objection, tab 2) Data interpretation is difficult, however, due to the following factors: (i) the Sand Slough Control Structure was plugged with silts and aquatic vegetation, resulting in water backing up at flows as low as 50 cfs, creating a high water surface relative to the surrounding ground (id, pp. 3, 4.); (ii) data documenting depth to groundwater in the absence of the SJJRP flows were not provided for the 25 wells; (iii) data on whether the 25 wells typically show an increase, decrease or are stable in response to irrigation were not provided, (iv) no information was provided on whether the irrigators were applying water for the purpose of leaching salts down the soil column, and (v) the natural channel of the San Joaquin River has not been maintained in this vicinity, necessitating use of the Eastside Bypass for the SJJRP flows. Given these issues, it is difficult to determine responsibility for the high groundwater levels. Reclamation agreed to continue the SMMP. (Petitions, p. 7; Reclamation email September 2, 2010.)

Reclamation appears to have complied with Condition 8 of Order WR 2009-0058-DWR. However, based on information gathered during WY 2010 operations, the SMMP reporting criteria should be further defined and an opportunity to comment on thresholds provided. The order is conditioned accordingly.

6.1.2c Groundwater elevation

Objection:

Order WR 2009-0058-DWR, Condition 9, required Reclamation to conduct real time evaluations of seepage impacts when flows exceeded 475 cubic feet per second (cfs). In April 2010, Reclamation was informed of seepage impacts at 25 sites. In response, Reclamation reduced flows from 750 cfs to 350 cfs for two weeks. The Exchange Contractors assert that the groundwater elevations did not drop to non-damaging levels because two weeks is not sufficient to permit the groundwater to recede. Even at 50 cfs, groundwater levels continued to remain at elevated levels above the 6-foot thresholds.

The Exchange Contractors state that flows in lower Reach 4A remained at 4.0 to 4.5 feet depth after flows were reduced to a base level of around 40 cfs to 50 cfs near the end of June 2010. (Exchange Contractors Objection, tab 2, p. 2.) The Exchange Contractors attribute this to the elevation of the Sand Slough Control Structure and the East Side Bypass channel. The structure is a 15-foot long partial flume fitted with weir board guides on the upstream side, and a concrete low flow containment levee. The center bays are not efficient due to impacts from silt buildup and aquatic plants. Only the outer bays are partially open.

Response:

Reclamation complied with the Order WR 2009-0058-DWR, Condition 9, requirement regarding flow monitoring and flow reduction. However, project operation was complicated due to the existing condition of the Sand Slough Control Structure and nearby lack of channel capacity. Modification of the channel capacity below the Sand Slough Control Structure to 475 cfs and modification of the structure itself to provide for fish passage and appropriate routing of water are identified in the Settlement Act as channel improvements to be constructed by December 31, 2013. Reclamation should prioritize this construction project. Inasmuch as this situation is scheduled to be remedied, this Order will continue to require Reclamation to actively monitor groundwater levels and adjust interim flows. Reclamation intends to continue its implementation of the SMMP. (Petition, p. 7; Reclamation email from Alicia Gasdick to Kathy Mrowka, September 2, 2010.)

6.1.3 Seepage monitoring and mitigation plan

Objection:

The Exchange Contractors/RMC assert that no water should be authorized for release pursuant to the petitions below the Mendota Pool until such time as a comprehensive seepage monitoring and mitigation plan has been implemented.

Response:

Reclamation conducted an analysis of non-damaging flow capacities in the San Joaquin River from Friant Dam to the Merced River confluence. This assessment considered direct inundation from Interim Flows, rise of the shallow groundwater table and associated water logging of crops and salt mobilization in the crop root zone, and levee instability resulting from through-levee and under-levee seepage. Sources of information included the Flood Control Manual (Reclamation Board, 1967), reports funded by local landowners (RMC, 2003, 2005, and 2007), landowner coordination meetings (Mooney, 2009), hydraulic modeling for Interim Flows (MEI, 2008), other studies of the flood control system (ACOE, 2002; Hedger, 1960; McBain and Trush, 2002; MEI, 2002; and Moss, 2002), and historical measured data (USGS, DWR, and Reclamation Gage Records). The non-damaging capacity is the minimum of the hydraulic capacity or stage where seepage impacts occur. Based on the analysis, Reclamation determined non-damaging channel capacity as follows:

- Reach 1 and Reach 2A: 8,000 cfs based on hydraulic capacity
- Reach 2B: 1,300 cfs based on landowner communication
- Reach 3: 1,300 cfs based on landowner communication
- Reach 4A: 3,300 cfs based on hydraulic capacity
- Reach 4B: unknown and assumed zero in reach 4B1
- Reach 5: greater than 8,000 cfs based on hydraulic capacity

Reclamation has proposed in the SMMP to limit incremental increases in Interim Flow releases from Friant Dam to provide the ability to observe system response. (WY 2010 EA/IS, Appendix D,)

Moreover, under the Settlement Act, Reclamation is prohibited from exceeding existing downstream channel capacities. Section 10004(h)(2)(B) of the Settlement Act provides authorization for the Secretary of the Interior (Secretary) to release flows to the extent that such flows would not exceed existing downstream channel capacities. Section 10004(h)(3) directs the Secretary to reduce interim flows to the extent necessary to address any material adverse impacts to third parties from groundwater seepage caused by such flows that the Secretary identifies based on the monitoring program of the Secretary.

A condition has been included in the order to prohibit Reclamation from exceeding the channel capacities.

6.1.4 Private property and facility access

Objection:

The Exchange Contractors/RMC request that Reclamation be required to enter into coordinated operations and use agreements with the CCID and San Luis Canal Company (SLCC) to ensure that neither CCID nor SLCC incurs any costs associated with the SJRRP that are not otherwise occurred on a voluntary basis and provide for financial assistance to assist with routine operations by CCID and SLCC that benefit Reclamation in its implementation of the SJRRP. In fiscal year 2010, Reclamation issued a grant for operation of Sack Dam to SLCC's operations entity for increased operations and maintenance cost due to interim flows. (Reclamation email from Alicia Gasdick to Kathy Mrowka, September 2, 2010.) A grant was also offered to CCID, but CCID did not complete the grant request package.

The Exchange Contractors/RMC also request that Reclamation enter into an operations agreement with the Levee District that provides Reclamation with the right to use rights-of-way managed by the Levee District for purposes of implementing the SJRRP. The agreement should include a provision that the Levee District will not incur costs except on a voluntary basis.

Response:

The Exchange Contractors/RMC have not provided specific information demonstrating that operation and use agreements are necessary to prevent injury to its member agencies as legal users of water. Nonetheless, it is in the public interest to ensure that the proposed change will not adversely affect flood channel operations and maintenance. (Wat. Code, § 1707, subd. (b).) Accordingly, this order requires Reclamation to prepare an operations and maintenance agreement, or comparable funding mechanism, and make the agreement or other funding mechanism available to the CCID, SLCC, and the Levee District. Moreover, information about operations will help to ensure that the interim flows program subject to this order is operated in a manner to avoid avoidable adverse impacts. Accordingly, this order requires Reclamation to maintain a public website to provide operations data, including daily operations information and the daily flow regime.

6.1.5 Damage claims

Objection:

The Exchange Contractors/RMC request that Reclamation establish an administrative process that permits landowners and other entities financially impacted by the SJRRP to easily submit claims and evidence of harm.

Response:

The Exchange Contractors/RMC have not submitted sufficient information to support a finding that the proposed change will injure legal users of water. The State Water Board cannot place conditions on the temporary change to avoid or mitigate effects that are not caused by the temporary change. (*Id.*, § 1727, subd. (e).)

6.1.6 General objections and concerns

Objection:

The Exchange Contractors/RMC's protest states that it is inappropriate for Reclamation to seek a one-year temporary transfer for a project that, after commencement of interim flows, will be continuously operated. The contractors also allege that the quantity of water involved is large and accordingly should not be the subject of a short-term transfer petition.

Response:

As discussed herein, the interim flows project covered by Reclamation's petitions meets the criteria for a temporary transfer. Reclamation has requested temporary authorization for the second year of a program to restore streamflow in the San Joaquin River. The Water Code does not require petitioners for temporary change to make a diligent effort to seek approval for the proposed changes under other provisions of the Water Code (as is required for temporary urgency changes and temporary permits) or prohibit the approval of a series of similar temporary changes. Accordingly, the proposed temporary change is not in violation of Water Code sections 1725 et seq. Moreover, the Water Code does not limit the amount of water that may be transferred under section 1725 or 1707 to a particular numeric quantity. Instead, the amount of water is relevant only to determine if Reclamation has an entitlement to the use of the water pursuant to water right Permits 11885, 11886, and 11887 and in making the necessary findings required by statute.

6.1.7 Water quality issues

To avoid potential harm to legal users of water resulting from adverse water quality impacts, Order WR 2009-0058-DWR required Reclamation to conduct water quality monitoring to determine whether there were adverse impacts associated with the Interim Flows Program.

Objection:

In regards to Order WR 2009-0058-DWR, the Exchange Contractors/RMC raised water quality considerations regarding ongoing operations and the salt loading associated with such operations.

Response:

In its petitions, Reclamation has requested a term requiring implementation of the 2009-2013 Interim Flow Release Program, Water Quality Monitoring Plan in Appendix E of the WY 2010 EA/IS. Reclamation has further agreed to implementation of a water quality response plan. This order requires Reclamation to continue implementation of the Water Quality Monitoring Plan and a water quality response plan. (Reclamation email from Alicia Gasdick to Kathy Mrowka, September 2, 2010 email.)

6.2 San Luis and Delta-Mendota Water Authority (Authority)

Objection:

The Authority, on behalf of its 29 member agencies[9], objects to the changes on the basis of public interest considerations and injury to their rights. The Authority also filed a protest on environmental grounds, but the supporting documentation for the second protest was identical to the information in the first protest. No environmental issues were identified in the second protest.

Response:

The Authority's members have historically received deliveries of Central Valley Project (CVP) water for irrigation along the San Joaquin Valley's West side and wetlands situated in the Pacific Flyway. The Authority did not provide specific information about its claims of right to use water beyond general references to its contracts and senior rights. Actual and threatened harm are said to result from the following:

6.2.1 Monitoring

Objection:

Order WR 2009-0058-DWR, Condition 10, requires Reclamation to coordinate its operations on a daily basis with CCID and SLCC when flows enter Mendota Pool. The Authority asserts that there were inadequate flow measurements to account for the flows under the SJRRP entering into the Mendota Pool, and to determine the amount of those flows available to be recaptured and recirculated. To properly account for the flow under the SJRRP, Reclamation must be required to install and maintain continuous monitors at Gravelly Ford, below the Bifurcation Structure, Sack Dam and Washington Road and publish the data on its web site no less than daily.

Response:

On August 30, 2010, State Water Board staff reviewed the Reclamation web site to determine whether flow ratings had been posted for the monitoring stations. Daily flow data was available for all but one station, San Joaquin River near Washington Road. As noted in section 6.1.1c, the gage station has been installed but the stage versus flow curve is still being developed. As explained in that section, monitoring conditions are imposed in this order to avoid injury to legal users of water. The Authority did not provide evidence of any injury or other basis for revising prior Condition 10.

[9] The Authority's member agencies are: Banta-Carbone Irrigation District, Broadview Water District, Byron Bethany Irrigation District (CVPSA), Central California Irrigation District, City of Tracy, Del Puerto Water District, Eagle Field Water District, Firebaugh Canal Water District, Fresno Slough Water District, Grassland Water District, Henry Miller Reclamation District #2131, James Irrigation District, Laguna Water District, Mercy Springs Water District, Oro Loma Water District, Pacheco Water District, Pajaro Valley Water Management Agency, Panoche Water District, Patterson Irrigation District, Pleasant Valley Water District, Reclamation District 1606, San Benito County Water District, San Luis Water District, Santa Clara Valley Water District, Tranquility Irrigation District, Turner Island Water District, West Side Irrigation District West Stanislaus Irrigation District and Westlands Water District.

6.2.2 Water quality

This issue was analyzed in section 6.1.1a, and that discussion is incorporated herein.

6.2.3 Displacement of CVP and/or SWP Delta pumping capacity – No injury to any legal user of water

Objection:

The Authority asserts that using the CVP and/or SWP facilities to recapture the SJRRP flows in the Delta and return water to San Joaquin River contractors could affect use of the facilities by others, due to limited capacity at the pumps. Thus, the Authority requests that Reclamation be required to recapture the SJRRP flows at the CVP and/or SWP pumping facilities after all water available to the Authority member agencies is pumped, including Project and non-Project water available to the Authority's members through transfer or exchange. The Authority's proposed permit condition would make re-diversion of SJRRP flows junior to all existing and future projects of the Authority's member agencies.

Response:

Reclamation has established a priority system for its contracts. Generally, the most senior contracts are the Exchange Contracts, followed by Settlement Contracts. All other water service contracts are junior to these two categories of contracts. The remaining regular contracts are prioritized based on the purpose of use, with municipal and industrial contracts receiving priority over agricultural contracts. Consequently, the Authority is requesting that the State Water Board re-prioritize Reclamation's CVP contracts by allocating Delta pumping capacity to contracts that would otherwise have a lower priority. As discussed above, the State Water Board must consider whether the proposed change will injure any legal user of water. The Authority has not demonstrated that it will receive less water to which it is legally entitled and thus the State Water Board will not interfere with Reclamation's determinations regarding the priority of the contracts for use of Delta facilities.[10] Nonetheless, to ensure that the proposed changes will not affect any legal user of water, this order will require Reclamation to account for its deliveries at the CVP and SWP pumping facilities.

6.3 California Fisheries and Water Unlimited (CFWU)

Objection:

CFWU submitted a protest alleging violations of law by the State Water Board and Reclamation for failing to require mandatory daily flow requirements from Friant Dam into the San Joaquin River since the permits were issued.

Response:

Water Code section 1727, subdivision (d) prohibits the State Water Board from modifying any term or condition of the petitioner's permit or license, including those terms that protect other legal users of water, fish, wildlife, and other instream beneficial uses, except as necessary to carry out the temporary change. Water Code section 1727, subdivision (e) prohibits the State Water Board from denying or placing conditions upon a temporary change to mitigate effects that are not caused by the temporary change. Thus, the State Water Board will not modify or amend Reclamation's permits, or place conditions upon this temporary change to mitigate alleged affects of Reclamation's ongoing operations as a condition of approval of the petition.

[10] DWR is not a co-petitioner. Accordingly, this order only imposes conditions on Reclamation's operations under the proposed temporary change; it does not make any findings regarding operation of SWP facilities.

6.4 Department of Fish and Game (DFG)

Comment:

DFG commented that a key guidance document for implementation of the Settlement Act is the restoration program's Fish Management Plan. The comment letter was received by both email and regular mail after the close of the objection period. The Fish Management Plan recommends: (a) that temperatures in Millerton Lake be monitored to assess the effects of the increased flow releases, and (b) that ramping rates be developed for interim flow releases to protect fish, instream habitat, and water quality downstream of Friant Dam. DFG also recommended that a water quality monitoring plan be prepared.

Response:

To ensure that fish, wildlife and other instream uses are not unreasonably affected, this order requires the measures requested by DFG.

6.5 Paramount Farming Company (Paramount)

Comment:

Paramount submitted a letter noting that it was not submitting a formal protest but wanted to comment on various aspects of the pending petitions. Paramount: (1) encouraged the State Water Board to condition the proposed temporary transfer on terms requiring groundwater seepage and flow monitoring and maintenance similar to those required in Order WR 2009-0058-DWR; and (2) requested the State Water Board to make clear that the proposed transfers involve water that otherwise would have been consumptively used or stored during 2011 and that they are made subject to existing water rights.

Response:

(1) As discussed above, similar terms have been included in this order; and (2) this order finds that the water proposed for transfer pursuant to this order would be consumptively used or stored in the absence of the proposed temporary change, and includes a term prohibiting the transfer from injuring legal users of water.

6.6 Lower San Joaquin Levee District (Levee District)

Comment:

The Levee District: (1) commented[11] on the adequacy of the environmental documents for the SJRRP regarding levee maintenance activity, car traffic and the need for Reclamation to obtain access easements; (2) seeks indemnification from third party liability from Reclamation and; and (3) requests that the Water Rights Order issued as a result of the pending petitions includes a requirement that Reclamation enter into an agreement with the Levee District, as a condition of the rediversion of the interim flows at the Sand Slough Control Structure, for the Levee District's operation, inspection and maintenance of the flood control facilities.

Response:

(1) As explained above, the proposed change is exempt from CEQA and the State Water Board will not consider CEQA-related issues further, except as they relate to the proposed change and the Board's required findings under Water Code section 1707 and 1725 et seq.; (2) Reclamation responds that it legally cannot enter such an agreement. The Levee District's desire to obtain such an indemnification agreement is beyond the State Water Board's purview in considering the proposed change, which is

[11] The comment letter was received by mail after the close of the objection period.

largely limited to preventing injury to legal users of water and avoiding unreasonable impacts on fish and wildlife. Moreover, under the circumstances presented here, where Reclamation is not using downstream channels for conveyance in excess of natural flows, but is instead releasing lesser amounts for the benefit of fish and wildlife, it would be contrary to the public interest to require Reclamation to provide indemnification. Reclamation is under no legal duty to divert water for the purposes of reducing costs to districts responsible for levee maintenance, and Reclamation has a legal duty to bypass or release sufficient water to maintain fish in good conditions; and (3) the Levee District requests that the order issued as a result of the pending petitions includes a requirement that Reclamation enter into an agreement with the Levee District, as a condition of the rediversion of the interim flows at the Sand Slough Control Structure, for the Levee District's operation, inspection and maintenance of the flood control facilities. This order requires Reclamation to obtain any necessary access agreements in order to proceed with the project. In addition, as discussed above, this order requires Reclamation to prepare an operations and maintenance agreement, or comparable funding mechanism, and make the agreement or other funding mechanism available to the Levee District.

6.7 Central Valley Flood Protection Board (CVFPB)

Comment:

In its comments,[12] the CVFPB explained that its primary concern is that the restoration program does not compromise the flood safety features of the San Joaquin River and Eastside and Mariposa Bypasses. Specifically, the CVFPB is concerned that restoration flows will preclude maintenance of these channels for flood protection purposes and that maintenance costs will increase in the long term. It identifies Reclamation's inability to indemnify the Levee District as the main obstacle in reaching a maintenance agreement.

Response:

As discussed above, this order requires Reclamation to prepare an operations and maintenance agreement, or comparable funding mechanism, and make the agreement or other funding mechanism available to the CCID, SLCC, and the Levee District. In addition, this order requires Reclamation to consult with the CVFPB, DWR, or any other appropriate agency to ensure that the proposed change will not compromise the flood safety features of San Joaquin River and Eastside and Mariposa Bypasses.

7. FINDINGS

7.1 Transfer involves water that would have been consumptively used or stored and will not increase the amount Reclamation is entitled to use

Before approving a temporary change due to a transfer or exchange of water, the State Water Board must find that the transfer would only involve the amount of water that would have been consumptively used or stored by the permittee or licensee in the absence of the proposed temporary change. (Wat. Code, §§ 1725 - 1726.) In addition, before approving a change under section 1707, the State Water Board must find that the proposed change will not increase the amount of water the person is entitled to use. (Wat. Code, § 1707, subd. (b)(1).)

Absent the proposed transfer, the water that is the subject of the transfer would have remained in storage at Millerton Reservoir or would have been diverted into the Madera and Friant-Kern canals for consumptive use in the Friant Division service area. In light of the above, I find in accordance with Water Code section 1726, subdivision (e) that the water proposed for transfer pursuant to this order would be consumptively used or stored in the absence of the proposed temporary change. Moreover, the proposed change will not increase the amount of water that Reclamation is entitled to use.

[12] The comment letter was received by both email and regular mail after the close of the objection period.

7.2 No injury to other legal users of water

Before approving a temporary change due to a transfer or exchange of water, the State Water Board must find that the transfer would not injure any legal user of the water during any potential hydrologic condition that the Board determines is likely to occur during the proposed change, through significant changes in water quantity, water quality, timing of diversion or use, consumptive use of the water, or reduction in return flows. (Wat. Code, § 1727, subd. (b)(1).) Before approving a change under Water Code section 1707, the State Water Board must find that the change will not unreasonably affect any legal user of water. (*Id.*, § 1707, subd. (b)(2).) A discussion of potential harm to other legal users of water is found in the responses to the objections, Section 6 above. As conditioned, I find that the proposed temporary change would not injure any legal user of the water during any potential hydrologic condition that the State Water Board determines is likely to occur during the proposed change, through significant changes in water quantity, water quality, timing of diversion or use, consumptive use of the water, or reduction in return flows, or otherwise unreasonably affect a legal user of water.

7.3 No Unreasonable Effect Upon Fish, Wildlife, or Other Instream Beneficial Uses

Before approving a temporary change due to a transfer of water, the State Water Board must find that the proposed change would not unreasonably affect fish, wildlife, or other instream beneficial uses. (Wat. Code, § 1727, subd. (b)(2).) The temporary transfer and 1707 change have been requested in order to re-establish flows below Friant Dam and re-water the stream system for the purpose of protecting and maintaining salmonids. The FONSI/MND considered possible effects upon wildlife and other instream beneficial uses and determined that the instream flows to be dedicated will not have a significant effect upon wildlife resources, or other instream beneficial uses. In its comments on the petitions, DFG suggested measures to address the management of reservoir and instream flow releases. Accordingly, I find that, as conditioned, the proposed change will not unreasonably affect fish, wildlife, or other instream beneficial uses.

8. STATE WATER RESOURCES CONTROL BOARD'S DELEGATION OF AUTHORITY

On September 18, 2007, the State Water Board adopted Resolution 2007-0057, delegating to the Deputy Director for Water Rights the authority to act on petitions for temporary change if the State Water Board does not hold a hearing. This order is adopted pursuant to the delegation of authority in section 4.4.2 of Resolution 2007-0057.

9. CONCLUSIONS

The State Water Board has adequate information in its files to make the evaluation required by Water Code sections 1707 and 1725.

The State Water Board concludes that, based on the available evidence:

1. The proposed change would not injure any legal user of water, during any potential hydrologic condition that the board determines is likely to occur during the proposed change, through significant changes in water quantity, water quality, timing of diversion or use, consumptive use of water or return flows.
2. The proposed change may be made without unreasonable effect upon fish, wildlife, or other instream beneficial uses.
3. The proposed change will not increase the amount of water Reclamation is entitled to use.
4. The proposed change will not unreasonably affect any legal user of water.
5. The proposed transfer involves only an amount of water that would have been consumptively used or stored in the absence of the temporary change.

ORDER

NOW, THEREFORE, IT IS ORDERED THAT Reclamation's petitions for temporary transfer and dedication of water for instream purposes of 389,355 acre-feet pursuant to Water Code sections 1707 and 1725 are approved for a period of one year, from October 1, 2010 to September 30, 2011, subject to prior vested water rights.

All existing terms and conditions of Permits 11885, 11886 and 11887 remain in effect, except as temporarily amended by the following provisions:

1. The following points of rediversion are temporarily added to the permits. All coordinates in this Order are in California Coordinate System of 1983, Zone 3:

   A. Mendota Dam – North 1,745,350 feet and East 6,598,943 feet, being within the SE ¼ of NE ¼ of Section 19, T13S, R15E, MDB&M, including intakes to the following canals:

      i. Main Canal – North 1,744,396 feet and East 6,598,937 feet, being within the SE ¼ of Section 19, T13S, R15E, MDB&M.
      ii. Outside Canal – North 1,741,896 feet and East 6,599,689 feet, being within SE ¼ of Section 19, T13S, R15E, MDB&M.
      iii. Columbia Canal – North 1,746,420 feet and East 6,605,595 feet, being within NE ¼ of Section 20, T13S, R15E, MDB&M.
      iv. Helm Ditch - North 1,745,022 feet and East 6,598,787 feet, being within NE ¼ of Section 19, T13S, R15E, MDB&M.
      v. Firebaugh Water District Canal – North 1,741,821 feet and East 6,599,844 feet, being within SE ¼ of Section 19, T13S, R15E, MDB&M.

   B. Intake to the Arroyo Canal – North 1,816,307 feet and East 6,561,446 feet, being within SW ¼ of Section 12, T11S, R13E, MDB&M.

   C. Intake to the Sand Slough Control Structure – North 1,862,535 feet and East 6,535,468 feet, being within NE ¼ of Section 31, T9S, R13E, MDB&M, for conveyance through the East Side Bypass.

   D. Along the East Side Bypass – North 1,883,703 feet and East 6,523,784 feet, being within NW ¼ of Section 11, T9S, R12E, MDB&M (at Lone Tree Unit, Merced National Wildlife Refuge).

   E. Intake to the Mariposa Bypass Control Structure, on the East Side Bypass – North 1,895,936 feet and East 6,505,198 feet, being within SE ¼ of Section 30, T8S, R12E, MDB&M.

   F. Along the East Side Bypass – North 1,914,452 feet and East 6,480,299 feet, being within NE ¼ of Section 8, T8S, R11E, MDB&M.

   G. Jones Pumping Plant – North 2,114,400 feet and East 6,248,083 feet, being within SW ¼ of SW ¼ of Section 31, T1S, R4E, MDB&M.

   H. Banks Pumping Plant – North 2,115,990 feet and Eat 6,237,838 feet, being within SW ¼ of Section 35, T1S, R3E, MDB&M.

   I. San Luis Dam – North 1,844,598 feet and East 6,394,093 feet, being within SW ¼ of SE ¼ of Section 15, T10S, R8E, MDB&M.

2. Any San Joaquin River water temporarily stored or routed through San Luis Reservoir shall not be delivered to south-of-Delta contractors other than Friant Division Contractors. The water need not be directly delivered, but can be made available through transfers and exchanges. Reclamation shall document that it has taken all practicable measures to provide contract water to the Friant Division Contractors, while complying with all other conditions of this Order.

3. The following additional place of use is temporarily added to the permits:

   San Joaquin River from Friant Dam to the Sacramento-San Joaquin Delta at the Jones and Banks Pumping Plants. This place of use is added for the dedication of instream flows for the purpose of preservation and enhancement of fish and wildlife resources pursuant to Water Code section 1707. The specific locations of these facilities are identified in item (1).

   Pursuant to this transfer, water may be temporarily used in Fresno, Madera, Merced, Stanislaus, Contra Costa, Alameda, San Joaquin and Sacramento Counties.

4. The following purpose of use is temporarily added to the permits: preservation and enhancement of fish and wildlife.

5. The quantities of water released from Friant Dam for this transfer shall be in addition to that quantity of releases otherwise required to maintain the 5 cubic feet per second requirement at Gravelly Ford and that would be sufficient to provide necessary flow in the river reach below Gravelly Ford pursuant to the obligations of the holding contracts executed by Reclamation.

6. Reclamation shall monitor river stage and flow conditions at the following locations during all periods when water released under this order is likely to be flowing at those locations:

   - below Friant Dam (river mile 267);
   - at Gravelly Ford (river mile 228);
   - below Chowchilla Bifurcation Structure (river mile 216);
   - below Sack Dam (river mile 182);
   - at the head of Reach 4B1 (river mile 168);
   - above the Merced River confluence (river mile 118); and
   - at the head of the Sand Slough Bypass (river mile 182).

   Monitoring shall be conducted on a daily basis, and Reclamation shall make the information from such monitoring readily available to the public by posting it on a daily basis on a publicly available website whenever the flows at Friant Dam are modified, and daily for a period of three days after any modification, and on a weekly basis under all other circumstances. Flows shall also be monitored at the Vernalis gaging station, which is operated by the U.S. Geological Survey and Department of Water Resources (DWR), with provisional monitoring data reported on the California Data Exchange Center website at cdec.water.ca.gov on a daily basis. Flows shall also be monitored by Reclamation at the Jones Pumping Plant and the Clifton Court Forebay in coordination with DWR, with provisional monitoring data reported on a daily basis on Reclamation's website.

   Reclamation shall, within 5 working days of determining that a station is non-working: (1) report the non-working flow monitoring station to the Deputy Director for Water Rights; and (2) submit to the Deputy Director for Water Rights a plan for timely restoration of the monitoring station. All stations

shall be calibrated and report flow data in accordance with standards established by the U.S. Geological Survey.

In the event that flows have the potential to or will exceed channel capacities, Reclamation shall reduce flows to the last known flows that did not result in exceeding such capacities until such time that Reclamation determines that increasing flows would not exceed channel capacities.

7. Release of transfer water is conditioned upon implementation of the Seepage Monitoring and Management Plan in Appendix D of the Final WY 2010 EA/IS.

   The groundwater monitoring network shall account for subsidence in the area when determining differences in groundwater elevations. Groundwater elevation thresholds shall be established to determine when impacts to agricultural lands or levee stability are imminent. Interim flows shall only be released in a manner consistent with the Plan.

   As part of implementing the Seepage Monitoring Plan, Reclamation shall publish the then-current well locations, monitoring/buffer groundwater thresholds, and proposed process for development of and updates to action thresholds on the SJRRP website by January 10, 2011 for public review and comment and shall also provide this information to the Division. In the event that written comments are submitted within 20 calendar days, Reclamation shall consider these comments and provide written responses, which may include revisions to the thresholds, by March 1, 2011. Comments, responses, and then-current thresholds shall be published on the SJRRP website by March 1, 2011, and also provided to the Deputy Director for Water Rights for review, modification and approval. Recognizing that many factors contribute to groundwater elevations, Reclamation shall manage Interim Flows to avoid exceeding an action threshold to the extent possible. In addition, and prior to January 10, 2011, Reclamation shall publish on the SJRRP website the location of all new monitoring wells installed in 2010 and its plans for installation for additional monitoring wells in 2011, including proposed well locations and estimated timelines for installation. Plans for installation of new monitoring wells shall include surveying well locations.

8. Reclamation shall issue a notification on the flow monitoring page of the SJRRP website, with a short description of status and decisions made, within 5 working days of any of the following:

   a. A seepage hotline call is reported.

   b. A monitoring well crosses a threshold.

   c. An operational change or constraint arises from the daily coordination call; or,

   d. A flow change is made.

9. When interim flows are greater than 475 cfs in Reaches 2A and 3 of the San Joaquin River, Reclamation shall conduct on a daily basis an evaluation of adjacent groundwater levels, river flow and related river stage, and post the information on the SJRPP website (http://www.restoresjr.net/). In the event that groundwater elevations create seepage conditions, Reclamation shall reduce or redirect flows to the last known flow volume that did not result in seepage conditions until Reclamation determines that increasing flows would not create seepage conditions (i.e., seepage is caused by an activity not related to the interim flows).

10. Reclamation shall coordinate its operations with the Central California Irrigation District (CCID) and the San Luis Canal Company (SLCC). When interim flows are or are anticipated to be flowing into Mendota Pool, Reclamation shall communicate with CCID, as the owner/operator of Mendota Dam, at least once daily via telephone, email, or other written communication. This daily communication shall identify, for the following 24 hours: (1) how much water is expected as inflow into the Mendota Pool for the purposes of the interim flows; (2) how much water is to be exchanged to satisfy the Exchange Contract at Mendota Pool; and (3) how much water is to be released below Mendota Dam for the

interim flows. Reclamation shall communicate with SLCC, as the owner/operator of Sack Dam, at least once daily via telephone, email, or other written communication when interim flows are being released from Mendota Dam. This daily communication shall identify, for the following 24 hours: (1) how much water is expected as inflow into Reach 3 below Mendota Pool for the purposes of the interim flows; (2) how much water is to be exchanged to satisfy water delivery contracts at the Arroyo Canal; and (3) how much water is to be released below Sack Dam for the interim flows. Reclamation shall also notify facility owners that flows authorized under this order are protected under the California Water Code and shall not be diverted or stored unless otherwise authorized by Reclamation consistent with this order.

11. Nothing in this order authorizes the use of, or access to, private property. In carrying out the activities authorized under this order, Reclamation is responsible for obtaining any approvals that may be necessary to access private property.

12. Reclamation shall obtain any necessary access agreements: (a) for use of the Sand Slough Control Structure as a point of rediversion for conveyance through the East Side Bypass and the introduction of flow into the East Side Bypass and Mariposa Bypass; (b) from the Central Valley Flood Protection Board for release of transferred water into the East Side Canal and (c) from the Lower San Joaquin Levee District for operation, inspection and maintenance of flood control facilities.

13. Prior to February 1, 2011, Reclamation shall prepare an operations and maintenance agreement, or comparable funding mechanism, that accounts for increased operations and maintenance costs associated with the Interim Flows Program and provide it to CCID, SLCC, and the Levee District, with a copy to the Deputy Director for Water Rights.

14. This order does not authorize any act that results in damage that could result in imminent failure: (a) to private levees located along the San Joaquin River, (b) to facilities, including levees and related structures, which are part of the San Joaquin River Flood Control Project, or (c) to Mendota Dam. Reclamation shall be responsible for operating under this Order in a way that does not result in such damage.

15. Within 30 days of the effective date of this Order, Reclamation shall consult with the Central Valley Flood Protection Board, Department of Water Resources, or any other appropriate agency to ensure that the proposed change will not compromise the flood safety features of the San Joaquin River and Eastside and Mariposa Bypasses. Within 60 days of the effective date of this Order, Reclamation shall provide the Deputy Director for Water Rights with a report on the status of the required consultation.

16. Reclamation shall maintain sufficient Millerton Lake storage and available San Joaquin River channel capacity in order to make releases of available storage from Millerton Lake as required under the terms and conditions of the San Joaquin River Exchange Contract, Ilr-1144, as amended February 14, 1968, to the extent such releases would be made in the absence of the transfer.

17. This order shall not be construed as modifying or amending (1) the rights and obligations of Reclamation and the Exchange Contractors under the Second Amended Contract for Exchange of Waters, Contract Ilr-1144, dated February 14, 1968, or (2) the requirements of section 10004(g) and 10004(j) of Public Law 111-11.

18. Rediversion and conveyance of water under Permits 11885, 11886 and 11887 by or through Central Valley Project (CVP) and State Water Project (SWP) facilities is limited to pumping and conveyance that is available at the C.W. Jones Pumping Plant, at the Harvey O. Banks Pumping Plant, in the Delta-Mendota Canal or in the California Aqueduct, after satisfying all contractual obligations to CVP and SWP contractors entitled to water from Delta Facilities and that existed prior to the date of the change order (or were subsequently renewed).

19. Rediversion of water at the Jones Pumping Plant and the Banks Pumping Plant pursuant to this order is subject to compliance by the operators with the objectives currently required of Reclamation or DWR set forth in Tables 1, 2, and 3 on pages 181 to 187 of State Water Board Revised Decision 1641 (D-1641), or any future State Water Board order or decision implementing Bay-Delta water quality objectives at those plants, including compliance with the various plans required under D-1641 as prerequisites for the use of the Joint Points of Diversion by Reclamation and DWR. Rediversion of water at the Jones Pumping Plant and the Banks Pumping Plant pursuant to this order is also subject to compliance by the operators with all applicable biological opinions and any court orders applicable to these operations.

20. By January 15, 2012, Reclamation shall provide to the Deputy Director for Water Rights a compliance report describing compliance with the requirements of this order. This report shall include the following information:

    a. the average daily rates of rediversion of water pursuant to the order at both the Clifton Court Forebay and the Jones Pumping Plant,

    b. the average daily rates of rediversion of water pursuant to the order at both the Clifton Court Forebay and the Jones Pumping Plant,

    c. the daily and monthly volumes of water rediverted at both the Clifton Court Forebay and the Jones Pumping Plant,

    d. daily releases from Friant Dam,

    e. daily rediversions at all authorized points of rediversion, and

    f. compliance with all other conditions of this order.

21. This order does not authorize any act that results in the taking of a threatened or endangered species, or any act that is now prohibited, or becomes prohibited in the future, under the federal Endangered Species Act (16 U.S.C.A. sections 1531 to 1544). If a "take" will result from any act authorized under this Order, Reclamation shall obtain authorization for an incidental take permit prior to construction or operation. Reclamation shall be responsible for meeting all requirements of the Endangered Species Act for the temporary change authorized under this order.

22. The State Water Board reserves jurisdiction to supervise the short-term change under this Order, and to coordinate or modify terms and conditions, for the protection of vested rights, fish, wildlife, instream beneficial uses as future conditions may warrant or as appropriate to respond to information provided by the monitoring programs required under this order.

23. Reclamation shall comply with Schedule 1 regarding maximum quantities of water released from Friant Dam and dedicated to the environment pursuant to the petitions. Schedule 2 identifies the anticipated releases under a wet-year hydrologic condition and documents the quantities of flow expected downstream from Friant Dam to the Merced River confluence with the San Joaquin River. Inasmuch as Schedule 2 is not intended to document maximum or minimum instream flows under all conditions, the schedule is informational.

24. Reclamation and the Department of Water Resources shall monitor red sesbania, salt cedar, giant reed, Chinese tallow, and sponge plant along affected portions of the San Joaquin River and bypass system (before and after WY 2011 interim flows) and control and manage these species as specified in the Invasive Species Monitoring and Management Plan, included in Appendix F of the Environmental Assessment and Finding of No Significant Impact/Initial Study and Mitigated Negative Declaration.

25. Reclamation shall implement the 2009-2013 Interim Flow Release Program Water Quality Monitoring Plan in Appendix E of the Supplemental EA. Requests for modification of the Interim Flow Release Program Water Quality Monitoring Plan shall be submitted in writing to the Deputy Director for Water Rights, and may only be made upon written approval from the Deputy Director for Water Rights.

26. Reclamation shall develop and submit to the Deputy Director for Water Rights by February 1, 2011, a water quality response plan that addresses the following: (a) the contribution of Interim Flows to high salinity conditions in the DMC, Mendota Pool, and Fresno Slough; (b) an identification of the different entities and individuals that may contribute to or play a role in the response to high salinity conditions; (c) the current legal and contractual roles and responsibilities of those entities; and (d) possible response mechanisms, including those that are under the control of Reclamation and those that are the responsibility of other entities and individuals.

27. Reclamation will implement monitoring of temperature changes in Millerton Reservoir and a schedule for ramping of flow releases consistent with the San Joaquin River Restoration Settlement Agreement in coordination with U.S. Fish and Wildlife Service, National Marine Fisheries Service, Department of Fish and Game and Department of Water Resources.

STATE WATER RESOURCES CONTROL BOARD

Victoria A. Whitney

Victoria A. Whitney
Deputy Director for Water Rights

Dated: SEP 30 2010

Attachment: Flow Schedule

Schedule 1 (Same Requirements as Table 2-3, Supplemental EA) Maximum Interim Flow Release from Friant Dam		
Start Date	**End Date**	**Maximum Interim Flow Release from Friant Dam (cfs)[1]**
October 1, 2010	October 31, 2010	575
November 1, 2010	November 10, 2010	575
November 11, 2010	December 1, 2010	575
December 2, 2010	January 31, 2011	0
February 1, 2011	February 15, 2011	375
February 16, 2011	February 28, 2011	1,375
March 1, 2011	March 15, 2011	1,475
March 16, 2011	March 31, 2011	1,475
April 1, 2011	April 15, 2011	1,475
April 16, 2011	April 30, 2011	1,475
May 1, 2011	May 31, 2011	1,475
June 1, 2011	June 30, 2011	1,475
July 1, 2011	July 31, 2011	1,475
August 1, 2011	August 31, 2011	125
September 1, 2011	September 30, 2011	145

[1] Includes 5 cfs of riparian releases. Includes both the fall and spring flexible flow periods as described in Exhibit B of the Settlement. Actual releases may be less. Total Interim Flows volume released from Friant Dam shall not exceed 389,355 af in a wet year. Water Year 2011 may include a pulse flow of up to 2,000 cfs release from Friant Dam for a 12-hour period.

Schedule 2
(Same Requirements as Table 2-1, Supplemental EA)

Example Estimated Maximum Regulated Nonflood Flows Under the Proposed Action in a Wet Year[1]

Begin Date	End Date	Estimated Maximum Flow Consisting of Interim Flows and Water Right Flows at Locations in the Restoration Area (cfs)									
		Head of Reach 1[3]	Head of Reach 2A[4]	Head of Reach 2B[5]	Head of Reach 3[6]	Head of Reach 4A	In Reach 4B1[7]	In Reach 4B2	In Bypass System[8]	Head of Reach 5	Merced River Confluence[9]
10/1/2010	10/31/2010	350	195	115	715	115	0	115	115	115	415
11/1/2010	11/6/2010	700	575	475	1,075	475	0	475	475	475	775
11/7/2010	11/10/2010	700	575	475	1,075	475	0	475	475	475	775
11/11/2010	12/1/2010	350	235	155	755	155	0	155	155	155	555
12/2/2010[2]	1/31/2010[2]	120	5	0	0	0	0	0	0	0	0
2/1/2011	2/28/2011	350	255	175	775	175	0	175	175	175	675
3/1/2011	3/15/2011	500	375	285	885	285	0	285	285	285	785
3/16/2011	3/31/2011	1,500	1,375	1,225	1,300	1,225	0	1,225	1,225	1,225	1,700
4/1/2011	4/15/2011	1,620	1,475	1,300	1,300	1,300	0	1,300	1,300	1,300	1,700
4/16/2011	4/30/2011	1,620	1,475	1,300	1,300	1,300	0	1,300	1,300	1,300	1,700
5/1/2011	6/30/2011	1,660	1,475	1,300	1,300	1,300	0	1,300	1,300	1,300	1,700
7/1/2011	8/31/2011	350	125	45	645	45	0	45	45	45	320
9/1/2011	9/30/2011	350	145	65	665	65	0	65	65	65	340

Notes
1. Example only. Actual Interim Flows may vary depending on a variety of factors. Flows may be lower under other water year types.
2. No Water Year 2011 Interim Flows during this period.
3. Assumes up to 230 cubic feet per second diverted by instream water right holders (e.g., holding contracts), consistent with Exhibit B of the Settlement.
4. Assumes up to 200 cubic feet per second lost through infiltration, consistent with Exhibit B of the Settlement.
5. Estimated maximum Water Year 2011 Interim Flows at the head of Reach 2B account for seepage losses experienced in Reach 2A, consistent with Exhibit B of the Settlement.
6. Assumes up to 600 cubic feet per second released to Reach 3 from the Mendota Pool for diversions at Sack Dam into the Arroyo Canal.
7. The Proposed Action does not include any activity in Reach 4B1.
8. Includes Eastside and Mariposa bypasses.
9. Assumes accretions from Mud and Salt Sloughs in Reach 5, consistent with Exhibit B of the Settlement.