



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
Southwest Region
501 West Ocean Boulevard, Suite 4200
Long Beach, California 90802-4213

SEP 30 2010

Jason Phillips
Program Manager
U.S. Bureau of Reclamation
Mid-Pacific Regional Office
2800 Cottage Way
Sacramento, California 95825-1898

Dear Mr. Phillips:

This letter is in response to your June 22, 2010, letter requesting concurrence from NOAA's National Marine Fisheries Service (NMFS) that the proposed San Joaquin River Restoration Program's (SJRRP) Water Year (WY) 2011 Interim Flows Project (Proposed Action) may affect but is not likely to adversely affect threatened Central Valley (CV) steelhead (*Oncorhynchus mykiss*), endangered Sacramento River winter-run Chinook salmon (*O. tshawytscha*), threatened CV spring-run Chinook salmon (*O. tshawytscha*), the threatened Southern distinct population segment (DPS) of North American green sturgeon, (*Acipenser medirostris*), or the respective designated critical habitats of CV steelhead and the Southern DPS of North American green sturgeon in accordance with the Endangered Species Act (ESA). In addition, the Bureau of Reclamation (Reclamation) has determined that the proposed project will have no adverse effect on the Essential Fish Habitat (EFH) of Pacific salmon or starry flounder (*Platichthys stellatus*), and has requested initiation of consultation pursuant to the Magnuson-Stevens Fishery Conservation and Management Act (MSA). This letter also serves as consultation under the authority of and in accordance with the provisions of the Fish and Wildlife Coordination Act of 1934 (FWCA), as amended.

The SJRRP was established in late 2006 to implement the Stipulation of Settlement (Settlement) in *NRDC, et al. v. Kirk Rodgers et al.* (Settlement). Authorization for implementing the Settlement is provided in the San Joaquin River Restoration Settlement Act (Act: Public Law 111-11).

Reclamation is proposing to continue Interim Flow releases, as identified in the WY 2010 Interim Flows Project Environmental Assessment/Initial Study (EA/IS) and Biological Assessment (BA) and Addendum. The continuation of this action is consistent with the Settlement which states that Interim Flows shall continue from October 1, 2009, until full Restoration Flows begin. The Proposed Action will comply with the Settlement and the Act in WY 2011 by releasing water from Friant Dam for one additional year in a manner



consistent with Federal, State, and local laws, and existing or future agreements with downstream agencies, entities, and landowners. The Proposed Action would include the release of Interim Flows to the San Joaquin River from Friant Dam during WY 2011, from October 1, 2010, through September 30, 2011, in accordance with the flow schedule presented in Exhibit B of the Settlement. WY 2011 Interim Flows would be reduced or diverted as needed to avoid causing substantial adverse conditions to fish habitat in downstream reaches. The Proposed Action involves recapturing WY 2011 Interim Flows through existing facilities at locations along the San Joaquin River, in the Delta, or both. The extent and effect of this potential stressor is unknown and cannot be determined at this time. Potential diversion locations for recapturing releases of Interim Flows during WY 2011 include the following locations within the Restoration Area, as defined in the BA: Mendota Pool, Arroyo Canal at Sack Dam, the Lone Tree Unit of the Merced National Wildlife Refuge (NWR), the East Bear Creek Unit of the San Luis NWR Complex, Patterson Irrigation District's (PID) facility, West Stanislaus Irrigation District's (WSID) facility, Banta-Carbona Irrigation District's (BCID) facility, Central Valley Project (CVP) Harvey O. Banks Pumping Plant (Banks), and the State Water Project (SWP) C.W. "Bill" Jones Pumping Plant (Jones) in the Delta. Recapture would only occur at PID's facility after fish screen installation scheduled for completion in May 2011 and at WSID's facility once ESA consultation is complete. The Proposed Action would involve no construction activities.

Consultation History

Informal consultations between Reclamation and NMFS on the Proposed Action have occurred regularly beginning January 4, 2010, primarily as part of the Environmental Compliance and Permitting Work Group (ECPWG), which includes staff from all Implementing Agencies, including Reclamation, the U.S. Fish and Wildlife Service (USFWS), and NMFS. This group is also the focal point for the development of the Supplemental Environmental Assessment/Initial Study (SEA/SIS) for the Proposed Action, to meet the requirements of the National Environmental Policy Act and the California Environmental Quality Act. In addition, members of the Fisheries Management Work Group (FMWG), which also includes staff from the Implementing Agencies, were involved in stages of the consultation process. Endangered Species Act (ESA) compliance for the WY 2011 Interim Flows and the SJRRP as a whole has been discussed on a regular basis as summarized in Table 2-2 in the SJRRP WY 2011 Interim Flows Project Biological Assessment (BA). The ECPWG and FMWG members continue to meet regularly, generally on a bi-weekly basis, to discuss ESA issues.

NMFS reviewed the information provided with your June 22, 2010, ESA Section 7 consultation initiation letter and found that it was insufficient to support a determination of not likely to adversely affect federally listed anadromous fish species or their designated critical habitat, and as a result we could not concur with that determination. Following the 30-day sufficiency review pursuant to 50 CFR 402.12(j), we provided a written response, dated July 23, 2010, in which we requested additional information deemed necessary to determine the level of effect from the Proposed Action on listed fish and their habitats, including effects to EFH. Reclamation provided the requested

additional information in an email received by NMFS on August 11, 2010. A meeting including Reclamation, their consultant HDR, and NMFS occurred on August 26, 2010, to address concerns listed in NMFS' July 23, 2010, letter and in the additional information provided by Reclamation. During the August 26, 2010, meeting, the proposed changes and additions to the SEA/SIS were discussed along with additional information requirements in order to complete the initiation package for consultation under the ESA. The proposed changes included modification of the project description to ensure that potentially adverse effects to ESA listed species within the action area would be minimized and avoided to the fullest extent practicable, as well as the addition of clarifying information to support Reclamation's analysis of effects related to the Proposed Action. Revised additional information in the form of an Erratum was received by NMFS by email on September 13, 2010. This supplemental information, in the form of an Erratum to the BA, included details relevant to: (1) recirculation and recapture, (2) Hills Ferry Barrier (HFB) operation and effects on CV steelhead, (3) Delta operations and the Vernalis Adaptive Management Program (VAMP), and (4) effects of the Proposed Action on Essential Fish Habitat (EFH). NMFS provided technical support on September 14 and 15, 2010 via phone and email to finalize your submission. The final supplemental information provided by the Bureau to NMFS via email on September 16, 2010, will supercede the information in your letter received on September 13, 2010, which updates and amends the BA. Subsequent reference herein to the BA includes the original document as updated and amended by the September 16, 2010, communication. This analysis is based on the June 2010 BA, and all of the information provided during the consultation history, and the best scientific and commercial information currently available.

Action Area

The action area described for WY 2011 is the same as that identified in the WY 2010 BA and is defined as all areas to be affected directly or indirectly by the Proposed Action. This includes all areas where flows and water levels could be altered as a result of the release of WY 2011 Interim Flows under the SJRRP, and includes the following: (1) Millerton Lake and the San Joaquin River between Kerkhoff Dam and Millerton Lake, (2) San Joaquin River from Friant Dam downstream to the Delta, (3) Eastside Bypass, downstream from the Sand Slough Control Structure, and the Mariposa Bypass, (4) Merced, Tuolumne, and Stanislaus rivers downstream from New Exchequer, Don Pedro, and New Melones dams, and (5) south and central Delta, defined as the San Joaquin River and its tributaries with the Delta west to its confluence with the Sacramento River.

Summary of Proposed Action

The Settlement stipulates the release of both Interim Flows and Restoration Flows. The release of Interim Flows began October 1, 2009, and continues until full Restoration Flows begin. The purpose of the Proposed Action is to collect relevant data on flows, temperatures, fish needs, seepage losses, recirculation, recapture, and reuse.

The Proposed Action is to provide releases of water from Friant Dam for one additional year (WY 2011) in accordance with the Settlement and in a manner consistent with Federal, State, and local laws, and existing agreements with downstream agencies, entities, and landowners. The Proposed Action would include the release of Interim Flows to the San Joaquin River from Friant Dam during WY 2011, from October 1, 2010, through September 30, 2011, in accordance with the flow schedule presented in Exhibit B of the Settlement. Estimated maximum non-flood flows for each reach of the San Joaquin River and conveyance facilities between Friant Dam and the confluence with the Merced River (Restoration Area) under the Proposed Action are included within the project BA by water year-type. The water year-type for WY 2011 cannot be determined until spring 2011. The Proposed Action also involves recapturing WY 2011 Interim Flows to the extent possible at several existing diversions along the San Joaquin River and in the Delta. At the maximum extent, WY 2011 Interim Flows released from Friant Dam would flow through the Restoration Area, combine with flows from major tributaries, and enter the Delta. However, these flows would be reduced or diverted as needed to avoid causing adverse conditions in the downstream reaches, for a variety of reasons including fishery concerns, channel capacity, and seepage issues as described in the BA.

The Proposed Action includes recapturing flows within the Restoration Area as well as locations as far downstream as the south Delta. These facilities include the following: (1) Mendota Pool, (2) Arroyo Canal at Sack Dam, (3) the Lone Tree Unit of the Merced National Wildlife Refuge (NWR) in Eastside Bypass Reach 2, (4) the East Bear Creek Unit of the San Luis NWR in Eastside Bypass Reach 3, (5) the WSID's facility, (6) the PID's facility, (7) the BCID's facility, and (8) the Jones and Banks pumping plants in the south Delta.

Three of the above listed facilities are currently screened. These include the BCID, Jones, and Banks facilities. The proposed recapture at the BCID facility would change the current operations in that the BCID would divert a portion of Interim Flows at its facility in lieu of deliveries via the Delta-Mendota Canal. All proposed recapture at these three facilities would occur within the facilities' operating criteria, including biological opinions in place at the time of recapture, and no additional take would occur beyond that already allowed.

Both the PID and WSID facilities are currently unscreened. The PID facility will not be used until after the installation of a fish screen. This is estimated to be completed in May 2011; but will likely not be operational until after June 2011. The WSID facility is currently unscreened and will remain unscreened during WY 2011. This facility would only be used for the diversion of WY 2011 Interim Flows with authority to take listed species under the ESA. Such authority is not being proposed to be provided as part of this BA, but may be proposed at some time in the near future as a separate project.

Under the Proposed Action, the water released under WY 2011 Interim Flows that is available for recapture and recirculation is estimated to equal to the amount of water that reaches the Mendota Pool at the downstream end of Reach 2B. WY 2011 Interim Flows

recaptured along the San Joaquin River may provide deliveries in lieu of Delta-Mendota Canal supplies. In this case, Delta exports would not change under the Proposed Action. Up to a like amount of exported water would be available for recirculation to the Friant Division using south-of-Delta facilities. No additional agreements would be required to recapture flows in the Restoration Area. Mutual agreements between Reclamation, California Department of Water Resources, the Friant Division Long-Term Contractors, and other south-of-Delta CVP/SWP contractors could be required before recaptured water could be recirculated to the Friant Division.

Implementation of the Proposed Action could result in a negligible increase in Delta inflow. It would also result in small changes to allowable Delta exports under existing operating criteria, consistent with prevailing and relevant laws, regulations, biological opinions, and court orders in force at the time the water is recaptured. Recirculation would be subject to available capacity within CVP/SWP storage and conveyance. Implementation of the Proposed Action would remain consistent with the reasonable and prudent alternative (RPA) as required by the USFWS Delta Smelt Biological Opinion (BO) of the Operating Criteria and Plan for the Continued Operations of the Central Valley Project and State Water Project (USFWS Operations BO) (USFWS 2008) and the NMFS Biological and Conference Opinion on the Long-Term Operations of the Central Valley Project and State Water Project (NMFS Operations BO) (NMFS 2009), respectively or as amended by court action.

WY 2011 Interim Flows could increase flows in the San Joaquin River, at the confluence of the Merced River, by up to 1,300 cubic feet per second (cfs). This in turn could affect the way that the Vernalis Adaptive Management Program (VAMP) is implemented. Although VAMP expires in WY 2010, NMFS expects tributary contributions from the Merced and Tuolumne rivers to continue through 2011, and that Reclamation shall seek supplemental agreement with the San Joaquin River Group Authority (SJRG) for tributary contributions so as to not rely on New Melones Reservoir to meet required flows at Vernalis, California. Reclamation is working with the SJRG to address the requirements of the NMFS Operations BO. However, at this time, no agreement has been reached on any future VAMP action and although it is reasonable to assume that VAMP or a VAMP-like action would occur in WY 2011, there is no information as to how this action would be implemented. Therefore, the BA includes an analysis assuming that any future implementation of VAMP or a VAMP-like action would be similar to historical implementation.

Endangered Species Act Section 7 Consultation

The action area includes but also extends beyond the geographic boundaries of several ESA listed anadromous fish species. The species exposed to the effects of the Proposed Action vary within three distinct sub-areas within the action area. For clarity of our species analysis we have defined these as the Delta Area, the Tributary Area, and Restoration Area. The Delta Area is the area downstream of the confluence of the Stanislaus and San Joaquin rivers that may be affected by operations of the Jones and

Banks export facilities. This is within the range of the Sacramento River winter-run Chinook salmon and the CV spring-run Chinook salmon evolutionarily significant units (ESUs) and the CV steelhead DPS and is within the range of the Southern DPS of North American green sturgeon. Available information indicates Sacramento River winter-run Chinook salmon, CV spring-run Chinook salmon, CV steelhead, and the Southern DPS of North American green sturgeon utilize this portion of the action area for migration and rearing purposes. This area also includes designated critical habitat for the Southern DPS of North American green sturgeon and CV steelhead. The Tributary Area includes the area of the San Joaquin River between its confluence with the Stanislaus and Merced rivers. CV steelhead is the only ESA listed anadromous fish that occurs in the Tributary Area, having small populations in the Merced, Tuolumne, and Stanislaus rivers. Designated critical habitat for CV steelhead includes these tributaries and the main stem San Joaquin River from the Delta to the confluence with the Merced River. Available information indicates CV steelhead use this portion of the San Joaquin River for migration to/from spawning areas in the tributaries and rearing. The Restoration Area includes the reaches of the San Joaquin River upstream of the confluence with the Merced River. Although these reaches of the San Joaquin River are within the historical range of CV steelhead, present habitat conditions in these reaches generally have been unsuitable for CV steelhead owing to no flow or lack of flow, since the operation of Friant Dam and associated conveyance canals. CV steelhead are rarely able to access this area except under currently unusual conditions of extended high flows. There is no designated critical habitat for anadromous fish species in the Restoration Area.

The potential adverse effects to listed salmonids and green sturgeon associated with the WY 2011 Interim Flows are expected to be insignificant or discountable due to the incorporation of several avoidance and minimization measures into the project description. These measures are discussed below in relation to the specific sub-areas in which they will be applied.

The Restoration Area

The potential adverse effect of the Proposed Action on CV steelhead in the Restoration Area could be the attraction of CV steelhead above the confluence of the Merced River. Since the operation of Friant Dam and associated conveyance canals, habitat conditions in the San Joaquin River are unsuitable for CV steelhead owing to flow limitations and passage barriers. NMFS concurs that the likelihood of CV steelhead moving into the Restoration Area as a result of WY 2011 Interim Flows is extremely low. The rare observations of individual adult CV steelhead above the confluence of the Merced River in recent record have only occurred during flood and extended high flow releases (e.g., 2,000–4,000 cfs for continuous months) that have occurred in wet years. The current depleted state of Millerton Reservoir would make such extended high release conditions unlikely even in the event that Water Year 2011 is a wet year. Hydrologic data presented in the BA demonstrate that the average annual flows under the Proposed Action are within 7 percent of the average flows expected at this time and location under existing conditions. This small increase is not anticipated to trigger any change to CV steelhead migration patterns in the San Joaquin River basin. The project does include a monitoring

and salvage component to redirect CV steelhead in the unlikely event that they move into the Restoration Area. These activities are covered for take by other permitting mechanisms between NMFS and California Department of Fish and Game. Consequently, NMFS has determined that the potential adverse effects to CV Steelhead in the Restoration Area are expected to be reduced to an insignificant and discountable level.

The recapture of WY 2011 Interim Flows within the restoration area (i.e. upstream of the Merced River confluence) will not impact listed species because they do not currently occur there, and will not impact critical habitat because the restoration area is not included in the designated critical habitat for listed salmonids and sturgeon.

The Tributary Area

If the WY 2011 Interim Flows reach the Tributary Area, they would have the potential to affect CV steelhead in terms of water temperature, potential introduction of contaminants, reduction of spring flows in the tributaries by affecting the VAMP-like flows, and potential water recapture.

Modeling results using a monthly time step presented in the BA indicated that Interim Flows that reach the confluence with the Merced River could raise water temperatures in the lower San Joaquin River from the existing condition. Further analysis indicates that the thermal effects of the Interim Flows likely would not be appreciatively different from currently impaired status, based on the level of precision of the model analysis. The model results do not assess daily temperatures, which are of greater ecological and biological significance to fish, but they do suggest a potential for adverse temperature effects as a result of Interim Flows downstream of the confluence of the Merced River. The EPA temperature standards for salmonids are based on the effect related to a 7 day maximum daily average (EPA 2003). 2010 temperature data collected on the San Joaquin River just upstream of the Merced River confluence indicates that water temperatures between March 1 and September 17 were lower and in some cases significantly lower than the modeled temperatures for that same time period. This comparison was presented with a daily average, which more accurately represents the habitat conditions that listed fish would encounter. The actual water temperature effects of WY2011 Interim Flows are unknown. To avoid potential adverse temperature effects, the project description includes weekly coordination with NMFS to monitor temperatures above and below the confluence of the Merced River, with alternative implementation of Interim Flows if thermal conditions are determined to be worse than predicted.

The added volume from the Interim Flows could mobilize contaminants from within the channel that have accumulated in recent dry years. Although this effect is of comparable intensity to the contaminant flushing that occurs with precipitation and flood events, contaminants could have effects on the aquatic food supply through the Delta suppressing growth rates and survival. Water column toxicity testing in the fall of 2009 in the Project Area for organochlorine and pyrethroid pesticides found that all pesticides were below the reporting limits. The reporting limits are however above levels of concern to aquatic

life and, as such, the results are under review by the Central Valley Regional Water Quality Control Board. NMFS is working with Reclamation to develop new aquatic resources reporting limits for the sampling/monitoring procedures for Water Year 2011 and future project operations. Overall, WY 2010 Interim Flows water quality monitoring did not detect any toxins or constituents of concern (Draft 2010 SJRRP Annual Technical Report). The extent and effect of this potential stressor is unknown and cannot be determined at this time. Reclamation commits to coordinate with NMFS and other agencies engaged in contaminant monitoring to monitor water quality components on a weekly to bi-weekly basis. Interim Flows will be modified if high levels of contaminants are detected.

Added Interim Flow contribution to base San Joaquin River flow has potential to reduce spring tributary releases based on past VAMP decision making processes. Modeling results in the BA also indicated that Interim Flow contributions can also result in increased spring tributary releases. The changes in flow as modeled are typically less than 12%, although some periods show a significant change on the Stanislaus River. The modeling in the BA of the VAMP flows does not incorporate the NMFS Operations BO RPA for the Stanislaus River. RPA actions for operational conditions for the Stanislaus River include minimum flows for salmonids and spring flow requirements. Implementation of Action suite III of the RPA will provide instream protection for CV steelhead during WY 2011 Interim Flows regardless of the VAMP action. VAMP terms for 2011 are uncertain but the Proposed Project assumes that a VAMP-like action will occur in the spring of 2011. Reclamation and NMFS will monitor VAMP tributary flow determinations, and coordinate to prevent Interim Flows from adversely modifying spring flow releases from tributaries.

The inclusion of a monitoring and coordination process between Reclamation and NMFS in the project description will assure that potential adverse effects relating to water temperature, contaminants, and tributary flows will be reduced to an insignificant and discountable level.

Recapture in the tributary area may occur in one of three locations; BCID, WSID, or PID's facilities. Any interim flows recaptured at the BCID facility will fall within the current operational conditions at this facility which are covered under an existing Biological Opinion. Interim flows recaptured at either WSID or PID would only occur after ESA consultation for the operations of these facilities has been completed. Therefore, no impacts to steelhead or critical habitat are expected from recapture in this section of the Action Area.

The Delta Area

If the WY 2011 Interim Flows reach as far as the Delta, they would have the potential to affect Sacramento River winter-run Chinook salmon, Central Valley spring-run Chinook salmon, CV steelhead, and the Southern DPS of North American green sturgeon by potentially increasing export operations as a result of recapturing WY 2011 Interim Flows. The 2009 NMFS Operations BO has analyzed the effects of proposed Delta export operations and provided a RPA for operations. Implementation of the RPA

actions III and IV in particular will address potential effects of export operations relating to Interim Flows on Sacramento River winter-run Chinook salmon, CV spring-run Chinook salmon, CV steelhead, and the Southern DPS of North American green sturgeon. On June 4, 2009, Reclamation responded to this Opinion that Reclamation will begin immediate implementation of the RPA to comply with the NMFS Operations BO, but they are also continuing to review the NMFS Operations BO and RPA. NMFS concurs that the potential effects of the WY 2011 Interim Flows in the Delta Area will be reduced to an insignificant and discountable level, as long as the recapture of Interim Flows via the CVP/SWP export facilities is conducted under the NMFS Operations BO and RPA.

NMFS concurs that the proposed WY 2011 Interim Flows project is not likely to adversely affect Sacramento River winter-run Chinook salmon, Central Valley spring-run Chinook salmon, CV steelhead, and Southern DPS of North American green sturgeon and the respective designated critical habitats of CV steelhead and the Southern DPS of North American green sturgeon. This concurrence is based on Reclamation implementing all conservation and protective measures intended to avoid or minimize adverse effects to fish and fish habitat as identified in the project description.

This concludes informal consultation for the proposed action. Re-initiation of consultation is required where discretionary Federal agency involvement or control over the action has been retained (or is authorized by law) and if: (1) new information reveals effects of the action that may affect listed species or critical habitat in a manner or to an extent not previously considered; (2) the action is subsequently modified in a manner that causes an effect to the listed species or critical habitat not considered; or (3) a new species is listed or critical habitat designated that may be affected by the action.

Essential Fish Habitat (EFH) Consultation

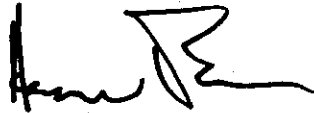
With regards to EFH consultation, the entire proposed action area has been identified as EFH for Central Valley fall/late fall-run Chinook salmon (*O. tshawytscha*) in Amendment 14 of the Pacific Salmon Fishery Management Plan pursuant to MSA. The Delta portion of the action area has been designated as EFH for starry flounder (*Platichthys stellatus*) in the Pacific Coast Groundfish Fishery Management Plan. Because the proposed action includes conservation measures to avoid impacts to salmonid habitat, and is in fact designed in the long-term to improve salmonid habitats and contribute to the recovery of fall-run and spring-run Chinook salmon, NMFS finds that the project activities will not adversely affect EFH for Pacific salmon and starry flounder, therefore, EFH conservation recommendations will not be provided at this time. Written response as required under section 305(b)(4)(B) of the MSA and Federal regulations (50 CFR 600.920) will not be required. Should there be substantial revision to the Proposed Action, however, the lead Federal agency will need to re-initiate EFH consultation.

Fish and Wildlife Coordination Act (FWCA)

The purpose of the FWCA is to ensure that wildlife conservation receives equal consideration, and is coordinated with other aspects of water resources development (16 U.S.C. 661). The FWCA establishes a consultation requirement for federal departments and agencies that undertake any action that proposes to modify any stream or other body of water for any purpose, including navigation and drainage (16 U.S.C 662(a)). Consistent with this consultation requirement, NMFS provides recommendations and comments to Federal action agencies for the purpose of conserving fish and wildlife resources. The FWCA allows the opportunity to offer recommendations for the conservation of species and habitats beyond those currently managed under the ESA and MSA. Because the proposed project is designed to avoid environmental impacts to aquatic habitat within the action area, NMFS has no additional FWCA comments to provide.

If you have questions or need additional information regarding this response please contact Erin Strange at (916) 930-3653 or via email erin.strange@noaa.gov.

Sincerely,



for

Rodney R. McInnis
Regional Administrator

Citations

National Marine Fisheries Service (NMFS). 2009. Biological Opinion on the Long-Term Central Valley Project and State Water Project Operations Criteria and Plan. Southwest Region. Long Beach, California. June 4.

United States Fish and Wildlife Service (USFWS). 2008. Formal Endangered Species Consultation on the Proposed Coordinated Operations of the Central Valley Project (CVP) and State Water Project (SWP). Region 8 (California and Nevada Region). Sacramento, California. Prepared for United States Department of the Interior, Bureau of Reclamation, Central Valley Operations Office, Sacramento, California. December 15, 2008.

cc: Copy to File – ARN 151422SWR2009SA00275
NMFS-PRD, Long Beach, CA