



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 23 2009

In response refer to:
2009/02837

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 May 22, 2009, letter requesting concurrence from NOAA's National Marine Fisheries Service (NMFS) that the proposed San Joaquin River Restoration Program's (SJRRP) Water Year (WY) 2010 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 designated critical habitat for the CV steelhead, in accordance with the Endangered Species Act (ESA). In addition, the Bureau of Reclamation (Reclamation) has determined that the proposed project may adversely affect the essential fish habitat (EFH) of Pacific salmon, 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 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 temporarily change Friant Dam operations in WY 2010 (October 1, 2009 through September 30, 2010) to accommodate the release of Interim Flows from Friant Dam into the San Joaquin River and potentially downstream as far as the Sacramento-San Joaquin Delta (Delta), as specified in the Act. Reoperation of Friant Dam is part of the SJRRP established under the Settlement. A portion or all of the



Interim Flows would be recaptured by existing water diversion facilities along the San Joaquin River and/or in the Delta for agricultural, municipal, and industrial, and/or fish and wildlife uses to the extent possible. Potential diversion locations for recapturing releases of Interim Flows during WY 2010 are Mendota Pool, Arroyo Canal, the Lone Tree Unit of the Merced National Wildlife Refuge (NWR), the East Bear Creek Unit of the San Luis NWR Complex, and Central Valley Project (CVP), and State Water Project (SWP) Delta Export facilities. The Proposed Action would involve no construction activities.

Consultation History

Informal consultations between Reclamation and NMFS on the Proposed Action have occurred regularly beginning February 19, 2009, primarily as part of the Environmental Compliance and Permitting Work Group (ECPWG), which includes staff from all Implementing Agencies, including Reclamation, U.S. Fish and Wildlife Service (USFWS), and NMFS. This group is also the focal point for the development of the Environmental Assessment/Initial Study (EA/IS) 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 2010 Interim Flows, and the SJRRP as a whole, has been discussed on a regular basis as summarized in Table 2-1 in the SJRRP WY 2010 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 May 22, 2009, 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 June 30, 2009, 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. A meeting including Reclamation, their consultants MWH, USFWS, and NMFS occurred on July 15, 2009 to address concerns listed in NMFS' June 30, 2009, letter. Reclamation provided the requested additional information in two separate emails received by NMFS on July 27 and August 20, 2009. This supplemental information included details relevant to: 1) Flows in the Lower San Joaquin River and its tributaries, 2) temperature, 3) Delta flow patterns, 4) contaminants, and 5) effects of the Proposed Action on EFH. Two additional meetings between the same parties occurred on August 10 and 28, 2009, in order to discuss proposed changes to the EA/IS and identify any 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. NMFS has received your letter dated September 17, 2009, which updates and amends the BA, and is in receipt of all the information necessary to initiate consultation. Subsequent reference herein to the BA includes the original document as updated and amended by the September 17, 2009 communication. This analysis is based on the September 2, 2009 project description provided in Chapter 2 of the EA/IS, all of the information provided during the consultation history, and the best scientific and commercial information currently available.

Action Area

The action area includes all areas where flows and water levels could be altered as a result of the release of WY 2010 Interim Flows under the SJRRP, and include 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 is to begin October 1, 2009, and continue until full Restoration Flows begin. The purpose of the Interim Flows is to collect relevant data on flows, temperatures, fish needs, seepage losses, recirculation, recapture, and reuse.

The Proposed Action is the implementation of the Interim Flows for the single WY 2010. This will include the release and potential downstream recapture of Interim Flows, conveyance of flows in the San Joaquin River system to the Delta, and monitoring to be conducted during the Interim Flow releases. The Interim Flows for this initial year are expected to yield important information to inform the later implementation of a program of Interim Flows and Restoration Flows. WY 2010 Interim Flows would be released to the San Joaquin River from Friant Dam between October 1 and November 20, 2009, and from February 1 to September 30, 2010, 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 2010 cannot be determined until spring 2010.

At the maximum extent, WY 2010 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 involves options for recapturing Interim Flows at locations along the San Joaquin River, in the Delta, or both to the maximum extent possible during WY 2010, and transferring water back to the Friant Division Long-Term Contractors. The farthest downstream that Interim Flows could be recaptured during WY 2010 would be at the Jones and Banks pumping plants in the south Delta. The Proposed Action includes several diversion locations where Interim Flows could be recaptured: 1) existing CVP and SWP facilities in the Delta, 2) the Mendota Pool at the downstream end of San Joaquin River Reach 2B, 3) the Arroyo Canal at the downstream end of San Joaquin River Reach 3, 4) The Lone Tree Unit of the Merced NWR (Lone Tree Unit) in Reach 2 of the Eastside Bypass, and 5) the East Bear Creek Unit of the San Luis NWR (East Bear Creek Unit) in Reach 3 of the East Side Bypass.

WY 2010 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. An amount of exported water, up to an equivalent of the Interim Flows, could 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 re-circulated to the Friant Division.

Implementation of the Proposed Action would 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. Any additional Delta exports would be eligible for recirculation to the Friant Division.

Given the uncertainties associated with the WY 2010 Interim Flows, such as the water quality changes, the flow schedule, and Vernalis Adaptive Management Program (VAMP) operations, Reclamation will coordinate with NMFS to ensure that potential adverse effects to listed species will be minimized. This will be accomplished by providing and discussing weekly stream flow and water quality data summaries. When Interim Flows are going past the confluence of the Merced River, specific stream flow and water quality measurements including dissolved oxygen, water temperature, pH, turbidity, stream flow, and specific conductivity will be collected and reviewed from locations on the San Joaquin River just upstream and downstream from the confluence with the Merced River as well as in the Merced River itself. Measurements of additional constituents will become available every two to four weeks including selenium, ammonia, and boron, and will be reviewed as they become available. Sources of this data are identified in the Draft Monitoring Plan for Physical Parameters Technical Memorandum (TM) available at restorsjr.net, Surface Water Ambient Monitoring Program (SWAMP), and the Grassland Bypass Project. In the event that monitoring data indicates a potential for Interim Flows to cause effects that are greater than those anticipated in the BA and in consultation with NMFS, Reclamation will work with

NMFS to modify Interim Flow releases, upstream diversions of flow to avoid downstream impacts, or constraining flows to the upper San Joaquin River upstream of the confluence with the Merced River. This weekly coordination with NMFS and Reclamation's commitment to modify flows is a process included in the project description of the Proposed Action which will allow modification of the Interim Flows to ensure that the effects of the Proposed Action remain at levels that may affect but are not likely to adversely affect federally listed anadromous fish species.

Endangered Species Act Section 7 Consultation

In order for NMFS to consider a project as being not likely to adversely affect the listed species, the effects upon the listed species must be discountable, insignificant, or completely beneficial. **Beneficial effects** are contemporaneous positive effects without any adverse effects to the species. **Insignificant effects** relate to the size of the impact and should never reach the scale where take occurs. **Discountable effects** are those extremely unlikely to occur. Based on best judgment, a person would not: (1) be able to meaningfully measure, detect, or evaluate insignificant effects; or (2) expect discountable effects to occur.

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 them as the Delta Area, the Tributary Area, and the 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 CVP/SWP 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 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 North American green sturgeon utilize this portion of the action area for migration and rearing purposes. This area also includes designated critical habitat for 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 utilizes this portion of the San Joaquin River for migration and rearing, and the tributaries support all other fresh water primary constituent elements. 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 the condition of no flow or lack of flow occurring since the operation of Friant Dam and its 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 2010 Interim Flows are expected to be insignificant or discountable due to the restricted duration of the Proposed Action to a single year and 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 its 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 2010 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 release conditions (*e.g.*, 2,000-4,000 cubic feet per second for several continuous months) that have occurred in wet year conditions. The current depleted state of Millerton Reservoir would make such extended high flow conditions unlikely even in the event that Water Year 2010 is a wet year. Even in wet year conditions, the Interim Flows levels are not sufficient to re-create the conditions that have attracted CV steelhead up the San Joaquin River in recent years. Additionally, the California Department of Fish and Game (CDFG) will operate the Hills Ferry Barrier in fall and winter months to monitor and block adult anadromous fish, including CV steelhead, from migrating into the Restoration Area. Although the spring Interim Flows are unlikely to create environmental conditions attractive to CV steelhead in Water Year 2010, the project does include a monitoring and salvage component to redirect CV steelhead that might move into the Restoration Area. These activities are covered for take by other permitting mechanisms between NMFS and CDFG. Consequently, NMFS has determined that the potential for adverse effects to occur within the Restoration Area is expected to be reduced to an insignificant and discountable level.

The Tributary Area

If the WY 2010 Interim Flows reach the Tributary Area, they would have the potential to affect CV steelhead in terms of water temperature, potential introduction of contaminants, and potential reduction of spring flows in the tributaries by affecting the flows called for in the VAMP. Reclamation used various modeling tools to evaluate the likelihood and degree of such effects. The magnitudes of the modeled effects in these areas were not significant based on the conditions modeled, and the potential differences were within the expected range of error based on input data and assumptions, however, it is not feasible to model every potential condition that may occur. The modeled results did not indicate a significant potential change in temperature from baseline conditions,

but the overarching trend in the temperature results was that Interim Flows that reach the confluence with the Merced River have the potential to raise water temperatures in the San Joaquin River. Through the informal consultation process, Reclamation identified that there are uncertainties associated with WY 2010 Interim Flows that flow beyond the confluence of the Merced River, such as the water quality changes, the flow schedule, as well as VAMP operations. Consequently, Reclamation has modified the project description to include weekly coordination with NMFS and a plan to modify Interim Flows to ensure that any potential effects to listed species will be minimized or avoided. In the event that monitoring of the Interim Flows shows a potential to cause effects that are greater than those anticipated in the BA, Reclamation has committed to work with NMFS to modify Interim Flow releases. Possible modifications include reducing flow releases, upstream diversions of flows to avoid downstream impacts, or constraining flows to the upper San Joaquin River upstream of the confluence with the Merced River. This weekly coordination with NMFS and Reclamation's commitment to modify flows based on real time conditions would ensure that the impacts of the WY 2010 Interim Flows would remain at levels that may affect but are not likely adversely affect listed species. Consequently, NMFS concurs that Reclamation's commitment to monitor temperatures and modify Interim Flows will ensure that the effect of the Proposed Action on water temperature below the confluence of the Merced River will be insignificant.

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 no different or less intense than 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. The extent and effect of this potential stressor is unknown and cannot be determined at this time. The project description has been modified so that 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 to avoid conveyance downstream of the Merced River. NMFS concurs that the proposed monitoring program, combined with the commitment in the project description to reduce flow releases, to divert flows upstream to avoid downstream impacts, or to constrain flows to the upper San Joaquin River upstream of the confluence with the Merced River will ensure that potential effects of the Proposed Action will remain at an insignificant level.

The project description has been modified to include that Reclamation and NMFS will coordinate and monitor the VAMP tributary flow determination process, and will modify the Proposed Action to prevent Interim Flows from adversely modifying spring flow releases from tributaries. Modeling results in the BA also indicated that Interim Flow contributions can result in both increased or decreased 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. Modeling of the VAMP flows was performed before the NMFS 2009 operations biological opinion was released. The reasonable and prudent alternative (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 2010 Interim Flows. VAMP terms for 2010 are uncertain. NMFS concurs that Reclamation's commitment in the project description to monitor the development of the 2010 VAMP flow schedule and to operate the Interim Flows to not adversely affect spring tributary releases will reduce the effects of the Proposed Action to insignificant levels.

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

The Delta Area

The NMFS 2009 biological opinion (Opinion) on the long-term operations of the CVP/SWP 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 Opinion, but they are also continuing to review the Opinion and RPA. NMFS concurs that the potential effects of the WY 2010 Interim Flows in the Delta Area will be reduced to an insignificant and discountable level, as long as the recapture of Friant Interim Flow water via the CVP/SWP export facilities is conducted under the Opinion and RPA.

NMFS concurs that the proposed WY 2010 Interim Flows project is not likely to adversely affect Sacramento River winter-run Chinook salmon, CV spring-run Chinook salmon, and CV steelhead and the designated critical habitat of CV steelhead, as well as 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. Reinitiation 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


Based on our review of the project description and conservation and protective measures included, NMFS finds that the project activities will not adversely affect EFH for Pacific salmon and starry flounder. We find the project activities incorporated in the project description include conservation measures that will reduce adverse affects to EFH for Pacific salmon, as described in Amendment 14 of the Pacific Salmon Fishery Management Plan pursuant to the MSA; therefore, additional 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 Rhonda Reed at (916) 930-3609 or via email rhonda.reed@noaa.gov, or Erin Strange at (916) 930-3653 or via email erin.strange@noaa.gov.

Sincerely,


for Rodney R. McInnis
Regional Administrator

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