



United States Department of the Interior



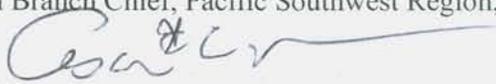
FISH AND WILDLIFE SERVICE

Sacramento Fish and Wildlife Office
2800 Cottage Way, Room W-2605
Sacramento, California 95825-1846

In reply refer to:

Memorandum

To: Water and Fisheries ARD, Pacific Southwest Region,
Sacramento, California

From: CVPIA Implementation Branch Chief, Pacific Southwest Region,
Sacramento, California 

Subject: Finding of No Significant Impact for Merced River Ranch Floodplain Restoration
Project, Merced River, Merced County, California

This memorandum transmits a Finding of No Significant Impact (FONSI) for your review and signature, if approved. The U.S. Fish and Wildlife Service prepared the attached Environmental Assessment/Initial Study (EA/IS) for the purpose of evaluating alternatives associated with granting funds, under the authority of the Central Valley Project Improvement Act's Anadromous Fish Restoration Program (AFRP), to Cramer Fish Sciences to implement a floodplain and channel restoration project to improve salmonid spawning and rearing habitat in the Merced River, Merced County, California. The proposal is consistent with recommendations for the Merced River in the Final Restoration Plan of the AFRP. The EA examines and evaluates effects of the proposed action on the environment and concludes that the action does not constitute a major Federal action significantly affecting the quality of the human environment. Therefore, an Environmental Impact Statement is not required.

Attachments:
Finding of No Significant Impact
Notification of Section 106 Compliance
Intra-Service Section 7 Evaluation Form
Letter of Concurrence, National Marine Fisheries Service
Environmental Assessment/Initial Study

Finding of No Significant Impact

Merced River Ranch Floodplain Restoration Project, Merced River, Merced County, California

Lead Federal Agency:

U.S. Fish and Wildlife Service
2800 Cottage Way, Room W-2605
Sacramento, California 95825

The U.S. Fish and Wildlife Service (Service) proposes to grant funds, under the authority of the Central Valley Project Improvement Act's (CVPIA) Anadromous Fish Restoration Program (AFRP), to Cramer Fish Sciences to implement a salmonid spawning gravel and floodplain enhancement project on the Merced River. The gravel and floodplain enhancement project would provide improved spawning and rearing habitat for naturally reproducing anadromous salmonids on the Merced River. The proposed project consists of re-grading and rehabilitating ~6 acres of dredger tailings on the historic floodplain and ~5.5 acres of salmonid spawning habitat. The floodplain will be graded and material from the floodplain will be washed and screened to appropriate size classes and placed within the spawning channel over a 5-year period. The proposed spawning gravel replenishment and rehabilitation activities will increase riffle to riffle bedslope; increase available and usable salmonid spawning areas by providing spawning gravels within the appropriate size range; facilitate increased use of spawning habitat; improve gravel permeability and intergravel water quality; decrease redd superimposition; and, ultimately, increase the natural production of fall-run Chinook salmon and steelhead in the Merced River. The proposed action supports objectives of the AFRP Final Restoration Plan, complements other ongoing efforts to improve important aquatic habitats for the benefit of naturally-producing anadromous salmonids in the Central Valley, and may assist in the recovery of Central Valley steelhead, which is listed as threatened under the Endangered Species Act.

Documents reviewed in the preparation of this Finding of No Significant Impact (FONSI) include:

- CVPIA PEIS
- AFRP Final Restoration Plan
- Merced River Ranch Floodplain Restoration Project Final Environmental Assessment/Initial Study (EA/IS)
- Intra-Service Section 7 Evaluation Form

These documents are incorporated by reference, as described in 40 CFR 1508.13.

Alternatives

The Environmental Assessment (EA) addresses three alternatives for implementing the Merced River Ranch Floodplain Restoration Project: (1) No Action Alternative, (2) Complete Restoration Alternative, and (3) Proposed Action Alternative.

The No Action alternative was not chosen because lack of action would allow the incremental spawning and rearing habitat deterioration trend to continue unabated, leading to further declines in spawning activity and inhibiting natural production of anadromous salmonids in the Merced River.

The Complete Restoration alternative was not chosen because of the extreme cost of implementation. The complete restoration alternative was also eliminated from further consideration because the current and future foreseeable flows available in the river would not meet the design standards. This alternative would (1) increase streamflows to simulate historic flow duration and timing; (2) restore the historical channel meander pattern within the project reach; (3) fill all captured mine pits that occur immediately upstream and downstream of the project area; (4) remove dams, berms, and enlarge the floodplain to restore normal hydraulic scour of gravel and the silt depositional processes; and, (5) inject gravel annually to restore the natural rate of gravel recruitment to the project area. Together, these actions would produce high quality salmonid habitat and a historically natural riparian community and river channel. This alternative would improve spawning and rearing habitat for salmonids, and meet the objectives of the project and programmatic goals of AFRP. However, this alternative is not feasible and thus was eliminated from consideration.

The Proposed Action alternative was selected over other alternatives because implementation of the proposed floodplain restoration and spawning gravel project would enhance salmonid spawning and rearing habitat in the river with the available funding provided by the AFRP. Salmonid spawning and rearing habitat restoration has been identified as priority actions in the CVPIA PEIS, AFRP Final Restoration Plan, and the CALFED's Ecosystem Restoration Program (ERP), as well as several California Department of Fish and Game (CDFG) publications and plans.

Environmental Impacts

Based upon information contained in the EA, we have determined this Federal action would not significantly affect the quality of the human environment. The basis for a Finding of No Significant Impact is as follows:

1. As a result of informal consultation under the Endangered Species Act and inclusion of conservation measures into the proposed action, no adverse impacts to federally listed or special status species and/or designated critical habitats are expected.
2. Short-term, minor impacts to wildlife may occur from implementing activities related to the habitat improvement. However, avoidance and conservation measures have been incorporated into the proposed action to minimize effects. The intent of this project is to provide additional salmonid spawning and rearing habitat and improve inter-gravel water quality. (*i.e.*, the conditions between gravel particles that are conducive to spawning success). The proposed activities would increase available and usable spawning areas by providing additional spawning

gravels within the appropriate size range; increase use of spawning habitat; improve gravel permeability and inter-gravel water quality; decrease redd superimposition; and ultimately, increase the natural production of fall-run Chinook salmon and Central Valley steelhead in the Merced River. Increased gravel substrate will also increase production of aquatic invertebrates, the food base for juvenile salmonids.

3. The proposed action is not expected to have long-term adverse effects on wildlife or fisheries, and most effects are expected to be beneficial. The restoration activities in and around the river would increase the potential for maintaining the functional integrity of salmonid habitat requirements, thus protecting and maintaining the natural diversity of fish and wildlife within the watershed.
4. Impact avoidance and conservation measures have been incorporated into the proposed action to minimize adverse effects on water quality and aquatic habitat. The proposed action is expected to have no negative impact on flooding potential.
5. The proposed action is not expected to have adverse effects on wetlands or floodplains pursuant to Executive Orders 11990 and 11988. The proposed action supports the preservation of the natural and beneficial values of floodplains.
6. Neither short- nor long-term adverse effects on human health or the environment, nor disproportionate adverse effects to low-income or minority populations are expected, pursuant to Executive Order 12898.
7. The proposed action was determined to be a routine undertaking with little to no potential to affect historic properties under Appendix A of the Cultural Resources Programmatic Agreement between the Service, the California State Historic Preservation Office, and the Advisory Council for Historic Preservation. The project activities can proceed under the stipulation that: if any cultural resources are discovered during the project, work would halt and the Service's Regional Archaeologist shall be contacted.

In addition to analyzing effects on biological and cultural resources, the EA/IS evaluated the following aspects of the physical and human environment for potential significant effects as a result of the proposed action alternative: Surface water and hydrology, water quality, air quality, wetlands, recreation and public safety, and socioeconomics and land use. General measures to minimize environmental effects were incorporated into the proposed action alternative to reduce impacts to a level below significance for those issues for which potentially negative impacts were anticipated.

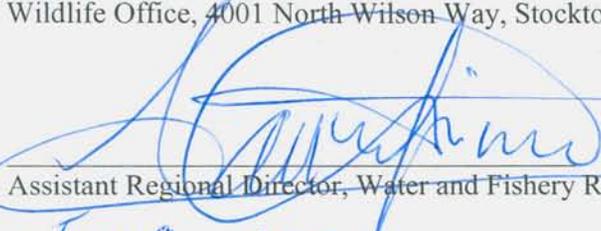
Public Review and Comment

The Service attended the Snelling Municipal Advisory Council Meeting on April 14th, 2010 to discuss the project and solicit comments from the local community. The EA/IS was submitted to the California State Clearinghouse and circulated for a 30-day review period which closed on May 27, 2010. A Notice of Availability was also posted at the Snelling, CA Post Office. The EA/IS was available for public review and copies by

request at the CDFG Regional Office, 1234 E. Shaw Avenue, Fresno, CA 93710. Only one comment letter was received from the California Department of Water Resources. Their comments were incorporated into the Final EA/IS and a response letter was sent by the CDFG, the project co-lead.

Conclusion

Therefore, the Service, as lead Federal agency for the proposed AFRP funding of the *Merced River Ranch Floodplain Restoration Project*, has determined that the proposal does not constitute a major Federal action significantly affecting the quality of the human environment under the meaning of section 102(2)(c) of the National Environmental Policy Act of 1969 (as amended). As such, an Environmental Impact Statement is not required. An Environmental Assessment has been prepared in support of this finding and is available upon request to the U.S. Fish and Wildlife Service, Stockton Fish and Wildlife Office, 4001 North Wilson Way, Stockton, California 95205.


Assistant Regional Director, Water and Fishery Resources

ACTIVE
Date

July 9, 2010



United States Department of the Interior

FISH AND WILDLIFE SERVICE, REGION 1
Cultural Resources Team
20555 SW Gerda Lane
Sherwood, Oregon 97140
503-625-4377 (fax 503-625-4887)

IN REPLY REFER TO:

16 December 2009

To: Michelle Workman
Program: Stockton FWO - Fisheries
Funding: CVPIA

From: Virginia Parks, Cultural Resources Team,
on behalf of Anan Raymond, Regional Archaeologist

Subject: **Section 106 compliance: Merced River Ranch Floodplain and Channel Restoration**

Thank you for requesting the assistance of the Cultural Resources Team (CRT) in achieving compliance with Section 106 of the National Historic Preservation Act (NHPA) for the above project. The U.S. Fish and Wildlife Service (FWS) is providing funding through the Central Valley Project Improvement Act (CVPIA) to rehabilitate historic floodplain habitat for fish and wildlife benefits on the Merced River Ranch property, Merced County, California (Snelling USGS 7.5' quad, T5S, 14E, S12).

The documents you provided describing the project activities included an archaeological survey report prepared by a cultural resource contractor (URS 2006). Received in our office on **11 December 2009**, the report was conducted specifically to meet the cultural resources requirements of the California Environmental Quality Act (CEQA) and the National Environmental Protection Act (NEPA). While it was not prepared specifically to meet the requirements of Section 106 of the National Historic Preservation Act (NHPA), the report notes that "since Federal and California State evaluation criteria for cultural resources are generally consistent, the assessment is also consistent with Section 106 of the NHPA" (URS 2006: 1-2). We generally concur with this characterization with the stipulation that any cultural resource identification effort conducted meets the Secretary of Interior's professional standards. After a review of the URS survey report, we have determined that it does meet the Secretary of Interior's standards.

We reviewed the information provided in the Request for Cultural Resources Compliance (RCRC) and the survey report in relation to the terms of our Programmatic Agreement (PA) with the state of **California**.

*Based on the nature and location of the activities, "**Appendix A**" applies to:*

Merced River Ranch Floodplain and Channel Restoration

An Appendix A determination indicates that the FWS has evaluated the potential impact of the proposed project on cultural resources at the location listed, and we do not anticipate that the

project would affect or impact cultural resources. In this instance, our determination is also supported by the negative results of the survey conducted by URS. Though the survey did identify the presence of dredger tailings associated with the operations of Snelling Gold Dredging Company from 1932 through 1952 in the project area, the report notes: "The dredger tailings do not appear to be eligible for inclusion on the National Register of Historic Places (NRHP) or the California Register of Historic Places (CRHP). As such, no mitigation measures are required prior to beginning work on the project." (URS 2006: 1-1).

We concur with the report's negative findings as well as the characterization of the APE as highly altered due to extensive past dredging activities which extended to bedrock (up to 20' below surface) and likely obliterated any subsurface deposits that may have been present (URS 2006: 3-1).

No further cultural resource identification effort is necessary for the project. However, the existence of cultural resources cannot be predicted with certainty. Please be aware that cultural resources are protected by all applicable federal and state laws. In the event that cultural resources are discovered during project implementation, any ground disturbing activity should be halted and the FWS Regional Archaeologist should be notified at the above address. If the planned activities change, please let us know.

Please note that the project will be reported to the State Historic Preservation Office in its annual report at the end of the fiscal year under the terms of the PA.

Reference:

URS (URS Corporation).

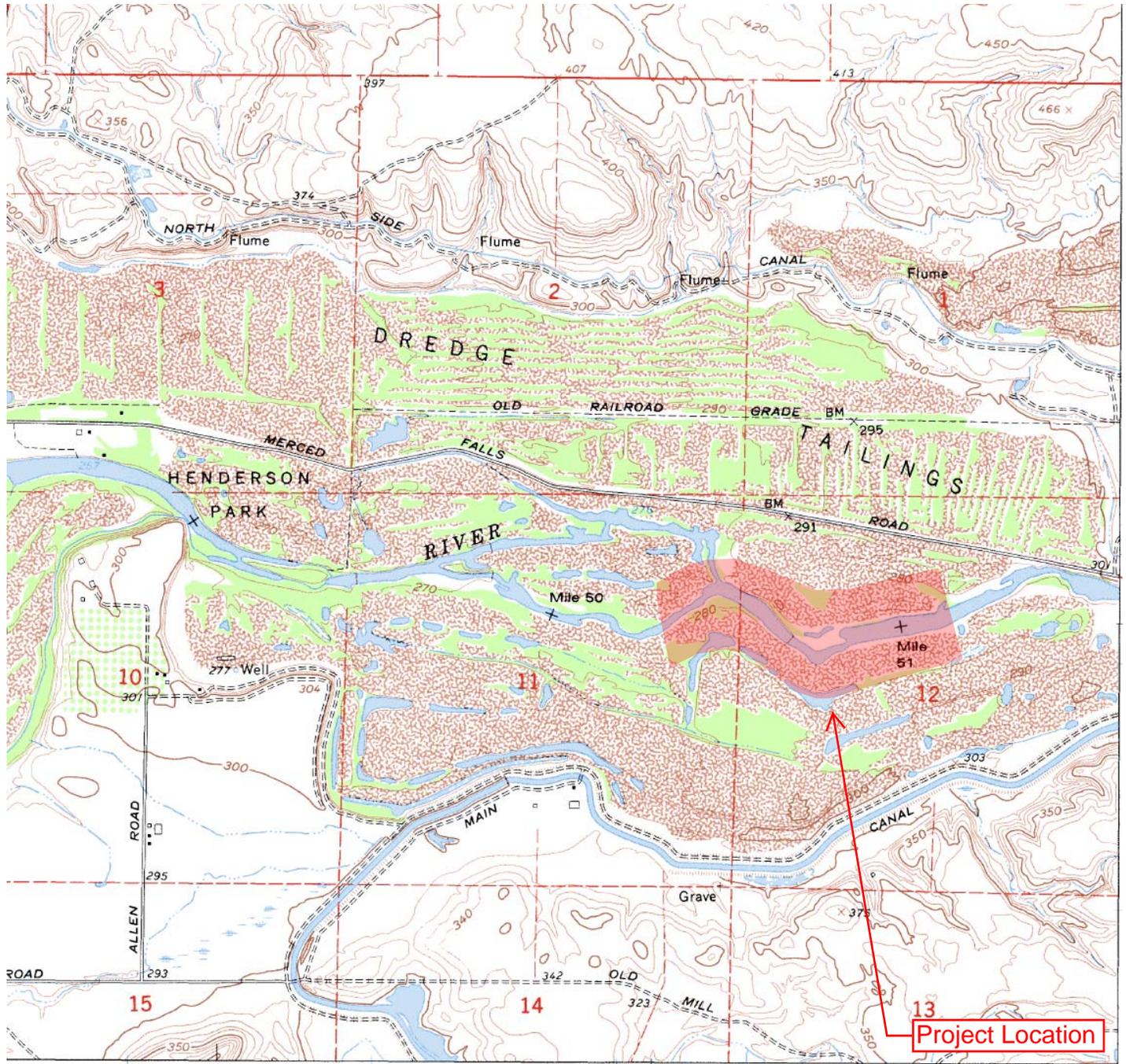
2006 Merced River Ranch channel floodplain restoration: Cultural resources survey.
Prepared for Stillwater Sciences, Berkeley, California.

Figure 1. USGS 7.5' map (Snelling Quad) showing Area of Potential Effects (APE)



PROJECT NAME: Merced River Ranch Floodplain and Channel Restoration

LOCATION INFORMATION:				<i>FWS Unit</i> Stockton FWO	<i>Township</i> 5S	<i>Range</i> 14E	<i>Section</i> 11, 12	PROJECT ACRES
<i>County</i> Merced		<i>USGS Topo</i> Snelling						<i>Total</i> 6
<i>State</i> California								6
<i>Appendix Item</i>	<i>Program Funding</i>	<i>Fisheries</i>	<i>Field Contact</i>					<i>APE</i>
A 11		CVPIA	Workman, M					6



Note: Section 106 compliance assistance is being provided solely for the activities as defined in the request for cultural resource compliance submitted to the CRT for the project. Changes to the planned activities and any future projects in this area may be subject to additional Section 106 compliance efforts.



Figure 2. Aerial photo of APE.

PROJECT NAME: Merced River Ranch Floodplain and Channel Restoration						
LOCATION INFORMATION:		<i>FWS Unit</i> Stockton FWO	<i>Township</i> 5S	<i>Range</i> 14E	<i>Section</i> 11, 12	PROJECT ACRES
<i>County</i> Merced		<i>USGS Topo</i> Snelling				<i>Total</i> 6
<i>State</i> California						APE 6
<i>Program</i> Fisheries		<i>Field Contact</i> Workman, M				
<i>Funding</i> CVPIA						

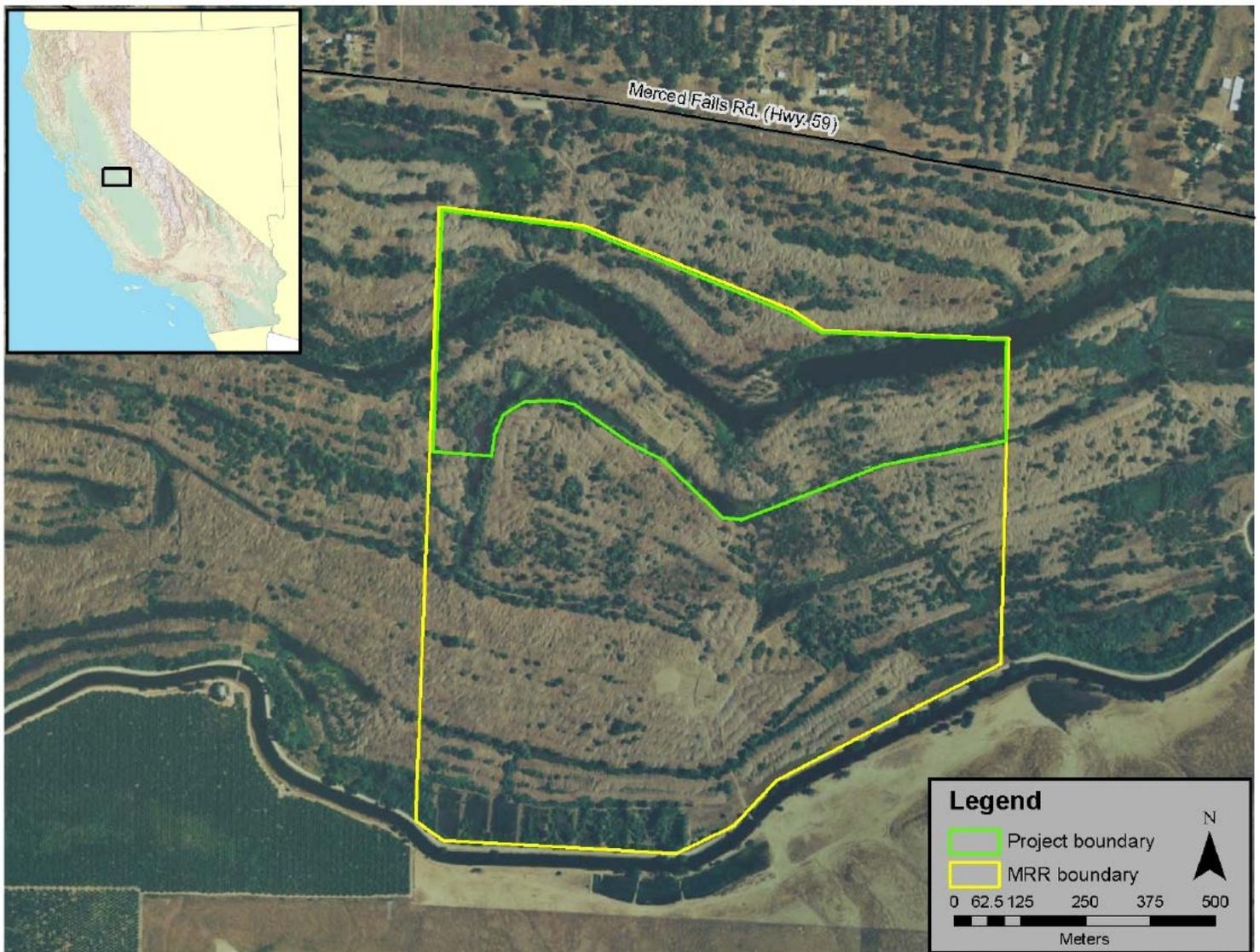


Figure 1. Map of the Merced River Ranch and the project boundary.

Note: Section 106 compliance assistance is being provided solely for the activities as defined in the request for cultural resource compliance submitted to the CRT for the project. Changes to the planned activities and any future projects in this area may be subject to additional Section 106 compliance efforts.



Figure 3. Aerial photo with sketch plan of project activities.

PROJECT NAME: Merced River Ranch Floodplain and Channel Restoration						
LOCATION INFORMATION:		<i>FWS Unit</i> Stockton FWO	<i>Township</i> 5S	<i>Range</i> 14E	<i>Section</i> 11, 12	PROJECT ACRES
<i>County</i> Merced		<i>USGS Topo</i> Snelling				<i>Total</i> 6
<i>State</i> California						<i>APE</i> 6
<i>Program</i> Fisheries		<i>Field Contact</i> Workman, M				
<i>Funding</i> CVPIA						

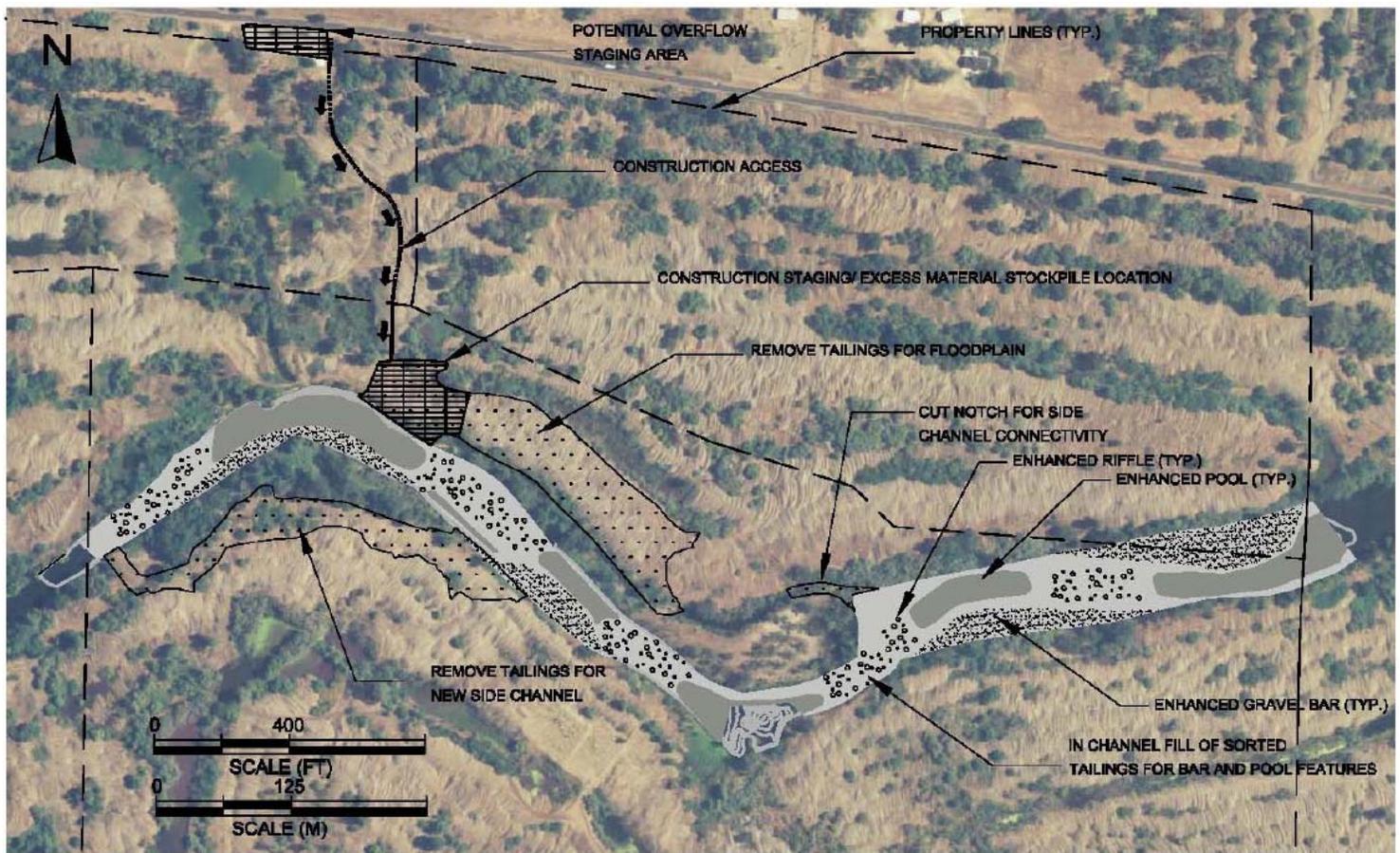


Figure 2. Aerial imagery of the Merced River Ranch with floodplain grading and gravel augmentation areas indicated.

Note: Section 106 compliance assistance is being provided solely for the activities as defined in the request for cultural resource compliance submitted to the CRT for the project. Changes to the planned activities and any future projects in this area may be subject to additional Section 106 compliance efforts.



Figure 5. Cover page from URS Survey report (2006).

PROJECT NAME: Merced River Ranch Floodplain and Channel Restoration						
LOCATION INFORMATION:		<i>FWS Unit</i> Stockton FWO	<i>Township</i> 5S	<i>Range</i> 14E	<i>Section</i> 11, 12	PROJECT ACRES
<i>County</i> Merced	<i>USGS Topo</i> Snelling					<i>Total</i> 6
<i>State</i> California						
<i>Program</i> Fisheries		<i>Field Contact</i> Workman, M				<i>APE</i> 6
<i>Funding</i> CVPIA						

**CULTURAL RESOURCES
FINAL TECHNICAL REPORT**

MERCED RIVER CORRIDOR
RESTORATION PLAN, PHASE
IV: DREDGER TAILINGS
REACH, MERCED COUNTY,
CALIFORNIA



Prepared for
Stillwater Sciences
2855 Telegraph Avenue, Ste. 400
Berkeley, CA 94705

May 15, 2006



Note: Section 106 compliance assistance is being provided solely for the activities as defined in the request for cultural resource compliance submitted to the CRT for the project. Changes to the planned activities and any future projects in this area may be subject to additional Section 106 compliance efforts.

INTRA-SERVICE SECTION 7 BIOLOGICAL EVALUATION FORM

Originating Person: Michelle Workman
Telephone Number: 209-334-2968 x404
Date: June 18, 2010

I. Region: 8

II. Service Activity (Program): AFRP
Merced River Ranch Floodplain Restoration Project

III. Pertinent Species and Habitats:

A. Listed species and/or their critical habitat within the action area:

- valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*) (T)
- Central Valley steelhead (*Oncorhynchus mykiss*) (T) (Consultation with NOAA Fisheries completed – Letter of Concurrence attached)

B. Proposed species and/or proposed critical habitat within the action area:
None

C. Candidate species within the action area:
None

D. Include species/habitat occurrence on a map.

Additional species identified on the species list (Attachment A of the Environmental Assessment) provided by the SFWO database for project-associated quadrangles included Central Valley spring-run Chinook salmon (*Oncorhynchus tshawytscha*) (T; NMFS), winter-run Chinook salmon (*Oncorhynchus tshawytscha*) (E; NMFS), delta smelt (*Hypomesus transpacificus*) (T), vernal pool fairy shrimp (*Branchinecta lynchi*) (T), vernal pool tadpole shrimp (*Lepidurus packardii*) (E), Conservancy fairy shrimp (*Branchinecta conservation*) (E), California red-legged frog (*Rana aurora draytonii*) (T), California tiger salamander (*Ambystoma californiense*) (T), giant garter snake (*Thamnophis gigas*) (T), owl's-clover (*Castilleja campestris* spp. *succulenta*) (T), Hoover's spurge (*Chamaesyce hooveri*) (T), Colusa grass (*Neostapfia colusana*) (T), hairy Orcutt grass (*Orcuttia pilosa*) (E), Hartweg's golden sunburst (*Pseudobahia bahiifolia*) (E), and Greene's tuctoria (*Tuctoria greenei*) (E). It was determined that the current ranges or habitats of these species do not occur near the project area; therefore, these species are not addressed further in this analysis.

IV. Geographic area or station name and action:

The MRR project site is a 6,500 ft (~2000 m) stretch of the lower Merced River between river mile (RM) 50 and 51, approximately one mile downstream of Crocker-Huffman Dam, adjacent to the Cuneo Fishing Access Site (Figure 1). The property was purchased by CDFG in 1998 for the primary purpose of protection, enhancement and restoration of the valuable riparian, wetland and aquatic habitats along the Merced River, and the use of large deposits of gravel for other habitat restoration projects in the San Joaquin basin (CDFG 1998).

The Merced River Ranch Floodplain Restoration Project will restore six acres of floodplain habitat and 5.5 acres of salmonid spawning habitat on the Merced River.

V. Location

A. County and State: Merced County, California

B. Section(s):

Township:

Range:

(or latitude and longitude): N 37.56243 and W -120.43853

C. Distance (miles) and direction to nearest town:

The town of Snelling is approximately 2.6 miles west of the project area (Figure 1).

VI. Description of Proposed Action

The proposed project consists of re-grading and rehabilitating ~6 acres (~2.4 ha) of dredger tailings on the historic floodplain and ~5.5 acres (~2.2 ha) of salmonid spawning habitat. Over a 5-year period, the floodplain will be graded and material from the floodplain will be screened to appropriate size classes (¼ to 5 in. [0.6 to 12.7 cm] of round river rock) and placed within the spawning channel. Approximately 112,000 yd³ (85,630 m³) of dredger tailings will be extracted from the floodplain area (84% from the north bank; 16% from the south bank) and processed on site to obtain the ~53,000 yd³ (40,521 m³) of gravel needed to rehabilitate salmonid spawning gravel beds within the project site (Figure 2). The remaining 59,000 yd³ (45,109 m³) would contain ~17% (10,030 yd³ [7,668 m³]) material < ¼ in. (0.6 cm) and 83% larger cobble (5 – 10 in. [12.7 – 25.4 cm] in size). The smaller material will be deposited in the floodplain and upland areas within the project footprint and used to enhance revegetation. The larger cobble would be used as a base layer at each riffle site before the addition of the spawning gravel to provide increased bed stability in high flow events and habitat heterogeneity throughout the site. Approximately 13,000 yd³ (9,939 m³) of cobble will also be used to fill deep holes in the channel profile and create the designed channel slope. The strategy for replenishment is based on an understanding of the existing channel bed topography (Stillwater Sciences 2004; CFS,

unpublished data) and the average grain size distribution of sediments available from the dredger tailings (URS 2004), and is intended to recreate channel bedforms favorable to spawning of native aquatic species. Gravel will be placed in configurations designed by incorporating the Spawning Habitat Integrated Rehabilitation Approach (SHIRA) developed by the University of California, Davis (Wheaton et al. 2004a, b; Pasternack 2008; Sawyer et al. 2008), and general rearing habitat components at each site, for five consecutive years. Due to future funding uncertainties we cannot develop a 5-year construction schedule but instead provided phased elements that would be completed each season in chronological order (Figure 2). Each element will be completed during the permitted construction window and designed to make sure that they will not have any potential adverse effects on listed salmonids such as stranding (Figure 3). The proposed Federal action does not include the removal or mining of material outside the floodplain, therefore a Reclamation Plan is not required. If future actions include the removal or mining of material outside of the floodplain a Reclamation Plan will be developed. The proposed spawning gravel replenishment and rehabilitation activities increase riffle to riffle bedslope; increase available and usable spawning areas by providing spawning gravels within the appropriate size range; facilitate increased use of spawning habitat; improve gravel permeability and intergravel water quality; decrease redd superimposition; and, ultimately, increase the natural production of fall-run Chinook salmon and steelhead in the Merced River. Increased gravel substrate will also increase production of aquatic invertebrates (Merz and Chan 2005), the food base for juvenile salmonids.

Construction Activities

Project construction is scheduled for each summer from 2010-2015, and all in-channel work will take place during the period from August 1 to October 1 in order to avoid adverse impacts to fall-run Chinook salmon spawning. Construction will require approximately 4 – 6 weeks annually, with in-stream construction work requiring 10 – 20 days annually. In-stream gravel placement will be accomplished during summer low-flow periods (approximately 300 cfs) when there will be minimal effect on anadromous fish and occur during daylight hours of weekdays (i.e., Monday through Friday).

VII. Determination of effects:

A. Explanation of effects of the action on species and critical habitats in items III. A, B, and C:

Direct Effects

Central Valley fall-run Chinook salmon and Central Valley steelhead inhabit this reach of the Merced River. Central Valley steelhead is federally threatened and the project area is situated in and along the lower Merced River which is designated as critical habitat for Central Valley steelhead. Central Valley steelhead and Central Valley fall-run Chinook salmon would benefit from restoration and preservation of existing riparian habitat, including shaded riverine aquatic cover and near-shore aquatic habitat, and by the protection and enhancement of important aquatic rearing and spawning habitats.

The proposed instream construction activities have potential to temporarily impact anadromous

salmonids and their habitat at the site-specific level. Existing instream habitat, such as pools, riffles, and spawning gravel could be disturbed or altered in the construction areas. Other construction activities associated with any streambed alteration would result in soil disturbance leading to temporary water quality degradation from sedimentation and increased turbidity at, and downstream of, construction sites. Heavy machinery operating in the streambed could also adversely affect water quality. However, implementing the proposed conservation measures would minimize impacts to water quality from project activities by ensuring that: (1) soils do not enter the river; (2) fluids from the construction equipment do not enter the river; (3) only pre-washed gravels would be placed in the river; and (4) disturbed soils would be vegetated to assist in filtering runoff. The probability for these events to occur is small, and will be offset by conservation measures.

Direct adverse impacts to Central Valley steelhead and fall-run Chinook salmon will be avoided and minimized by limiting in-channel construction activities to low flow periods when the fish are absent (August 1 to October 1). Spawning and incubation periods for Central Valley steelhead and fall-run Chinook salmon occur outside of the construction window and, therefore, spawning and incubation should not be affected. Instream construction activities would occur for a short duration in summer and early fall during low flow periods and would incorporate Best Management Practices to control erosion and protect water quality. These measures are expected to avoid impacts to juvenile Central Valley steelhead. It is unlikely that *O. mykiss* will be present in the vicinity since water temperatures at nearby Snelling (CDEC) are generally in excess of 14 degrees Celsius (60 degrees Fahrenheit) during the construction window (NMFS 2010).

Central Valley steelhead critical habitat could be temporarily impacted due to limited removal of riparian vegetation to facilitate equipment access to the river for instream gravel placement, grading, and contouring activities and by the removal of encroaching non-native vegetation. A Project objective is to restore native vegetation to increase riparian canopy cover along the river to encourage cold-water fisheries. Revegetation for the Merced River Ranch Floodplain Restoration Project will be implemented to maintain a dense cover of native riparian vegetation in the project area. The restored native riparian vegetation will 1) increase the quality and quantity of shaded riverine aquatic cover, 2) help control erosion and siltation, and 3) provide terrestrial habitat for insects which are prey for Central Valley steelhead and fall-run Chinook salmon. All planted vegetation will be with species native to, and collected in, the area, as appropriate at a 4 to 1 ratio. Floodplain inundation is expected to rejuvenate native plant colonization on the reconnected floodplain areas.

Valley elderberry longhorn beetle (VELB) were listed as a threatened species in 1980 when they were only known to occur at a few locations on the American River, Putah Creek, and the Merced River. Currently, it is known to occur from southern Shasta County to Fresno County (USFWS 2009). Kellner (1992) reported the most observations along the Merced River and further north. Population densities of the beetle are probably naturally low (USFWS 1984), and it has been suggested, based on the spatial distribution of occupied shrubs (Barr 1991), that the beetle is a poor disperser. Low density and limited dispersal capability may cause the beetle to be vulnerable to the negative effects of the isolation of small subpopulations due to habitat

fragmentation. Field surveys in February 2006 identified a total of 277 elderberry shrubs in the Merced River Ranch property (Figures 4-1 through 4-8; URS 2006). Of these, 203 had stems larger than 1 inch, and therefore are considered suitable habitat for VELB, within and adjacent to the project site. Potential VELB exit holes were observed in one elderberry shrub located on the southwest bank of the river. The holes were elongated and split in old dead wood. The condition of the holes makes it uncertain that they are VELB emergence holes. It may be more significant that of 277 valley elderberry shrubs, none showed recent emergence holes. Trees within the project vicinity were surveyed in 2010 (Cramer Fish Sciences, unpublished data) and no recent emergence holes or VELB were found. Further, the majority of elderberry shrubs are located far from construction areas and the project design was modified to avoid harm to elderberry plants. All elderberry plants will be avoided by flagging and/or fencing and maintaining a 100-foot (or wider) buffer. No construction work will occur during the flight period of the VELB (March 15th – June 15th).

Indirect Effects

Indirect effects will be beneficial to Central Valley steelhead, with increased availability of seasonally inundated floodplains, additional opportunities for the river to move fine sediments from the active channel, and a more robust riparian plant community that will provide increased shading, cover, and habitat for insects. Also, 5.5 acres (~2.2 ha) of spawning riffle will be enhanced with clean gravel screened to appropriate size classes (¼ to 5 in. [0.6 to 12.7 cm]) from the adjacent floodplain (Kondolf 2000). Indirect effects to the beetle resulting from construction activities of the proposed project are not likely to occur because elderberry shrubs will not be disturbed by project activities and all project activities will occur outside of the flight period of the VELB. The resulting flow and flood regimes within the modified floodplain is expected to benefit elderberry and beetle habitat. As a result, unlikely impacts due to future development would be expected to be offset by project benefits.

Cumulative Effects

Cumulatively, similar projects undertaken in the Dredger Tailing Reach in the Merced River would create an ever greater increase in the quality and quantity of salmonid spawning and rearing habitat. Therefore, cumulative effects of multiple, similar projects would be increasingly beneficial to salmonids and riparian species (URS and Stillwater 2004; Stillwater 2004).

The STFWO is not aware of specific projects in the action area that might affect the VELB or its habitat that are currently under review by State, county, or local authorities. Nevertheless, continued human population growth in the Central Valley is expected to cause further development of agriculture, cities, industry, transportation, and water resources in the foreseeable future. Some of these future activities will not be subject to Federal jurisdiction and, thus, are considered cumulative effects, which likely will result in loss of riparian and other habitats where elderberry shrubs and the VELB occur.

Interdependent or Interrelated Activities

There are no interdependent or interrelated activities associated with the Proposed Federal Action. The Service is only funding the habitat restoration activities associated with this consultation.

B. Explanation of actions to be implemented to reduce adverse effects:

Neither Central Valley steelhead nor Central Valley fall-run Chinook salmon are expected to occur in the action area during the project work window due to elevated water temperatures and low discharge conditions (NMFS 2010). The following conservation measures built into the proposed project are expected to avoid or minimize the potential for adverse effects on Central Valley steelhead, steelhead critical habitat, and EFH for Central Valley fall-run Chinook salmon. The Fish and Wildlife Service's *Conservation Guidelines for the VELB* (USFWS 1999) will be followed to avoid or minimize the potential for adverse effects on VELB.

- To minimize potential impacts on the anadromous fish of the Merced River, instream activities will be limited to the low flow period of August 1 to October 1.
- Heavy equipment and vehicular movement will be limited to existing access roads and predetermined staging areas.
- In-water construction activities will be minimized to reduce sedimentation.
- Turbidity will be monitored to meet exceedence thresholds established by the project's water quality waiver agreement with the Regional Water Quality Control Board, as applicable.
- Any machinery that enters the river during work will be steam-cleaned and properly maintained to avoid water quality contamination from the release of grease, oil, petroleum products, or other nonnative materials.
- Only clean gravel washed of silt and fines will be placed into the river channel. Water pumps will have the hose end protected by a NMFS approved fish screen to block entry by juvenile fish. Large rock will cover the hose/filter to reduce velocity and avoid injury to fish.
- Existing access points will be used whenever possible in order to avoid sensitive locations. Least sensitive areas will be used for parking, construction activities, stockpiling, and staging areas, and these areas will be clearly marked and restored following construction.
- All contractors and equipment operators will be given instructions to avoid impacts and be made aware of the ecological values of the site.
- Surveying and monitoring activities will be designed and conducted to minimize disturbance of fish habitat. Should the collection of data on redds require surveyor boats, monitors will travel only downstream to minimize disturbance of salmon redds.
- Sedimentation due to alterations in water control structures will be managed to minimize adverse effects on fish habitat.
- A Storm Water Pollution Prevention Plan (SWPPP) would be prepared to comply with the requirements of the General Construction NPDES permit. The SWPPP would identify appropriate best management practices to avoid, reduce, and minimize potential water quality impacts.
- A Spill Prevention, Control, and Countermeasures Plan (SPCC) will be developed prior to the initiation of construction activities. The SPCC will be maintained and

implemented onsite by a construction monitor that will be onsite during all construction activities. If a spill is reportable (as defined in 40 CFR 110), the construction monitor will notify the Central Valley Regional Water Quality Control Board (RWQCB), the California Department of Fish and Game (CDFG), the U.S. Fish and Wildlife Service (USFWS), and the National Marine Fisheries Service and be responsible for ensuring that the SPCC is followed. In addition, if a spill contains hazardous materials, the Department of Toxic Substances Control (DTSC) will be notified.

- While disturbance to existing riparian vegetation is expected to be minimal, disturbed sites along the riparian corridor will be revegetated. Revegetation for the Merced River Floodplain Restoration Project will be implemented to maintain a dense cover of native riparian vegetation in the project area. The restored native riparian vegetation will 1) increase the quality and quantity of shaded riverine aquatic cover, 2) help control erosion and siltation, and 3) provide terrestrial habitat for insects which are prey for Central Valley steelhead and fall-run Chinook salmon. All planted vegetation will be with species native to, and collected in, the area, as appropriate at a 4 to 1 ratio. Floodplain inundation is expected to rejuvenate native plant colonization on the reconnected floodplain areas.

VIII. Effect determination and response requested: [*=optional]

A. Listed species/designated critical habitat

Determination

Response requested

no effect/no adverse modification

X Concurrence

(species: Central Valley spring-run Chinook salmon, winter-run Chinook salmon, delta smelt, vernal pool fairy shrimp, vernal pool tadpole shrimp, Conservancy fairy shrimp, California red-legged frog, California tiger salamander, giant garter snake, owl's-clover, Hoover's spurge, Colusa grass, hairy Orcutt grass, Hartweg's golden sunburst, and Greene's tuctoria)

may affect, but is not likely to adversely affect species/adversely modify critical habitat

X Concurrence

(species: valley elderberry longhorn beetle; Central Valley steelhead (Consultation with NOAA Fisheries completed – Letter of Concurrence attached))

may effect, and is likely to adversely affect species /adversely modify critical habitat (species: not applicable)

Concurrence

may effect, and is likely to adversely affect species
/adversely modify critical habitat
(species: not applicable)

_____ Formal
Consultation

B. Proposed species/ proposed critical habitat:

Determination

Response requested

no effect/no adverse modification
(species: not applicable)

_____ Concurrence

may affect, but is not likely to adversely
(species: not applicable)

_____ Concurrence

may effect, and is likely to adversely affect species
/adversely modify critical habitat
(species: not applicable)

_____ Formal
Consultation

C. Candidate species/ proposed critical habitat:

Determination

Response requested

no effect on candidate species
(species: not applicable)

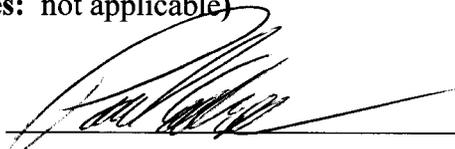
_____ Concurrence

is not likely to jeopardize candidate species.

_____ Concurrence

is likely to jeopardize candidate species
(species: not applicable)

_____ Conference



Project Leader
Stockton Fish and Wildlife Office

6/29/2010

date

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Wheaton, J. M., G. B. Pasternack, and J. E. Merz. 2004b. Spawning Habitat Rehabilitation – II. Using hypothesis development and testing in design, Mokelumne River, California, U.S.A. *International Journal of River Basin Management* 2:1:21-37.



Figure 1. Map of the Merced River Ranch and the project boundary.

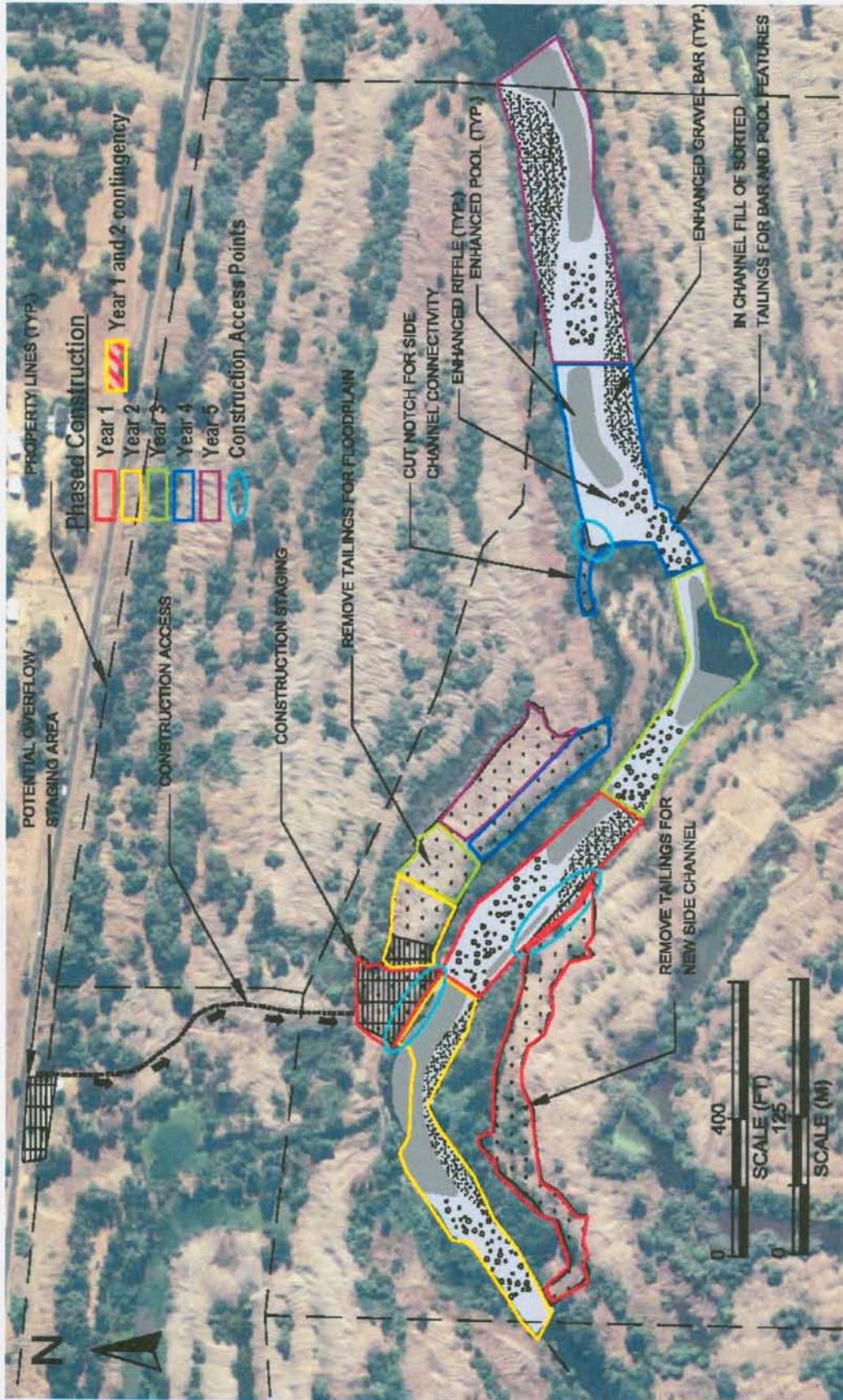


Figure 2. Aerial imagery of the Merced River Ranch with floodplain grading and gravel augmentation areas indicated. Note: main access point and temporary construction staging areas; construction access points to the main channel; and, phased construction plan by year.

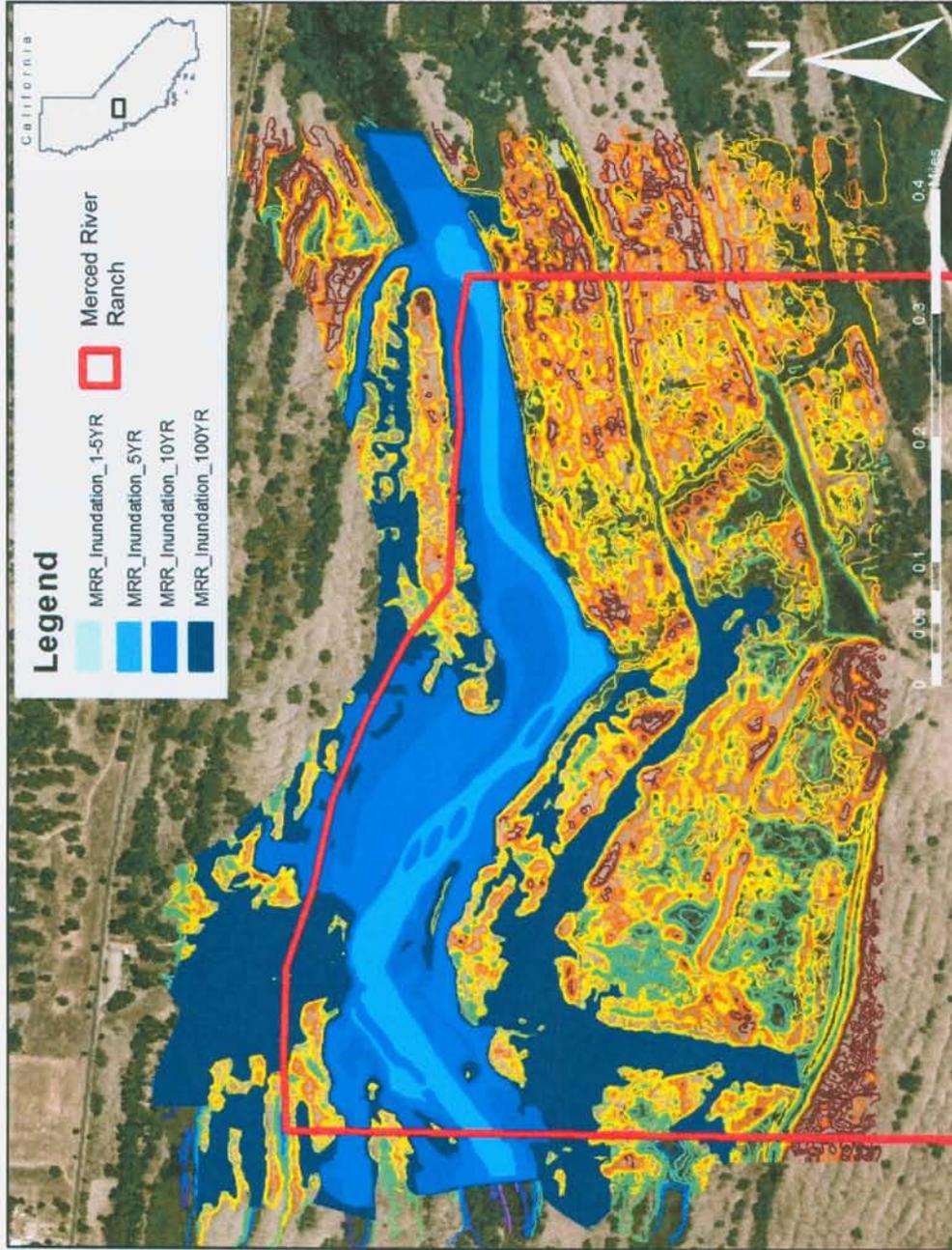


Figure 3. Inundation map of Merced River Ranch showing inundation at 1-5, 5, 10, and 100 year flow events.

APPENDIX A

**Federal Endangered and Threatened Species that may be Affected by Projects in the
COOPERSTOWN 7 1/2 Minute Quad
Database Last Updated: April 29, 2010
Today's Date is: June 7, 2010**

Listed Species

Invertebrates

- Branchinecta conservation* – Conservancy fairy shrimp (E)
- Branchinecta lynchi* - vernal pool fairy shrimp (T)
- Desmocerus californicus dimorphus* - valley elderberry longhorn beetle (T)
- Lepidurus packardi* - vernal pool tadpole shrimp (E)

Fish

- Hypomesus transpacificus* - delta smelt (T)
- Oncorhynchus mykiss* - Central Valley steelhead (T) (NMFS)
- Oncorhynchus tshawytscha* – Central Valley spring-run Chinook salmon (T) (NMFS)
- Oncorhynchus tshawytscha* - winter-run Chinook salmon (E) (NMFS)

Amphibians

- Ambystoma californiense* - California tiger salamander (T)
- Rana aurora draytonii* - California red-legged frog (T)

Reptiles

- Thamnophis gigas* - giant garter snake (T)

Plants

- Castilleja campestris ssp. succulenta* - succulent (=fleshy) owl's-clover (T)
- Chamaesyce hooveri* – Hoover's spurge (T)
- Neostapfia colusana* – Colusa grass (T)
- Orcuttia pilosa* – hairy Orcutt grass (E)
- Pseudobahia bahiifolia* – Hartweg's golden sunburst (E)
- Tuctoria greenei* – Greene's tuctoria (E)

Species with Critical Habitat Proposed or Designated in this Quad

Invertebrates

- Branchinecta lynchi* - vernal pool fairy shrimp (Designated)

Fish

- Oncorhynchus mykiss* - Central Valley steelhead (Designated)

Plants

Castilleja campestris ssp. succulenta - succulent (=fleshy) owl's-clover (Designated)

Chamaesyce hooveri – Hoover’s spurge (Designated)

Neostapfia colusana – Colusa grass (Designated)

Orcuttia pilosa – hairy Orcutt grass (Designated)

Tuctoria greenei – Greene’s tuctoria (Designated)

Key:

(E) Endangered - Listed (in the Federal Register) as being in danger of extinction.

(T) Threatened - Listed as likely to become endangered within the foreseeable future.

(NMFS) Species under the Jurisdiction of the National Marine Fisheries Service. Consult with them directly about these species.

Critical Habitat - Area essential to the conservation of a species.



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

JUN 16 2010

In reply refer to:
2010/01969

Mr. Paul Cadrett
Deputy Project Leader
U.S. Fish and Wildlife Service
Stockton Fish and Wildlife Office
4001 North Wilson Way
Stockton, California 95205-2486

Dear Mr. Cadrett:

This is in response to your January 12, 2010, letter requesting the initiation of section 7 consultation on the Merced River Ranch Floodplain Restoration Project, with NOAA's National Marine Fisheries Service's (NMFS) pursuant to the Endangered Species Act (ESA), which was received in our office on February 8, 2010. The U.S. Fish and Wildlife Service (FWS) has requested NMFS' concurrence on the proposed Merced River Ranch Floodplain Restoration Project (project), located on the Merced River near Snelling, in Merced County, California. You have determined the proposed project may affect, but is not likely to adversely affect Federally listed threatened Central Valley steelhead (*Oncorhynchus mykiss*), their respective designated critical habitat, or Essential Fish Habitat (EFH) of the Pacific salmon. 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.

Consultation History

On February 8, 2010, NMFS received a letter from the FWS, dated January 12, 2010, requesting section 7 consultation for the proposed project. A letter from NMFS, dated March 30, 2010, was sent to you requesting additional information in order to initiate section 7 consultation. A site visit and meeting was conducted on April 16, 2010, with NMFS, the FWS, and Cramer Fish Sciences staff to review current site conditions and project components and documentation. NMFS received additional information from the FWS in a letter dated April 23, 2010.

Proposed Project

The Merced River system and its associated habitats have been affected by European-American activities for more than a century, beginning with extensive gold mining in the 1850s. Large-scale aggregate mining began in the Merced River in the 1940s. Major actions such as these and other events have led to the deterioration of riparian and aquatic habitat conditions on the lower Merced River.



The FWS plans to replenish spawning gravel at a restoration site within an approximately 3/4-mile reach of the Merced River near the town of Snelling, California, to increase and improve Chinook salmon and steelhead spawning habitat. In addition, the FWS plans to restore and rehabilitate approximately 6 acres of dredger tailings, created by previous aggregate mining activities, located on the historic floodplain along the north and south banks of the above mentioned reach and reconnect side-channel habitat. Work would start in the summer of 2010 and be completed during the low flow period before the spawning season and after the incubation period for steelhead and salmon. The FWS plans to phase elements of the project strategically and chronologically over a 5-year period. Approximately 112,000 yd³ of dredger tailings will be extracted from the floodplain area and processed onsite over the 5-year period. Of the 112,000 yd³ of extracted material, up to a total of 53,000 yd³ of gravel would be placed within the channel to rehabilitate salmon spawning gravel beds. In addition, up to a total of approximately 13,000 yd³ of cobble would be placed within the project site as a base layer to fill deep holes in the channel profile and create the designed channel slope. The smaller material will be placed within the floodplain and upland areas within the project footprint and used to enhance revegetation. Construction will require 4 to 6 weeks annually, with in-stream construction occurring over 10 to 20 days annually.

Side-channel habitat has degraded by impacts from previous aggregate mining. One side-channel exists within the project area; however, it is disconnected from the river at the upstream end. This small area will be re-contoured to provide side-channel connectivity and overall habitat heterogeneity. In addition, a new side channel will be created along the downstream portion of the project in an area already proposed to be a source for gravel replenishment.

Only clean, washed gravel would be placed in the channel. The gravel would be placed by steam-cleaned and properly maintained equipment with minimal disturbance to riparian vegetation, streambank, or streambed. Disturbance of riparian vegetation would be minimized. Disturbed sites would be revegetated, and any removed native, woody riparian vegetation would be replanted at a 4 to 1 ratio. The FWS plans to implement conservation measures to minimize the effect of construction activities, including conducting construction activities between August 1 and October 1; implementing best management practices for erosion control and water quality; staging, conducting maintenance, and refueling equipment away from the river; formulating a Storm Water Pollution Prevention Plan and a Spill Prevention, Control, and Countermeasures Plan; and avoiding riparian vegetation wherever possible.

Endangered Species Act (ESA) Section 7 Consultation

Based on our review of the material provided with your request, subsequent communications and site visit, and the best available scientific and commercial information currently available, NMFS concurs that the Merced River Ranch Floodplain Restoration project may affect, but is not likely to adversely affect, federally listed Central Valley steelhead or its designated critical habitat. NMFS has reached that determination because the construction activities are proposed to occur during a time when salmonids are not expected to be within the project area. The spawning and incubation period for Central Valley steelhead occurs outside the construction window and, therefore, spawning and incubation should not be affected. Instream construction activities would occur in the summer and early fall during low-flow periods and would incorporate Best

Management Practices (BMPs) to control erosion and protect water quality. These BMPs are expected to be implemented during and after construction as conservation measures, and are expected to avoid impacts to juvenile Central Valley steelhead. It is unlikely that *O. mykiss* will be present in the vicinity because water temperatures in nearby Snelling (CDEC) are generally in excess of 60 degrees Fahrenheit during the construction window. In addition, disturbance to vegetation will be minimal and mitigated at a 4 to 1 ratio, and the creation of spawning and floodplain habitat would be beneficial for steelhead.

This concludes section 7 consultation for the proposed project; however, should new information indicate that the project may affect listed species in an unforeseen manner, if a new species is listed, or if the applicant cannot complete work in the manner proposed or within the specific time frames, further consultation may be necessary.

Essential Fish Habitat (EFH)

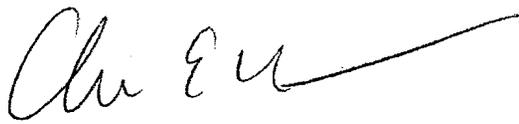
With regards to EFH consultation, the proposed project area has been identified as EFH for Central Valley fall/late fall-run Chinook salmon (*O. tshawytscha*) in Amendment 14 of the Pacific Salmon Fishery Management Plan pursuant to the Magnuson-Stevens Fishery Conservation and Management Act (MSA). Federal action agencies are mandated by the MSA (section 305[b] [2]) to consult with NMFS on all actions that may adversely affect EFH, and NMFS must provide EFH conservation recommendations to those agencies (section 305[b] [4] [A]). Because the proposed action includes conservation measures designed to avoid impacts to salmonid habitat, and is in fact designed to enhance and increase spawning habitat in the Merced River, NMFS has determined that the proposed action will not adversely affect EFH. Therefore, EFH Conservation Recommendations are not required at this time; however, if there is substantial revision to the action, the lead Federal agency will need to reinitiate EFH consultation.

Fish and Wildlife Coordination Act

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 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 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 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.

Please contact Ms. Leslie Mirise at (916) 930-3638, or via email at leslie.mirise@noaa.gov, if you have questions regarding this letter.

Sincerely,

FOIA 

Rodney R. McInnis
Regional Administrator

cc: NMFS-PRD, Long Beach, CA
Bryant Chesney, Long Beach, CA
Copy to file: ARN151422SWR2010SA00034