

RECLAMATION

Managing Water in the West

Riparian Habitat Restoration at Dos Rios Ranch

Environmental Assessment No. 18-05-MP



**U.S. Department of the Interior
Bureau of Reclamation**

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Mission Statements

The mission of the Department of the Interior is to protect and provide access to our Nation's natural and cultural heritage and honor our trust responsibilities to Indian Tribes and our commitment to island communities.

The mission of the Bureau of Reclamation is to manage, develop, and protect water and related resources in an environmentally and economically sound manner in the interest of the American public.

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List of Abbreviations and Acronyms

CFR	Code of Federal Regulations
CVP	Central Valley Project
HRP	Central Valley Project Improvement Act Habitat Restoration Program
LBVI	Least Bell's Vireo
NRCS	Natural Resources Conservation Service
Reclamation	Bureau of Reclamation
RBR	Riparian brush rabbit
RWR	Riparian woodrat
USFWS	U.S. Fish and Wildlife Service
SHPO	State Historic Preservation Officer
SJRNWR	San Joaquin River National Wildlife Refuge
VELB	Valley Elderberry Longhorn Beetle

Section 1 Introduction

1.1 Background and Need for the Proposal

In conformance with the National Environmental Policy Act of 1969, Council on Environmental Quality regulations (40 CFR 1500-1508), and Department of the Interior Regulations (43 CFR Part 46), the Bureau of Reclamation (Reclamation) prepared this Environmental Assessment to evaluate and disclose any potential environmental impacts associated with providing \$499,730 from the Central Valley Project Improvement Act Habitat Restoration Program (HRP) to the non-profit conservation organization River Partners (Proposed Action). Reclamation's grant funding would supplement funding from the United States Department of Agriculture Natural Resources Conservation Service (NRCS)'s Wetland Reserve Program and from the California Department of Fish and Wildlife to restore habitat at Dos Rios Ranch (the Project). The Project will restore and enhance native riparian habitats on 159 acres of previously-farmed floodplain and mixed riparian habitat, to benefit a variety of federally-listed, state-listed, and sensitive species.

The Proposed Action would be consistent with the Central Valley Project Improvement Act, Public Law 102-575, Title 34, Section 3406(b)(1), under which Reclamation, through the HRP, is directed to restore, maintain, and stabilize populations and native habitats of threatened, endangered, and sensitive species impacted by the Central Valley Project (CVP) not specifically addressed in the Fish and Wildlife Restoration Activities section of the Central Valley Project Improvement Act. The HRP was developed by Reclamation and the U.S. Fish and Wildlife Service (USFWS) during the Endangered Species Act Section 7 consultation process to ensure the existing operations of the CVP and renewal of CVP water service contracts would not jeopardize listed or proposed species, nor adversely affect designated or proposed critical habitat. Accordingly, the HRP implements actions that protect, restore, and enhance special-status species and their habitats affected by the CVP.

Reclamation's CVP has contributed to losses of riparian habitat through delivery of federal water for irrigated farmland that has consequently impacted federally-listed as endangered and federally-listed as threatened species. The Proposed Action serves to support River Partners, San Joaquin River National Wildlife Refuge (SJRNWR), and other federal, state, and public partners conducting projects to assist in the recovery of riparian-associated listed species in the Central Valley. The Project would substantially expand the footprint of restored riparian floodplains in the area, providing habitat for federally-listed, state, and other special-status species.

The Project is located at the confluence of the Tuolumne and San Joaquin Rivers in Stanislaus County, immediately adjacent to the SJRNWR (Figure 1). It lies within the current floodplain at the 1,600-acre Dos Rios Ranch, approximately nine miles west-southwest of downtown Modesto. The area experiences periodic flooding and has limited areas of elevated, covered ground that are adequate for species to take refuge during flood events.

River Partners purchased Dos Rios Ranch in 2011 and has since completed 600 acres of riparian habitat restoration to benefit riparian-associated special-status species. Through the Project, River Partners would conduct riparian habitat restoration on 159 acres at Fields 10, 11, and 12 of Dos Rios Ranch (Figure 2).¹ As part of the 159 acres, approximately three acres of elevated land would be created and planted with riparian shrub species to provide a high-ground refuge to animals from flooding (“refugia”), and cover from predators until floodwaters recede.

¹ These three fields are designated in River Partners’ documents as “Phase 2B Restoration Fields” and Reclamation’s documents as “Phase 3” fields.

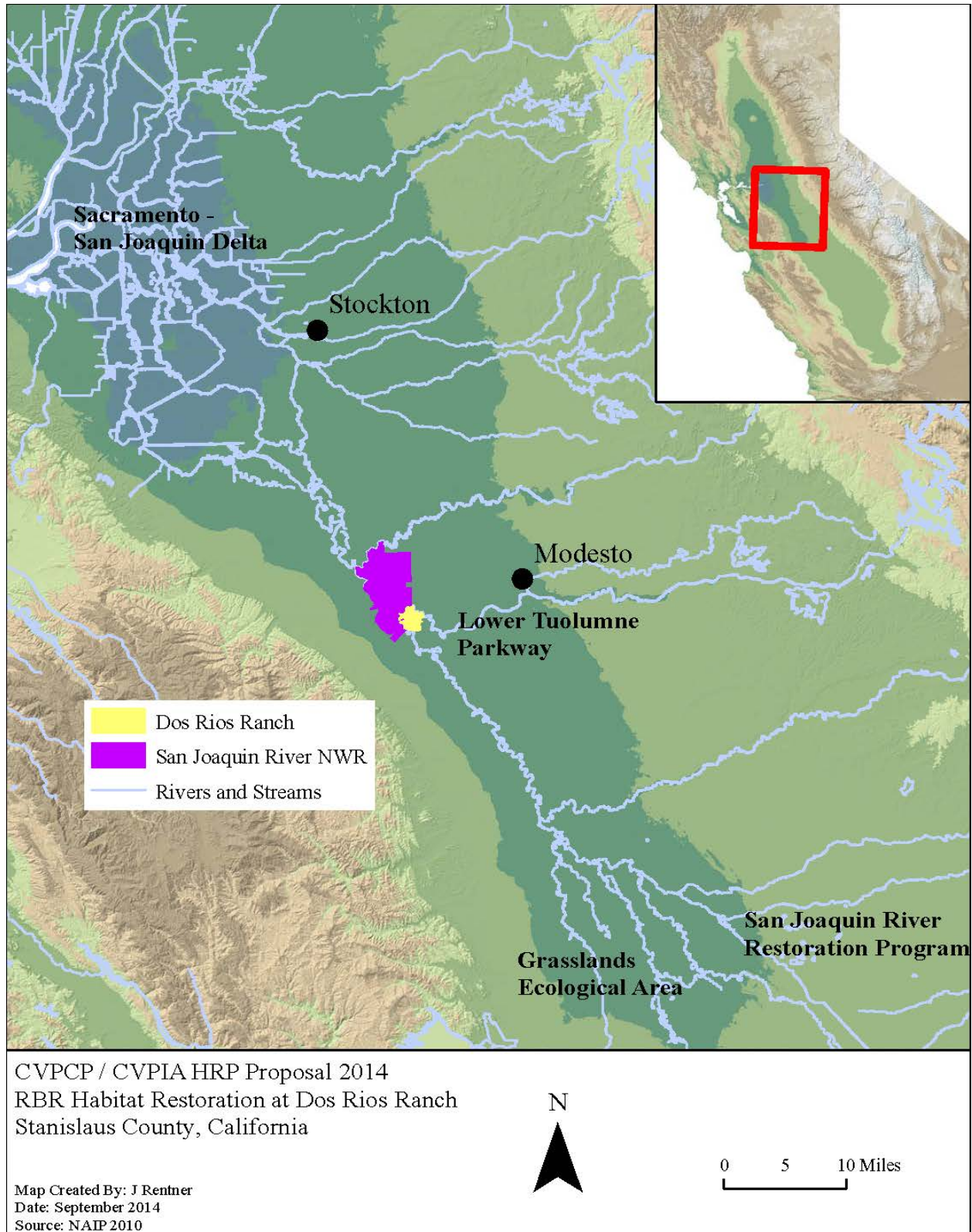


Figure 1. General Location of Dos Rios Ranch in Stanislaus County, California.

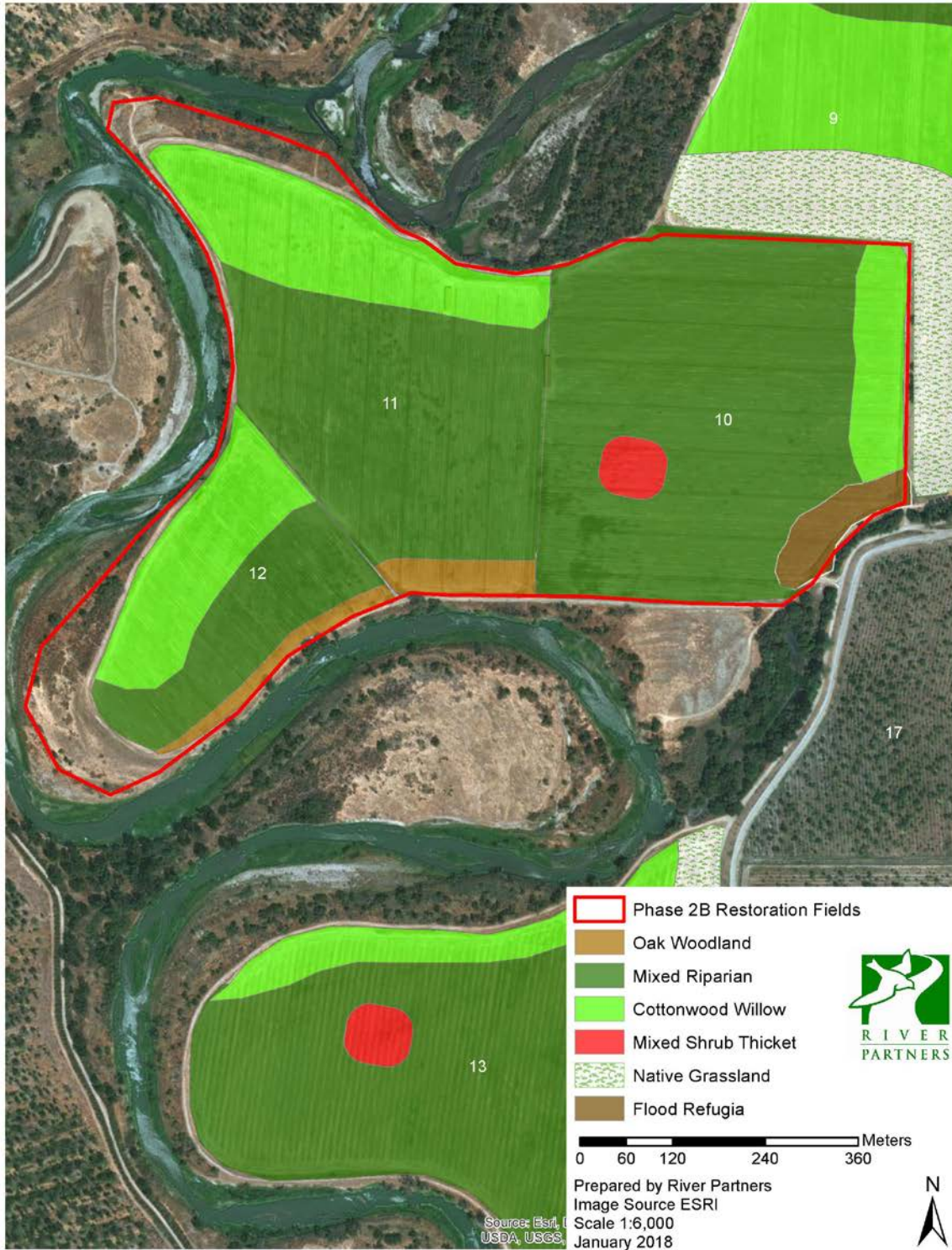


Figure 2. Project location on Fields 10, 11, and 12, including the location of the wildlife flood “refugia”.

Section 2 Alternatives Including the Proposed Action

This Environmental Assessment considers two possible actions: “No Action Alternative” and “Proposed Action”. The No Action Alternative reflects future conditions without the Proposed Action and serves as a basis of comparison for determining potential effects to the environment.

2.1 No Action Alternative

Under this alternative, Reclamation would not provide \$499,730 from the HRP to River Partners to restore and enhance native riparian habitats on 159 acres of floodplain or establish 3 acres of wildlife flood refugia on Fields 10, 11, and 12. Absent Reclamation funding, the project would not meet NRCS’s program eligibility requirement so would not move forward in any capacity.

2.2 Proposed Action

Reclamation would provide \$499,730 in HRP funds to River Partners to restore and enhance native riparian habitats on 159 acres of farmland, including the creation of three acres of wildlife flood refugia. This would supplement funds committed to the Project by the NRCS and California Department of Fish and Wildlife who will provide the remaining funds. The Project consists of the following components over three growing seasons:

Table 1. Restoration activities to be conducted under the Dos Rios Ranch Riparian Habitat Restoration Project

Restoration Activities	
Site Preparation and Irrigation Installation	
<ul style="list-style-type: none">• Prepare 147 acres for planting, including clearing weeds and debris, disking and furrowing, and pulling (clearing of) head and drain ditches for flood-irrigated fields;• Construct 3 acres of elevated flood refugia using earthen material from the site;• Install drip irrigation on the refugia: approximately 4,200 linear feet of 4-6-inch mainline pipe would be installed to irrigate plantings on the refugia using Tuolumne River water.	

<p>Planting</p>
<ul style="list-style-type: none"> • Collect and propagate local plant material for restoration; • Plant approximately 18,221 propagated container plants and cuttings throughout the 159-acre project site. The planting area includes 12 acres of degraded remnant habitat between fields and in field margins to enhance existing habitat in those areas and 147 acres of farmed land. Approximately 15,608 plants/cuttings would be planted on the prepared fields and field margins (black willow, arroyo willow, Fremont’s cottonwood, valley oak, Oregon ash, and box elder) and 2,613 plants on the refugia (native blackberry, wild rose, and elderberry); • Apply seed to approximately 38 acres of the floodplain fields and the refugia. Only perennial grasses and forbs native to the Central Valley would be planted, including mugwort, gumplant, evening primrose, telegraph weed, western goldenrod, hedge nettle, stinging nettle, milkweed, and creeping wildrye.
<p>Maintenance</p>
<ul style="list-style-type: none"> • Throughout the growing seasons of project years 1 and 2, provide flood or drip irrigation to plantings monthly, as needed; • Maintain flood and drain ditches as needed; • Smooth field furrows and irrigate fields by directly flooding the aisles between plantings; • Provide drip irrigation to plantings on the 3 acres of refugia by running an existing groundwater pump for a period of 12 to 20 hours per day to supply deep irrigation via ½-gallon per hour pressure-regulated in-line emitters. Repair drip lines as needed. Drip irrigation will be provided to plantings placed between fields and in field margins as needed; • Conduct weed control through disking and mowing in the restored farmed fields, approximately monthly, throughout the growing season during project years 1 and 2; • Apply spot treatments with approved herbicides as needed to control perennial weeds, including in areas not accessible by disking or mowing.
<p>Monitoring</p>
<ul style="list-style-type: none"> • Measure project performance through monitoring of plant survival and growth, and through post-project evaluation of habitats for targeted species; • Monitoring includes vegetation data collected in the form of a census in project year 1, and permanent plot monitoring in years 2 and 3; • Report project activities and monitoring results in semi-annual reports and the final report.

2.2.1 Environmental Commitments

As part of the Project, River Partners would implement mitigation measures for biological resources. The following measures would be implemented to avoid and reduce potential impacts to federally-listed species:

- River Partners' would conduct worker environmental training, including discussion of physical procedures, procedures for wildlife encounters, and proper herbicide application methods;
- Vehicle speeds would be maintained at or below 15 miles per hour to reduce the likelihood of animal strikes and noise disturbance;
- Earthwork would only occur in areas with a history of farming and which were regularly disked and cleared of all vegetation;
- All equipment used to conduct the project (55 horse-power tractor, belly scraper, bulldozer, road grader, and ATVs) would be stored on site at the Dos Rios Ranch main equipment storage yard east of the project boundary to reduce the risk of animals being hit from equipment traveling to and from the project site;
- Roads and other areas of bare soil where equipment operates would be regularly sprayed with water to reduce dust emissions;
- No activities would occur within 100 feet of any elderberry shrub (Figure 3);
- Applications of herbicide within the action area would be supervised by a California Department of Food and Agriculture-certified Pest Control Advisor trained and experienced in riparian and wetland weed treatment. All herbicide applications would be tracked and reported per Stanislaus County Agricultural Commission regulations;
- Disking and mowing for weed control within the new planting row centers will be conducted before weeds exceed six inches in height;
- If a listed species is encountered during construction, work will stop until the animal leaves the construction area of its own volition.

Additionally, River Partners has committed to the following actions if any cultural resources are discovered while implementing the Project:

- If Native American cultural resources are encountered during construction, work would stop, and the find would be assessed by a qualified archaeologist. River Partners would notify Reclamation within 1 working day of the discovery to determine if additional Section 106 consultation is required. In the event that Native American human remains are discovered, River Partners also would follow California state law as outlined in Health & Safety Code 7050.5, Dead Bodies and California Public Resources Code 5097.98, Notification of Discovery of Native American Human Remains.



Figure 3. 100-foot buffer zones around existing elderberries at Dos Rios Ranch, Stanislaus County

Section 3 Affected Environment and Environmental Consequences

3.1 Required Resource Discussions

Department of the Interior Regulations, Executive Orders, and Reclamation guidelines require a discussion of the following items when preparing environmental documentation:

3.1.1 Indian Trust Assets

Indian Trust Assets are legal interests in assets that are held in trust by the United States for federally recognized Indian tribes or individuals. There are no Indian reservations, rancherias or allotments in the Project Area. The nearest Indian Trust Asset is the Chicken Ranch Rancheria of the Me-Wuk Indians approximately 45 miles northeast of the Project Area. Therefore, the Proposed Action does not have the potential to affect Indian Trust Assets (See Appendix A).

3.1.2 Indian Sacred Sites

Sacred sites are defined in Executive Order 13007 (May 24, 1996) as "any specific, discrete, narrowly delineated location on federal land that is identified by an Indian tribe, or Indian individual determined to be an appropriately authoritative representative of an Indian religion, as sacred by virtue of its established religious significance to, or ceremonial use by, an Indian religion; provided that the tribe or appropriately authoritative representative of an Indian religion has informed the agency of the existence of such a site". The Proposed Action would not be located on nor impact any federal land and therefore would not affect any Indian sacred sites.

3.1.3 Environmental Justice

Executive Order 12898 requires each federal agency to identify and address disproportionately high and adverse human health or environmental effects, including social and economic effects of its program, policies, and activities on minority populations and low-income populations. The Project would not have adverse economic or social effects on any individuals or populations within the vicinity of the Project. Accordingly, the Proposed Action would not have disproportionately negative impacts on low-income or minority populations within the Project Area.

3.2 Biological Resources

3.2.1 Affected Environment

The SJRNWR and Dos Rios Ranch were once hydrologically-connected floodplains of the San Joaquin River supporting the same types of riparian habitats, with wildlife moving back and forth across the River. The floodplains were converted into agricultural lands in the early 1900s and Dos Rios Ranch fields were leveled to facilitate irrigation and drainage to grow row crops, alfalfa, and almonds.

Of the 159 acres to be restored through the Project, 147 acres rotate between disked, unvegetated fallow ground providing little, if any, habitat value to wildlife, and winter hay under a Wetland Reserve Program compatible use authorization from the NRCS, that provides marginal foraging habitat and cover for migratory birds and other wildlife. The remaining 12 acres support mixed riparian, mixed shrub thicket, and cottonwood/willow riparian habitat patches, and narrow and discontinuous riparian corridors at riverside edges, lacking a dense understory and adequate flood refugia. The area experienced notable flood events in 1983, 1986, 1995, 1997, 2005, 2006, 2011, and 2017.

Reclamation obtained a listing of federally-listed endangered, threatened, proposed, and candidate species and critical habitat using USFWS's Information for Planning and Consultation tool and conducted a search of the California Natural Diversity Database on July 10, 2018 (USFWS 2018; CDFW 2018). Biological resources identified for further consideration are the federally-listed as endangered riparian brush rabbit (*Sylvilagus bachmani riparius*; RBR), riparian woodrat (*Neotoma fuscipes riparia*; RWR), least Bell's vireo (*Vireo bellii pusillus*; LBVI), and federally-listed as threatened valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*; VELB).

According to information provided by River Partners, formal wildlife surveys have not previously been performed at Dos Rios Ranch but are planned after Project construction as part of long-term biological monitoring in collaboration with Point Blue Conservation Science and the Endangered Species Recovery Program of California State University, Stanislaus. River Partners has an Endangered Species Act 10(a)(1)(a) permit for both RBR and RWR with the USFWS covering their vegetation maintenance activities, including disking.

3.2.1.1 Riparian Brush Rabbit

The 147 acres of unvegetated fallow ground and mixed hay cultivation lands do not provide suitable habitat for RBR. The remaining 12 acres located on the fringes of the Project Area is mixed riparian habitats which is considered poor-quality habitat for RBR. RBR live in the brushy understory of dense riparian forests and require areas of high cover dominated by willow thickets, California rose, California blackberry, coyote brush, and wild grape. The rabbits avoid large openings in shrub coverage, but frequent small clearings to feed on herbaceous vegetation including grasses, sedges, clover, and forbs. The species does not usually inhabit or cross large,

open areas, deterring RBR from successfully dispersing beyond the dense brush of riparian forests.

Conversion of the floodplain for agricultural use, including the construction and maintenance of levees at the project site, has eliminated the small patches of shrub-covered uplands that once provided refuge for rabbits from flooding and predators. Currently, when forced to seek high ground during flood events, RBR move to cleared levees and agricultural fields, both of which lack adequate coverage to protect from predators.

The nearby SJRNWR and Caswell Memorial State Park (approximately 6 miles north of the Project Area) support natural and reintroduced populations of RBR. RBR presence was documented by the Endangered Species Recovery Program of California State University, Stanislaus in 2004 on Dos Rios Ranch when a radio-collared rabbit was trapped on the northern boundary of the property, approximately 1 mile from the site of the Project. River Partners also observed RBR in July 2014 using wildlife cameras.

3.2.1.2 Riparian Woodrat

As with RBR, historic habitat for RWR and refugia from flooding have been converted to cultivated fields and the Project site no longer provides suitable habitat for RWR. RWR inhabit areas like those inhabited by RBR, and include areas with dense shrub cover, typically willow thickets with a valley oak overstory. RWR were live-trapped on the adjacent SJRNWR in 2005, 2009, 2011 and 2012 on the west side of the San Joaquin River, approximately 1.2 miles from the project site.

3.2.1.3 Least Bell's Vireo

Adequate breeding and nesting habitat for LBVI does not currently exist at the Project Area. However, LBVI are found in the vicinity of the Project Area during breeding season, in early April through September (Kus 2002). Breeding habitat includes 3-5-year-old willow thickets within a dense herbaceous understory. Nests are usually low in a shrub or tree, near the edge of a thicket. A critical structural component is a dense shrub layer 0.6-3 meters above ground (TNC 2000). Brood parasitism by brown-headed cowbirds is a major threat to LBVI populations. Open agricultural ground, as presently found at the project site, provides foraging habitat for the brown-headed cowbird (RHJV 2004). LBVI that are forced into fragmented or marginal nesting areas are more vulnerable to nest parasitism from cowbirds.

River Partners and its partners including SJRNWR staff and Point Blue Conservation Science periodically conduct bird surveys to monitor post-project responses to habitat restoration activities at SJRNWR and adjacent lands including Dos Rios Ranch. The first nesting pair of LBVI observed in the Central Valley in over 50 years was documented in restoration plantings at the SJRNWR in 2005 and 2006, approximately one mile from the project site (Howell and Dettling 2007) however, LBVI have not been found at SJRNWR since 2008.

3.2.1.4 Valley Elderberry Longhorn Beetle

Several groups of elderberry shrubs occur at Dos Rios Ranch, the nearest located approximately 500 feet south of Field 10 near the site access route. California Natural Diversity Database records include an occurrence of VELB approximately one-mile northwest of the Project site, on the other side of the San Joaquin River. The locations of elderberry shrubs and their 100-foot avoidance buffers, where no project activity would occur, is shown in Figure 3.²

3.2.1.5 Other Species

Several state-designated sensitive species, including Swainson's hawk (*Buteo swainsoni*), Northern harrier (*Circus cyaneus*), tricolored blackbird (*Agelaius tricolor*), loggerhead shrike (*Lanius ludovicianus*), yellow warbler (*Dendroica petechia*), yellow-breasted chat (*Icteria virens*), and Lawrence's goldfinch (*Carduelis lawrencei*), have been documented on the SJRNWR (USFWS 2006; Howell and Dettling 2007). Swainson's hawk have been documented nesting on Fields 8 and 9 of Dos Rios Ranch, and Northern harrier, tricolored blackbird, and loggerhead shrike likely nest at the Ranch in some years (Howell and Dettling 2007).

3.2.2 Environmental Consequences

3.2.2.1 No Action

If Reclamation does not provide funding to River Partners for restoration and enhancement at Dos Rios Ranch, the area would continue to be farmland. The land would continue to be rotated between disked, unvegetated fallow ground providing little and winter hay which provides marginal foraging habitat and cover for wildlife.

3.2.2.2 Proposed Action

The Proposed Action would partially fund the restoration and enhancement of 159 acres of floodplain to riparian woodland habitat through the planting of mixed riparian, mixed shrub thicket (including blue elderberry), and cotton willow species. It would also establish 3 acres of elevated wildlife refugia. After restoration, the Project Area would provide high quality habitat for RBR immediately adjacent to documented populations. Additionally, it would increase the amount of habitat for the RWR, LBVI, and VELB, and the other species listed above.

3.2.2.2.1 Riparian Brush Rabbit

Areas that will undergo site preparation and irrigation installation activities, including disking, grading, and construction of refugia are currently in an actively farmed state and do not provide habitat for RBR and therefore would not affect RBR.

² Figure 3 is taken from a River Partners and U.S. Army Corps of Engineers planning document detailing restoration of the entirety of Dos Rios Ranch and therefore includes fields that would not be affected by the Project analyzed in this EA.

Planting activities on the 147 currently-farmed acres would not affect the species since the area does not provide suitable habitat. The 12 acres of mixed riparian habitat is considered poor-quality habitat for the RBR, so hand-planting activities in these areas are unlikely to affect RBR, but minimal impacts cannot be discounted completely. The species is unlikely to inhabit the area during the time of planting due to Project activities and noises. With the implementation of the mitigation measures listed above, potential impacts to RBR would be reduced.

The species may be attracted to the area after the plantings are completed and could be affected by the maintenance activities. However, RBR are unlikely to inhabit the area during the time mechanical weed control will occur because (1) once planted, restored vegetation will be too small and sparse to provide cover for RBR for the first two years following planting; and (2) flood irrigation proposed to water restored vegetation during the first two years will deter populations or individuals of the species from taking up residence within the action area.

Taking into consideration the marginally suitable nature of the existing habitat for RBR at the project site, and implementation of the mitigation measures to be undertaken during implementation listed in Section 2.2.1, the Project may affect, but is not likely to adversely affect RBR.

In the long term, the Project is expected to provide a substantial benefit to the species through restoration of high quality native riparian and riparian scrub habitats upon which the species depends and covered refugia areas that would allow the RBR to safely find refuge during flood events. The long-term benefits could help lead to recovery of the species.

3.2.2.2 Riparian Woodrat

Impacts to the RWR from the restoration activities would be akin to those for the RBR. Implementation of the mitigation measures to be undertaken by River Partners during Project construction would reduce the likelihood of any potential effects. Therefore, the Project may affect, but is not likely to adversely affect RWR. In the long-term the Project is also expected to benefit RWR in the same manner it does RBR.

3.2.2.3 Least Bell's Vireo

Since there is no suitable LBVI habitat in the Project Area, site preparation and irrigation installation activities and planting activities would not affect the species. LBVI that may be nesting at the SJRNWR would be at least one mile from the project site which gives the LBVI a substantial buffer from noise, dust, and herbicide use. River Partners would notify Reclamation if LBVI is detected in the Project Area during surveys conducted during the maintenance and monitoring phases of the Project.

Restoring quality breeding habitat and cowbird control have led to population recovery in some areas (Kus 1998, TNC 2000). Minimizing habitat patchiness may reduce rates of cowbird nest parasitism. Water availability, vegetation structure, and proximity to natural habitat are key components of restoration success and use by the LBVI (Kus 1998). The Project would increase

the availability of riparian and dense shrub habitat for the LBVI and reduce conditions that enable cowbird parasitism.

Taking into consideration the absence of existing habitat for LBVI in the Project Area, the mitigation measures to be implemented as discussed in Section 2.2.1, and the distance between the Project Area and potentially nesting LBVI, the Project may affect, but is not likely to adversely affect the LBVI.

3.2.2.2.4 Valley Elderberry Longhorn Beetle

There is minimal potential for Project vehicles to affect VELB during travel to and from the Project Area. Avoidance measures listed in Section 2.2.1, including a 100-foot buffer boundary around existing elderberry shrubs (Figure 3) and dust prevention measures are expected to minimize any potential adverse effects. Therefore, the Project may affect, but is not likely to adversely affect VELB. Over 1,500 blue elderberry shrubs will be planted as part of the project, expanding VELB habitat and benefitting the species in the long-term.

3.2.2.2.5 Other Species

The Project could aid in the recovery of state-listed and sensitive species Swainson's hawk, Northern harrier, tricolored blackbird, loggerhead shrike, yellow warbler, yellow-breasted chat, and Lawrence's goldfinch by restoring nesting and foraging habitats and by broadening the available prey base.

3.3 Cultural Resources

3.3.1 Affected Environment

The term "cultural resources" can be broadly defined as sites, objects, structures, and landscapes created, modified, used, or assigned cultural value by humans. The cultural resources affected environment for Reclamation's Proposed Action consists of the landscape on which habitat restoration would occur and any prehistoric or historic-era cultural resources, or traditional cultural properties, that could be impacted by project activities. Located near the confluence of the Tuolumne and San Joaquin Rivers, this fertile area has supported intensive agricultural use for nearly 100 years, and contains buildings, structures, and other artifacts reflecting its farming and ranching history. Prior to the arrival of Euro-Americans in the region, Native American people similarly were attracted to and utilized this resource-rich area.

The National Historic Preservation Act is the primary federal legislation that outlines the federal government's responsibilities related to cultural resources. Title 54 USC § 306108, commonly known as Section 106 of the National Historic Preservation Act, requires federal agencies to take into account the effects of their undertakings on significant cultural resources, which are known as historic properties. The effects of an agency's undertaking are determined by following the Section 106 process described at 36 CFR Part 800. This process involves efforts to identify historic properties in an area of potential effects (APE), consultation with the State Historic

Preservation Officer (SHPO) on a finding of effect, and the resolution of adverse effects on historic properties, if any.

3.3.2 Environmental Consequences

3.3.2.1 No Action

Under the No Action alternative, Reclamation would not provide funding to River Partners for restoration and enhancement work at Dos Rios Ranch. By taking no action, Reclamation would cause no effects on cultural resources.

3.3.2.2 Proposed Action

The Proposed Action would fund the restoration and enhancement of 159 acres on Dos Rios Ranch. Reclamation determined that the Proposed Action involves activities that have the potential to cause effects on historic properties, assuming such properties are present. Efforts to identify historic properties in the APE for the undertaking were conducted in 2011 by Solano Archaeological Services and in 2017 by Sonoma State University Anthropological Studies Center. No historic properties were identified in the APE through these identification efforts.

Reclamation contacted (by letters dated February 21, 2018) the Tule River Indian Tribe and Tuolumne Band of Me-Wuk Indians, as well as the Calaveras Band of Mi-Wuk Indians, North Valley Yokuts Tribe, and the Southern Sierra Miwok Nation, requesting assistance in identifying historic properties. Ms. Katherine Perez, of the North Valley Yokuts Tribe, replied by email recommending Native American monitoring of project work. Reclamation determined that ground disturbance from project activities is unlikely to reach depths where previously undisturbed soils or buried cultural resources could be encountered; however, River Partners agreed to contact Ms. Perez about her concerns.

Through correspondence dated April 27, 2018, Reclamation initiated consultation with the California SHPO, providing notification of a finding of no historic properties affected for the proposed undertaking pursuant to 36 CFR § 800.4(d)(1). The SHPO responded with no objection to Reclamation's finding through correspondence dated May 30, 2018. With receipt of the SHPO's response, Reclamation's responsibilities under Section 106 have been fulfilled (Appendix B). Implementation of the Proposed Action would result in no significant impacts to cultural resources.

3.4 Cumulative Impacts

According to Council on Environmental Quality regulations for implementing the procedural provisions of the National Environmental Policy Act, a cumulative impact is defined as the impact on the environment, which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (federal or non-federal) or person undertakes such other actions. Cumulative effects can result from individually minor but collectively significant actions taking place over a period of time (40 CFR 1508.7).

There are no adverse impacts associated with implementing the Proposed Action, and therefore no adverse cumulative effects to consider.

Section 4 Consultation and Coordination

4.1 Agencies and Persons Consulted

Reclamation consulted and coordinated with River Partners, the U.S. Fish and Wildlife Service, and the California Office of Historic Preservation in the preparation of this environmental assessment.

4.2 HRP Technical Team

HRP managers are guided by a Technical Team of biologists and natural resource specialists from Reclamation, USFWS, and the California Department of Fish and Wildlife. The purpose of the Technical Team is to implement a collaborative and integrated multi-agency process to coordinate actions under state and federal laws to aid in recovery of CVP-impacted listed species. The Technical Team helps ensure the program is operated consistent with USFWS biological opinions (USFWS 2000) that guide implementation of the HRP and jointly administers the Central Valley Project Conservation Program to mitigate for past impacts to species from the CVP. The Team provides guidance and recommendations to HRP managers regarding the projects to be funded.

During the period of October 3, 2016 through January 9, 2017, members of the Technical Team reviewed and scored proposals submitted to Reclamation for consideration for funding. River Partners' proposal for habitat restoration at Dos Rios Ranch was recommended for funding. Reclamation and USFWS management subsequently approved the Technical Team's recommendation that the Project be funded.

4.3 Endangered Species Act (16 USC § 1531 et seq.)

Section 7 of the Endangered Species Act requires federal agencies, in consultation with the Secretary of the Interior, to ensure that their actions do not jeopardize the continued existence of endangered or threatened species or result in the destruction or adverse modification of the critical habitat of these species.

The restoration work that would be funded through Reclamation's Proposed Action is part of a larger restoration effort (1,026 acres) by River Partners at Dos Rios Ranch. The U.S. Army Corps of Engineers has jurisdiction over several of the Project Areas and requested informal consultation from the USFWS regarding the larger restoration effort, for Fields 6, 7, 8, 9, 10, 11, 12, and F6 (that align with River Partners' Phases 2B, 2C, and 3) of Dos Rios Ranch. In a letter dated July 5, 2017, the USFWS concurred with the U.S. Army Corps of Engineers that these phases of the restoration project may affect, but is not likely to adversely affect, the federally-listed as threatened valley elderberry longhorn beetle, and the federally-listed as endangered

riparian brush rabbit, riparian woodrat, and least Bell's vireo (Appendix C). Reclamation has determined that providing grant funding to implement activities under the project would have no additional adverse effects beyond what was described in this correspondence. However, if new information is made available, the project description is altered, or River Partners does not fully comply with the avoidance and minimization measures in the July 5, 2017 letter, Reclamation may need to revisit its Endangered Species Act responsibility.

Section 5 References

- California Department of Fish and Wildlife (CDFW). 2018. California Natural Diversity Database. Rarefind electronic database. <http://www.dfg.ca.gov/biogeodata/cnddb/rarefind.asp>. Accessed 10 July 2018.
- Howell, C.A. and M. Dettling. 2007. Least Bell's Vireo Monitoring, Nest Predation Threat Assessment, and Cowbird Parasitism Threat Assessment at the San Joaquin River National Wildlife Refuge 2007 Field Season Final Report.
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Appendix A Indian Trust Assets Compliance

Indian Trust Assets Request Form (MP Region)

Submit your request to your office's ITA designee or to MP-400, attention Kevin Clancy.

Date: January 30, 2018

Requested by <i>(office/program)</i>	Gwen Robson, MP-152
Fund	RX304249930250000
WBS	18XR0680A3
Fund Cost Center	RR2015200
Region # <i>(if other than MP)</i>	
Project Name	Dos Dios Ranch Riparian Brush Rabbit Riparian Restoration
CEC or EA Number	18-05-MP
Project Description <i>(attach additional sheets if needed and include photos if appropriate)</i>	Reclamation would provide \$535,778 from the CVPCP to River Partners to restore and enhance native riparian habitats to 159 acres of floodplain in fields 10, 11, and 12 within Dos Rios Ranch, including the creation of 3 acres of rufugia.

<p>*Project Location (Township, Range, Section, e.g., T12 R5E S10, or Lat/Long cords, DD-MM-SS or decimal degrees). Include map(s)</p>	<p>Long: -121.17 Lat: 37.60</p>
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Signature

GWEN ROBSON
Printed name of preparer

1-30-2018
Date

ITA Determination:

The closest ITA to the Proposed Action is **Chicken Ranch Rancheria of Me-Wuk** which is about **45.21** miles to the **NE**. (See attached image).

Based on the nature of the planned work it does / ~~does not~~ appear to be in an area that will impact Indian hunting or fishing resources or water rights nor is the proposed activity on actual Indian lands. It is reasonable to assume that the proposed action will / ~~will not~~ have any impacts on ITAs.


Signature

KEVIN CLANCY
Printed name of approver

2/5/2018
Date

Appendix B Cultural Resources Compliance

CULTURAL RESOURCES COMPLIANCE Mid-Pacific Region Division of Environmental Affairs Cultural Resources Branch MP-153

MP-153 Tracking Number: 18-SCAO-051

Project Name: Riparian Habitat Restoration at Dos Rios Ranch, Stanislaus County, California

NEPA Document: EA No. 18-05-MP

NEPA Contact: Kaitlin Flahive, Natural Resources Specialist

MP-153 Cultural Resources Reviewer: Joanne Goodsell, Archaeologist

Date: June 27, 2018

JOANNE GOODSELL Digitally signed by JOANNE GOODSELL
Date: 2018.06.27 11:01:36 -07'00'

Reclamation proposes to provide funding through its Central Valley Project Improvement Act Habitat Restoration Program (CVPIA HRP) to River Partners, a nonprofit organization that aims to protect and create wildlife habitat along rivers and streams, for a riparian habitat restoration project involving former farm fields within Dos Rios Ranch. Reclamation determined that the use of Federal funding for the proposed restoration work is an undertaking as defined in 36 CFR § 800.16(y) and involves the type of activity that has the potential to cause effects on historic properties under 36 CFR § 800.3(a).

In 2012, and again in 2015, Reclamation provided CVPIA HRP funding to River Partners for similar work on Dos Rios Ranch. For Section 106 compliance, Reclamation defined the current undertaking as comprising work to be completed using funding awarded in 2018 on Fields 10, 11, and 12, as well as work that may be eligible for funding in 2020 on Fields 3, 4 and 5. Efforts to identify historic properties within the area of potential effects (APE), which comprises Fields 10, 11, and 12 and 3, 4, and 5, were conducted in 2011 by Solano Archaeological Services and in 2017 by Sonoma State University Anthropological Studies Center. Additionally, through letters dated February 21, 2018, Reclamation requested information on historic properties in the APE from the Tule River Indian Tribe and Tuolumne Band of Me-Wuk Indians, which are federally-recognized Indian tribes, and the Calaveras Band of Mi-Wuk Indians, North Valley Yokuts Tribe, and the Southern Sierra Miwok Nation, which do not have Federal recognition at this time. No historic properties were identified in the APE through these identification efforts.

Reclamation initiated Section 106 consultation with the California State Historic Preservation Officer (SHPO) through correspondence dated April 27, 2018, notifying the SHPO of the finding of no historic properties affected for the undertaking. The SHPO responded with no objection to Reclamation's finding through correspondence dated May 30, 2018. With receipt of the SHPO response, Reclamation's responsibilities under Section 106 for the current undertaking are fulfilled. Based on the Section 106 finding, implementation of the Proposed Action would result in no significant impacts to cultural resources.

This document conveys the completion of the NHPA Section 106 process for this undertaking. Please retain a copy in the administrative record for this action. Should the proposed action change, or in the event of any post-review discoveries, additional NHPA Section 106 review and consultation may be required.

Appendix C Endangered Species Act Concurrence



In Reply Refer to:
08ESMF00-
2017-I-2396

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Sacramento Fish and Wildlife Office
2800 Cottage Way, Suite W-2605
Sacramento, California 95825-1846



JUL 05 2017

Ryan T. Larson
Chief, Flood Protection and Navigation Section
U. S. Army Corps of Engineers
Department of the Army
1325 J Street
Sacramento, California 95814

Subject: Informal Consultation for the Dos Rios Ranch Restoration Project, Stanislaus
County, California

Dear Mr. Larson,

This letter is in response to the U. S. Army Corps of Engineers' (Corps) May 16, 2017, request for informal consultation with the U.S. Fish and Wildlife Service (Service) on the Dos Rios Ranch Restoration Project (proposed project), as proposed by River Partners. Your request was received by the Service on May 22, 2017. The proposed project involves removing berms, creating swales and mounds, and planting native riparian vegetation to restore approximately 1,026 acres of floodplain and riparian habitat. The proposed project is being implemented in phases as funding is secured due to the large size of Dos Rios Ranch. On March 3, 2016, the Service issued a letter of concurrence (Service file no. 08ESMF00-2016-I-0707) to the Bureau of Reclamation which determined that restoration activities in fields 13 and 14 (Phase 2A of the proposed project) "may affect, but ... not likely to adversely affect" listed species and to date, 600 acres of riparian habitat have been restored. The federal action on which you have now requested consultation is the Corps' authorization and Section 408 permitting for Phases 2 and 3 of the proposed project

The Corps has determined that the proposed project may affect, but is not likely to adversely affect the federally threatened valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*) (VELB), federally endangered riparian brush rabbit (*Sylvilagus bachmani riparius*) (RBR), riparian woodrat (*Neotoma fuscipes riparia*) (RWR), and least Bell's vireo (*Vireo bellii pusillus*) (LBVI) and is seeking concurrence from the Service on this determination.

This response is provided under the authority of the Endangered Species Act of 1973, as amended (16 U.S.C. 1531 et seq.), (Act) and in accordance with the implementing regulations pertaining to interagency cooperation (50 CFR 402). The findings and recommendations presented in this document are based on the following information: (1) the May 15, 2017, Biological Assessment prepared by River Partners, (2) email and telephone correspondences between the Corps and the Service in June 2017, and (3) other information available to the Service.

Project Description

The proposed project action area is located on Dos Rios Ranch, approximately 1.6 miles west of Shiloh Road and 2.2 miles south of Maze Boulevard in Modesto, Stanislaus County, California. Dos Rios Ranch is located at the confluence of the San Joaquin and Tuolumne rivers, directly east of the San Joaquin River National Wildlife Refuge (SJRNR). The goal of the proposed project is to restore and enhance native riparian vegetation on approximately 1,026 acres of historic riparian forest which are currently degraded farmlands and remnant habitat. The proposed project, together with the SJRNR, will contribute to the largest contiguous block of riparian habitat restoration in the Central Valley. The anticipated timeline to achieve a self-sustaining restoration site through the proposed project is three years, although construction could take as many as 6-8 years.

Within the Corps' jurisdiction, six 1.5-acre elevated flood refuge mounds will be created, two floodplain swales will be sculpted, portions of seven berms will be removed, and native plants will be seeded and planted. In the remaining areas which are not included in the Corps' jurisdiction but are part of the proposed project, an additional three 1.5-acre refuge mounds will be created and berm removal and native planting activities will be similar to those within the Section 408 permit area. All fill material used to construct the refuge mounds will be obtained from swale creation, berm removal, and borrow material from up to 20 inches of top soil from within the farm fields of each mound. The portions of each berm to be removed will be graded to the existing height of the adjacent fields to allow floodplain inundation at a lower river flow rate.

Native riparian species will be planted in plant associations representative of rose (*Rosa californica*) briar thicket, herbaceous vegetation, mixed shrub thicket, mixed riparian, oak (*Quercus lobata*) woodland, and cottonwood-willow (*Populus fremontii-Salix spp.*). Refuge mounds will be planted consistent with rose briar plant associations, which are primarily composed of native shrubs and an herbaceous perennial understory, to create thickets in which terrestrial species can seek refuge. Swales, as well as a floodplain corridor traversing fields 13 and 14, will be seeded with aggressive native grasses and forbs to prevent invasion by non-native plant species and to provide avian nesting habitat. Routine mowing and herbicide application will occur to control unwanted weeds throughout the project period. The remainder of the fields, excluding field 6, will be prepared for planting by installing a series of furrow rows in which native tree and shrub species will be planted to establish an over-story and mid-story canopy. These plantings will be irrigated with drip lines for three years and maintained with regular disking until a native herbaceous understory is seeded during the second winter. Until the understory is established, the trees and shrubs will be small and immature, and thus, the amount of vegetative cover will be minimal.

The proposed project action area occurs within the ranges of the VELB, RBR, RWR, and LBVI. Several groups of elderberry (*Sambucus spp.*), upon which the VELB is entirely dependent, occur within the remnant riparian forests along the edges of the agricultural fields within the proposed project action area. Although no surveys have been conducted, the Corps is assuming presence of VELB. In addition, the adjacent SJRNR supports known populations of RBR and RWR, and LBVI were documented breeding within 1.5 miles of the proposed project action area as late as 2008. Currently, the proposed project action area is primarily an expanse of sparsely vegetated farmland with small patches of habitat, narrow and discontinuous riparian corridors, and a lack of dense understory and flood refugia.

Conservation Measures

River Partners has committed to implement the following measures to avoid and/or reduce potential impacts to federally-listed species within the action area:

1. Vehicle speeds will be maintained at or below 15 miles per hour;
2. Earthwork will only occur in areas with a history of farming and which were regularly disked and cleared of all vegetation;
3. All equipment used to conduct the project (55 horse-power tractor, belly scraper, bull dozer, road grader, and ATV's) will be stored on site at the Dos Rios Ranch main equipment storage yard east of the project boundary so as to reduce the risk of animals being hit from equipment traveling to and from the project site;
4. Roads and other areas of bare soil where equipment operate will be regularly sprayed with water to reduce dust emissions;
5. No activities will occur within 100 feet of any elderberry shrub;
6. Applications of herbicide within the action area will be supervised by a California Department of Food and Agriculture-certified Pest Control Adviser trained and experienced in riparian and wetland weed treatment; and
7. Discing and mowing for weed control within the planting row centers will be conducted before weeds exceed six inches in height.

In addition, River Partners has proposed that the "Service would be notified within 1 working day of finding of any individual of a federally listed species that is injured or killed, or any unanticipated damage to a species habitat, associated with project activities. Injured listed species would be cared for by a licensed veterinarian or other Service-approved individual. Notification to the Service regarding the individual would include the date, time, and location of the animal indicated on a USGS quadrangle, and other maps at a finer scale as requested by the Service. Should a listed animal be injured or killed, the Service's Chief of the San Joaquin Valley Division of the Sacramento Fish and Wildlife Office would be contacted for specific instructions on how to care-for or preserve the individual." Based on a June 5, 2017, telephone conversation between the Service and Corps, it is the Service's understanding that this language will be voided. The following determination is based on this understanding.

Determination

The Service notes that Phase 2A activities are covered under the previous March 3, 2016, concurrence letter. The following determination is based on an analysis of Phases 2B, 2C, and 3 effects to federally listed species.

Although the Service believes the probability of encountering VELB, RBR, RWR, and/or LBVI within the action area is low, it cannot be discounted entirely. The proposed project sites are located within the ranges of these species. In addition to the current and historic records of RBR, RWR, and LBVI on the SJRNWR, according to the California Natural Diversity Database, there is one presumed extant record of VELB within five miles of the proposed project. It is possible that any of these species could utilize the remnant riparian habitat patches within the proposed project area. However, these lands within the proposed project action area can be considered marginally suitable, fragmented habitat and implementation of the conservation measures outlined above will minimize impacts to VELB, RBR, RWR, and LBVI. In addition, the proposed project could positively affect these species by increasing the amount of contiguous, suitable habitat and may contribute to the goal

of re-establishing a LBVI breeding population in this region. Based on this information, and on the applicant's commitment to adhere to the above outlined conservation measures, it is the Service's opinion that the effects of the action on the VELB, RBR, RWR, and LBVI will be of an insignificant and discountable nature.

Based on the information you have provided, the Service concurs with your determination that the project may affect, but is not likely to adversely affect VELB, RBR, RWR, and LBVI for Phases 2B, 2C and 3. This concludes the Service's review of the proposed project. No further coordination with the Service under the Act is necessary at this time. Please note, however, this letter does not authorize take of listed species. As provided in 50 CFR §402.14, initiation of formal consultation is required where there is discretionary Federal involvement or control over the action (or is authorized by law) and if: 1) new information reveals the effects of the agency action that may affect listed species or critical habitat in a manner or to an extent not considered in this review; 2) the agency action is subsequently modified in a manner that causes an effect to the listed species or critical habitat that was not considered in this review; or 3) a new species is listed or critical habitat designated that may be affected by the action. The Service notes that, due to the phased nature of this project, further consultation may be warranted for Phase 5 activities, if funding is secured and a Section 408 permit is required for such activities.

The Service appreciates your conscientious efforts to comply with federal requirements. If you have questions regarding this response, please contact Holley Kline, Fish and Wildlife Biologist (holley_kline@fws.gov) at (916) 414-6625 or me (patricia_cole@fws.gov), at the letterhead address above or at (916) 414-6544.

Sincerely,



Patricia Cole
Chief, San Joaquin Valley Division

cc:

Julie Vance, Regional Manager, California Department of Fish and Wildlife, Fresno, California
Heyo Tjarks, Restoration Ecologist, River Partners, Turlock, California