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**INITIAL STUDY (IS) /
MITIGATED NEGATIVE DECLARATION (MND)**

GREAT VALLEY GRASSLANDS - FLOODPLAIN RESTORATION



FEBRUARY 2018
SCH# 2017121006



State of California
**DEPARTMENT OF PARKS AND RECREATION
MITIGATED NEGATIVE DECLARATION**

PROJECT: Great Valley Grasslands - Floodplain Restoration

LEAD AGENCY: California Department of Parks and Recreation

AVAILABILITY OF DOCUMENTS: The Initial Study for this Mitigated Negative Declaration has been made available for review at the following locations:

- California Department of Parks and Recreation
Central Valley District Office
22708 Broadway Street
Columbia, CA 95310
- California Department of Parks and Recreation
Great Valley Grasslands State Park
31426 Gonzaga Road
Gustine, CA 95322
- Gustine Library
205 6th Street
Gustine, CA 95322
- Los Banos Branch Library
1312 South 7th Street
Los Banos, CA 93635
- https://www.parks.ca.gov/?page_id=980

Project Description:

The Project aims to reconnect a section of the San Joaquin River in Merced County to a portion of Great Valley Grasslands State Park through strategic levee breaches and/or removal in combination with strategic abandonment of levee maintenance. American Rivers has partnered with local landowners and stakeholders including the California Department of Parks and Recreation (CDPR), US Fish and Wildlife Service (USFWS), and the Lower San Joaquin Levee District (LSJLD).

The proposed project would remove segments of existing levees that protect portions of Great Valley Grasslands State Park from flooding. Removal of levee segments would reconnect the grasslands to natural fluctuations of the San Joaquin River, and would reestablish floodplain ecological functions in the park through connection to San Joaquin River flows. The Project has the potential to restore native rare grasslands vegetation and habitat in a setting adjacent to National Wildlife Refuge lands. This proximity provides an opportunity to improve habitat not only at the Project site, but to improve a larger wildlife corridor.

The levees built around what is now the Great Valley Grasslands State Park were originally constructed in the 1950s and have been ecologically detrimental by isolating the site from the dynamic riverine system. Isolation from the floodplain has increased opportunities for invasive exotic vegetation and reduced habitat connectivity. The original purpose of the levees was to facilitate livestock grazing, but this purpose ended in 1981 with the conversion of the Project site to a State Park. The existing levees contain a known erosion site which has compromised the levee at that location and reduced the levee's ability to withstand high flow events.

Comments and questions regarding this Initial Study / Mitigated Negative Declaration may be addressed to:

Heather M. Reith, Senior Environmental Scientist (*Supervisor*)
California State Parks
Central Valley District
22708 Broadway Street
Columbia, CA 95223

Pursuant to Section 21082.1 of the California Environmental Quality Act, the California Department of Parks and Recreation (CDPR) has independently reviewed and analyzed the Initial Study and Negative Declaration for the proposed project and finds that these documents reflect the independent judgment of CDPR. CDPR, as lead agency, also confirms that the project mitigation measures detailed in these documents are feasible and will be implemented as stated in the Negative Declaration.

Jess C. Cooper
Central Valley District Superintendent

Date

Heather M. Reith
Senior Environmental Scientist (*Supervisor*)

Date

TABLE OF CONTENTS

Introduction	5
Project Description	8
Location	8
Background and Need for the Project	10
Removal of Levees	11
Project Sequencing	12
Environmental Factors Potentially Affected	13
Determination of Documentation Required	13
Evaluation of Environmental Impacts	14
Environmental Checklist	16
Aesthetics	16
Agricultural Resources	17
Air Quality	18
Biological Resources	20
Tribal and Cultural Resources	24
Geology and Soils	26
Greenhouse Gas Emissions	28
Hazardous Materials	29
Hydrology and Water Quality	31
Land Use and Planning	34
Mineral Resources	35
Noise	36
Population and Housing	38
Public Services	39
Recreation	41
Transportation / Traffic	41
Utilities and Service Systems	43
Mandatory Findings of Significance	45
Avoidance, Minimization, Mitigation Measures	46
Air Quality Mitigation	46
Biological Resource Mitigation	48
Tribal and Cultural Resource Mitigation	49
Hazardous Materials	51
Hydrology Water Quality:	51
Report Preparation	52

Public and Agency Comment	52
References	53
Appendix A: Wetland Delineation	54
Appendix B: Biological Resources Map	55

1. Introduction

This Initial Study/Mitigated Negative Declaration (IS/MND) has been prepared by the California Department of Parks and Recreation (CDPR) to evaluate the potential environmental effects of a proposed floodplain restoration project at Great Valley Grasslands State Park (Great Valley Grasslands), near Stevinson, California. This document has been prepared in accordance with the California Environmental Quality Act (CEQA), Public Resources Code §21000 et seq., and the State CEQA Guidelines, California Code of Regulations (CCR) §15000 et seq.

An IS is conducted by a lead agency to determine if a project may have a significant effect on the environment [CEQA Guidelines §15063(a)]. If there is substantial evidence that a project may have a significant effect on the environment, an Environmental Impact Report (EIR) must be prepared, in accordance with CEQA Guidelines §15064(a). However, if the lead agency determines that revisions in the project plans or proposals made by or agreed to by the applicant mitigate the potentially significant effects to a less-than-significant level, an MND may be prepared instead of an EIR [CEQA Guidelines §15070(b)]. The lead agency prepares a written statement describing the reasons a proposed project would not have a significant effect on the environment and, therefore, why an EIR need not be prepared. This IS/MND conforms to the content requirements under CEQA Guidelines §15071.

The lead agency is the public agency with primary approval authority over the proposed project. In accordance with CEQA Guidelines §15051(b)(1), "the lead agency will normally be an agency with general governmental powers, such as a city or county, rather than an agency with a single or limited purpose." The lead agency for the proposed project is CDPR. The contact person for the lead agency is:

Heather M. Reith, Senior Environmental Scientist (*Supervisor*)
California State Parks
Central Valley District
22708 Broadway Street
Columbia, CA 95223
Office: (209) 536-2887
Fax: (209) 536-2978
Heather.Reith@parks.ca.gov

All inquiries regarding environmental compliance for this project, including comments on this environmental document should be addressed to:

Brad Michalk, Staff Park and Recreation Specialist
California Department of Parks & Recreation
1 Capitol Mall STE 410
Sacramento, CA 95814
Office: (916) 445-8783

Fax: (916) 445-9100

Brad.Michalk@parks.ca.gov

The purpose of this document is to evaluate the potential environmental effects of the proposed project on Great Valley Grasslands. Mitigation measures have also been incorporated into the project to eliminate any potentially significant impacts or reduce them to a less-than-significant level.

This document is organized as follows:

Introduction

Project Description

This chapter describes the purpose of the project, the need for the project, and how the project will be carried out.

Environmental Setting, Impacts, and Mitigation Measures

This chapter identifies the significance of potential environmental impacts, explains the environmental setting for each environmental resource or impact, and evaluates each through the CEQA Environmental (Initial Study) Checklist. Mitigation measures are incorporated, where appropriate, to reduce all potentially significant impacts to a less-than-significant level.

Mandatory Findings of Significance

The overall significance of any potential impacts to natural and cultural resources, cumulative impacts and impacts to humans shall be identified and summarized within this chapter as required by the Initial Study guidelines.

Summary of Mitigation Measures

This chapter includes the mitigation measures incorporated into the project as a result of the Initial Study.

References

This chapter identifies the references and sources used in the preparation of this IS/MND.

Report Preparation

This chapter provides a list of those involved in the preparation of this document.

Public and Agency Comment (* Final document only)

Summary of the public review process for the IS/MND and comments received.

Based on the IS and supporting environmental analysis provided in this document, the proposed project would result in less-than-significant impacts to the following resources or issues: biological resources, cultural resources, and hydrology and water quality.

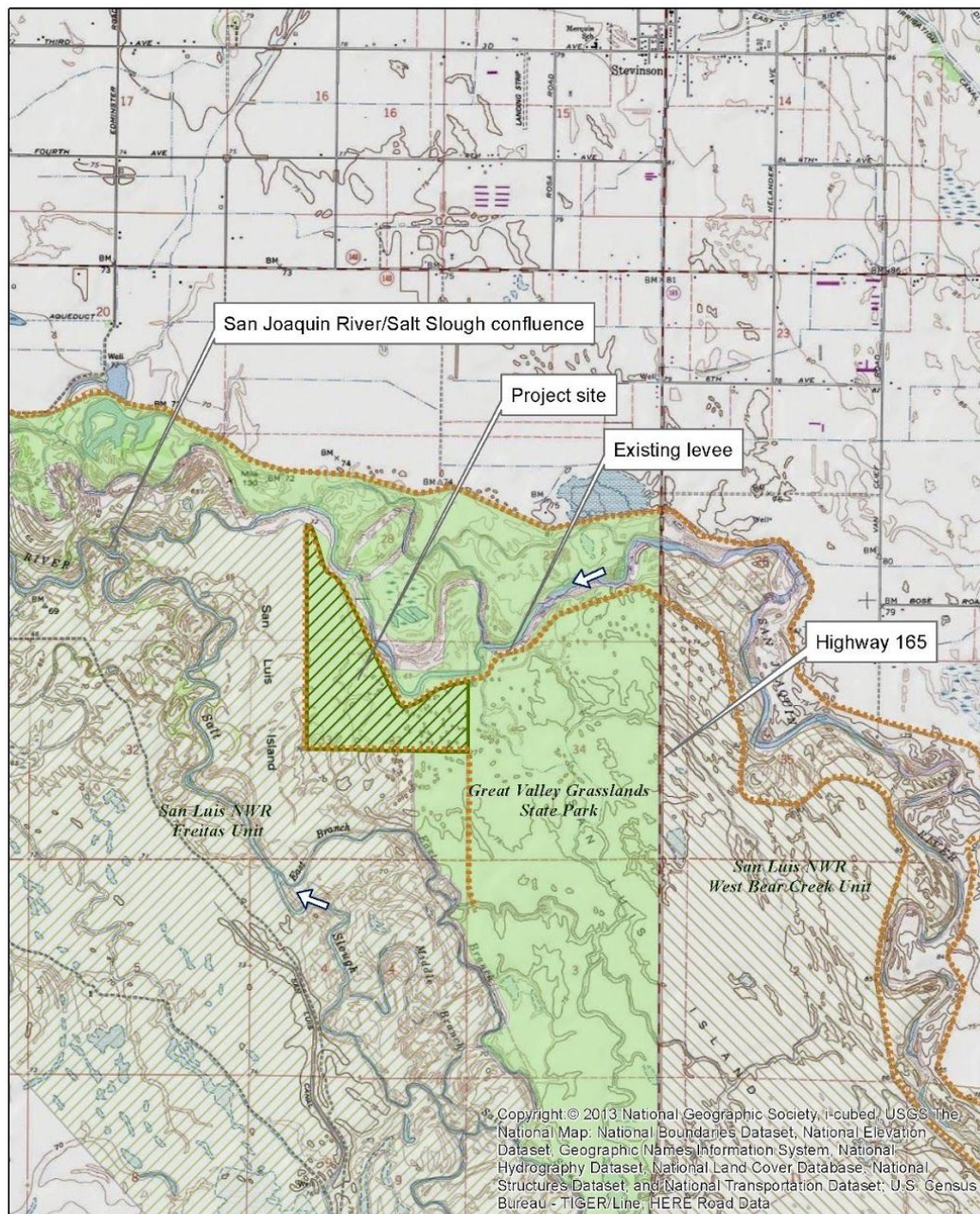
In accordance with §15064(f) of the CEQA Guidelines, an MND shall be prepared if the proposed project will not have a significant effect on the environment after the inclusion of mitigation measures. Based on the available project information and the environmental analysis presented in this document, there is no substantial evidence that, after the incorporation of mitigation measures, the proposed project would have a significant effect on the environment. It is proposed that a Mitigated Negative Declaration be adopted in accordance with CEQA Guidelines.

2. Project Description

This IS/MND has been prepared by CDPR to evaluate the potential environmental effects of the proposed project. The proposed project would restore floodplain habitat in Great Valley Grasslands by removing parts of an existing levee near the boundary of the Park. Reconnection of the floodplain would help restore natural processes in the park, including establishment of native vegetation.

Location

The project would connect areas of Great Valley Grassland State Park to the San Joaquin River floodplain. The Project site is located in Merced County at the confluence of the San Joaquin River and Salt Slough just west of Highway 165. The Project floodplain planned for inundation is on the left overbank of the San Joaquin River and the right overbank of Salt Slough just upstream of the confluence. Great Valley Grasslands is bounded by U.S. Fish & Wildlife Service (USFWS) San Luis National Wildlife Refuge (NWR) conservation lands. The West Bear Creek Unit of the San Luis NWR is upstream of the Project site, and the Freitas Unit of the San Luis NWR is downstream. This setting along existing conservation areas enhances the ecological potential for wildlife usage of the restored floodplain as part of a larger habitat corridor.



- Legend**
- Existing Levee
 - Project Site
 - Protected Lands**
 - San Luis NWR West Bear Creek Unit
 - Great Valley Grasslands State Park
 - San Luis NWR Freitas Unit

Great Valley Grasslands Floodplain Restoration Project Vicinity Map

1 0.5 0 1 Miles



Figure 1 Vicinity Map



Figure 2 Project Location

Background and Need for the Project

The levees along Great Valley Grasslands were built in the 1950s as part of the Lower San Joaquin Flood Control Project. The Lower San Joaquin Levee District is responsible for maintaining the levees. The Operations and Maintenance Manual for that project (Reclamation Board, 1967) shows the full Flood Control Project extents and maintenance requirements of the levees.

California State Parks established Great Valley Grasslands by acquiring approximately 2,000 acres from Joseph Gallo in 1981 in order to protect grassland and vernal pools (Solomeshch and Barbour, 2005). The Gallo property was included in the Lower San Joaquin Levee District protected property before it was transferred to state parks.

In 2010, the State Parks Central Valley District identified that the 220-acre historical floodplain site at Great Valley Grasslands could feasibly be reconnected to the river and restored by breaching the obsolete levee (NewFields, 2011). This reconnection would help maintain natural processes at the Park and help encourage natural vegetation. Reconnecting to the floodplain would advance the Park's mission of protecting native grassland and vernal pool communities by re-establishing natural hydrologic processes. The purpose of the Project is to abandon a

portion of the existing levee system adjacent to the San Joaquin River and Salt Slough, and restore portions of Great Valley Grasslands to a naturally functioning condition. This would occur by selectively breaching or removing portions of the levees, thereby restoring hydrologic connectivity between the river channels and the adjacent floodplain terraces.

Removal of Levees

Removal of Project Levees would allow for more frequent inundation of Great Valley Grasslands. Prior to removing the levees, detailed lidar data and associated flood modeling was evaluated to identify the most beneficial locations for breaching the levee. For the purposes of this environmental evaluation, it is assumed that more of the existing levees will be removed and moved on-site to higher elevation locations near existing levees than will likely occur. This approach allows for an overly conservative estimate of potential impacts and provides some flexibility in developing a final project.

The Project would include the following construction activities:

- Creating construction access and staging locations
- Removing levee materials from existing locations
- Placing removed levees in suitable locations on-site

The following construction methods are consistent with approaches applied at other, similar sites, and have been developed and approved by state and local resource agencies during project development. These methods are intended to avoid potential significant impacts associated with levee removal. Construction is anticipated in 2018 beginning in July and concluding by October. The construction window corresponds with seasonal low-flow periods that will avoid impacts to the riverine ecosystem. The majority of activities outlined below are expected to use standard construction techniques with excavators, bulldozers, scrapers, and standard hauling vehicles for delivery and removal levee material.

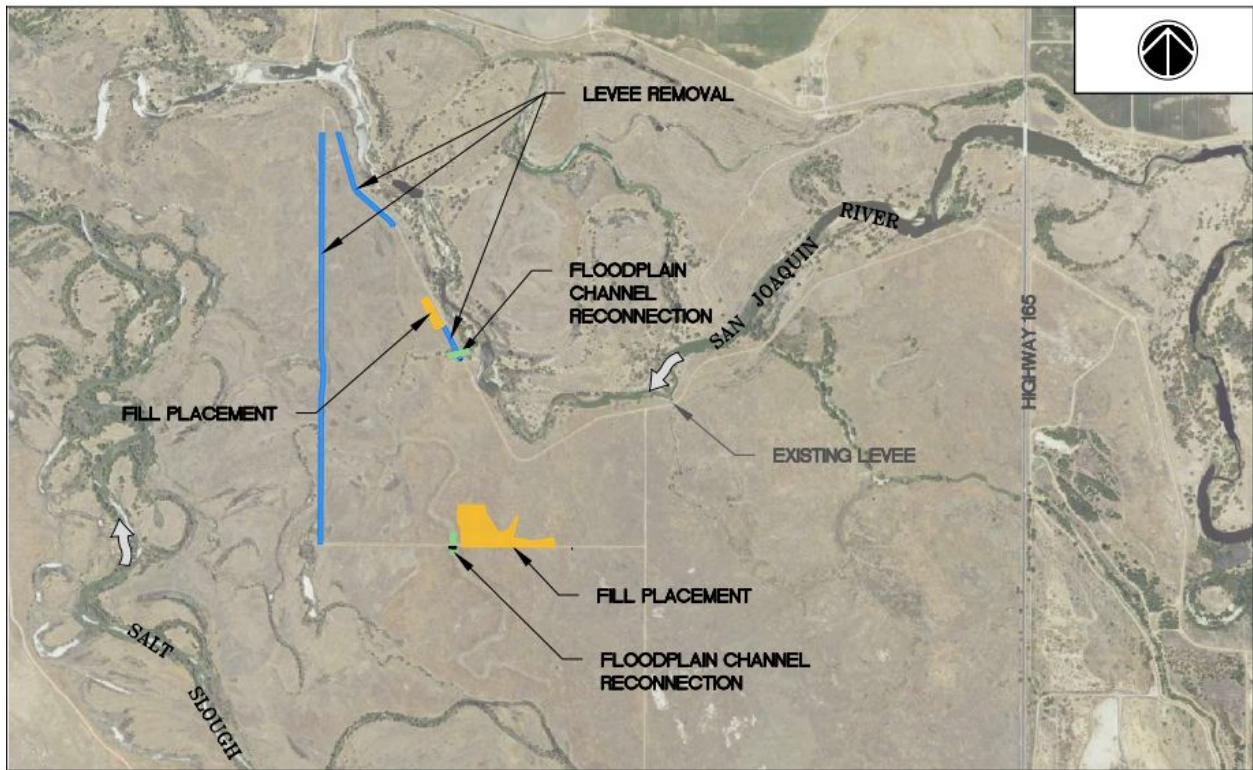


Figure 3 Proposed Project

Project Sequencing

Removal of portions of the levee would generally follow the sequencing outlined below. Final guidance for sequencing is currently being refined, and it is expected that contractors bidding on the removal work will propose some adjustments to the sequencing outline below. To ensure that the refinements would not cause unidentified impacts, sequencing evaluated here represents a maximum physical impact with respect to environmental conditions. Specific final levee removal actions will be coordinated with resource agencies and be monitored by qualified specialists as appropriate to minimize and avoid environmental impacts. The primary example of this is the choice of placement locations for removed materials and locations of staging areas and vehicle routes during removal.

1. **Develop Access and Staging Areas.** Currently, vehicles access the project area on top of the existing levee, which can only accommodate one vehicle at a time. This essentially limits traffic to one direction at a time, because there is not adequate room to pass another vehicle on the levee. Accordingly, several off-levee passing zones are being developed that would be established at areas with fill placement. Any additional passing zones that may be needed will be established with the approval of the CDPR.

2. **Remove Levees.** Figure 3 shows the sections of levee that would be removed (blue). Levee sections would be either scraped or excavated into dump trucks for placement on designated fill areas (yellow). Fill areas would be placed up to 8 feet above current ground surface and would include slopes of up to 1:3 at the edges.

3. **Revegetate Removal Areas and Fill.** Following levee removal, the sections of former levee would be revegetated with native species consistent with the surrounding areas.

4. **Monitor Post-Removal Conditions at the Site.** The site will be monitored and assessed after the removal is complete to identify self-sustaining populations of native vegetation.

3. Environmental Factors Potentially Affected

The environmental factors checked below would be potentially affected by this project. Please see the checklist beginning on page 5 for additional information.

<input type="checkbox"/>	Aesthetics	<input type="checkbox"/>	Agriculture and Forestry	<input checked="" type="checkbox"/>	Air Quality
<input checked="" type="checkbox"/>	Biological Resources	<input checked="" type="checkbox"/>	Cultural Resources	<input type="checkbox"/>	Geology/Soils
<input type="checkbox"/>	Greenhouse Gas Emissions	<input checked="" type="checkbox"/>	Hazards and Hazardous Materials	<input checked="" type="checkbox"/>	Hydrology/Water Quality
<input type="checkbox"/>	Land Use/Planning	<input type="checkbox"/>	Mineral Resources	<input type="checkbox"/>	Noise
<input type="checkbox"/>	Population/Housing	<input type="checkbox"/>	Public Services	<input type="checkbox"/>	Recreation
<input type="checkbox"/>	Transportation/Traffic	<input type="checkbox"/>	Utilities/Service Systems	<input type="checkbox"/>	Mandatory Findings of Significance

Determination of Documentation Required

On the basis of this initial evaluation:

<input type="checkbox"/>	I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.
<input checked="" type="checkbox"/>	I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.
<input type="checkbox"/>	I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

<input type="checkbox"/>	I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.
<input type="checkbox"/>	I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required

Signature: _____

Date: _____

Printed Name: _____

Evaluation of Environmental Impacts

1) A brief explanation is required for all answers except "No Impact" answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. A "No Impact" answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone). A "No Impact" answer should be explained where it is based on project-specific factors as well as general standards (e.g., the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).

2) All answers must take account of the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.

3) Once the lead agency has determined that a particular physical impact may occur, then the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. "Potentially Significant Impact" is appropriate if there is substantial evidence that an effect may be significant. If there are one or more "Potentially Significant Impact" entries when the determination is made, an EIR is required.

4) "Negative Declaration: Less Than Significant With Mitigation Incorporated" applies where the incorporation of mitigation measures has reduced an effect from "Potentially Significant

Impact” to a “Less Than Significant Impact.” The lead agency must describe the mitigation measures, and briefly explain how they reduce the effect to a less than significant level (mitigation measures from “Earlier Analyses,” as described in (5) below, may be cross-referenced).

5) Earlier analyses may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration. Section 15063(c)(3)(D). In this case, a brief discussion should identify the following:

- a. **Earlier Analysis Used.** Identify and state where they are available for review.
- b. **Impacts Adequately Addressed.** Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.
- c. **Mitigation Measures.** For effects that are “Less than Significant with Mitigation Measures Incorporated,” describe the mitigation measure which were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.

6) Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.

7) Supporting Information Sources: A source list should be attached, and other sources used or individuals contacted should be cited in the discussion.

8) The explanation of each issue should identify:

- a. the significance criteria or threshold, if any, used to evaluate each question; and
- b. the mitigation measure identified, if any, to reduce the impact to less and significance

The proposed project is the removal of portion of the levees surrounding Great Valley Grasslands State Park. The project would reconnect the park with a more naturally occurring inundation of floodplain, which would promote native ecosystems and functions.

4. Environmental Checklist

a. Aesthetics

Environmental Setting

Rural and agricultural landscapes provide the primary scenic resources in Merced County along with scenic vistas, such as the Sierra Nevada, Coast Range, Los Banos Creek, Bear Creek, Merced River, and San Joaquin River. On clear days, distant views of the Sierra Nevada can be seen from the project site to the east. Managed open space such as refuges and state parkland along with agricultural uses dominate the visual character of the project site and vicinity.

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
I. AESTHETICS: Would the project:				
a) Have a substantial adverse effect on a scenic vista	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

The project would not negatively impact aesthetics on the site. Over time, as the site evolves into a more natural state it is possible that aesthetics at the site will improve.

Discussion

- a) The site is not an element of a scenic vista.
- b) The project would not damage scenic resources.

- c) The project would not degrade visual character or quality.
- d) The project would not increase light or glare.

b. Agricultural Resources

Environmental Setting

The site is designated as Non-agricultural and Natural Vegetation, by the 2030 Merced County General Plan Recirculated Draft Program Environmental Impact Report (Merced County 2013, Figure 6-2). This designation includes heavily wooded, rocky, or barren areas, riparian and wetland areas, grassland areas that do not qualify for Grazing Land due to their size or land management restrictions, small water bodies, and recreational water ski lakes. Constructed wetlands are also included in this category.

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
II. AGRICULTURE AND FOREST RESOURCES: In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment Project; and the forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. Would the project:				
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Result in the loss of forest land or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

The project would not impact agricultural resources.

Discussion

- a) The project would not convert farmland.
- b) The project would not conflict with agricultural zoning.
- c) The project would not conflict with zoning of forest land.
- d) The project would not result in the loss of forest land.
- e) The project would not convert current farmland or managed forest to other uses.

c. Air Quality

Environmental Setting

The project area is within the San Joaquin Valley Air Basin (SJVAB), and includes San Joaquin County, Stanislaus County, Madera County, Fresno County, Kings County, Tulare County, and a portion of Kern County. Merced County is in the north-central portion of the SJVAB. The SJVAB is bordered on three sides by mountains: the Sierra Nevada to the east, the Coast Ranges to the west, and the Tehachapi mountains to the south. The SJVAB is open to the north to the Sacramento Valley. The San Joaquin Valley is approximately 250 miles long and averages approximately 35 miles in width. The mountains surrounding the SJVAB restrict air

movement through and out of the basin, and as a result, impede the dispersion of pollutants from the basin.

State and federal ambient air quality standards have been set for several pollutants. The SJVAB is a “severe” nonattainment area for the state one-hour ozone standard, “extreme” nonattainment for the federal eight-hour ozone standard, nonattainment for federal and state PM2.5 standards, attainment (maintenance) for the federal PM10 standard, and nonattainment for the state PM10 standard. The Air Basin has an attainment or unclassified status for the applicable federal and state standards for carbon monoxide, nitrogen dioxide, lead, sulfur dioxide, sulfates, and hydrogen sulfide.

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
III. AIR QUALITY: Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:				
a) Conflict with or obstruct implementation of the applicable air quality plan?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non- attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Expose sensitive receptors to substantial pollutant concentrations?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Create objectionable odors affecting a substantial number of people?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Implementation of the project would require use of standard construction equipment, including excavators, bulldozers, scrapers, and standard hauling vehicles for delivery and removal of levee material. Operation of this equipment would generate air quality impacts from both the use of internal combustion engines (and subsequent generation of emission exhaust) and the

mobilization of particles from driving on unpaved roads and movement of material on the site. Mitigation measures and Best Management Practices have been developed by the SJVAB to offset impacts from projects in the Basin that can comply with certain standards. These mitigation measures apply to the proposed project, and are described in the Avoidance, Minimization, Mitigation Measures section of this MND.

Discussion

- a) The project has the potential to conflict with implementation of elements of the San Joaquin Valley Air Pollution Control District. Of particular concerns are dust or vehicle emissions.
- b) The project has the potential to violate air quality standards during construction through contribution to an existing air quality violation, but will reduce the impacts through the implementation of mitigation and BMPs as outlined by the SJVAB.
- c) The use of construction equipment on site will not be cumulatively considerable because the removal of levees will be a short-duration effort.
- d) There are no sensitive receptors in the project vicinity.
- e) The project will not create objectionable odors.

d. Biological Resources

Environmental Setting

Great Valley Grasslands State Park is an important habitat for numerous special status species occurring in the San Joaquin Valley, and is well known as high quality migratory bird habitat. The park is an important example of remaining native grasslands of the Central Valley, and is part of the Grasslands Ecological Area, which are managed federal, state and private lands. San Luis National Wildlife Refuge Complex is adjacent to the Great Valley Grassland State Park.

Numerous surveys for sensitive flora and fauna have been completed by federal, state, university, and consulting biologists over the history of the park.

A list of federal and state endangered and threatened species that may be affected by the Project within the Stevinson U.S. Geological Survey (USGS) 7.5-minute topographic quadrangle (quad) and eight adjacent quads was obtained from the USFWS website in November 2016 (USFWS 2016). The California Native Plant Society (CNPS) electronic inventory online was queried for Stevinson quad, as well as for all adjacent quads (CNPS 2016). The CDFW California Natural Diversity Database (CNDDB) (CDFW 2016) was queried for all special-status species records within a 5-mile buffer of the Project.

Literature reviews were conducted regarding potential occurrence of sensitive species and habitat within the project area and Great Valley Grasslands State Park. Documents reviewed included the Special Status Species in San Joaquin Valley State Parks, California Report (Engilis et al. 2007), which presented survey results from 2006 and 2007. The above report also

summarized small mammal trapping, avian use, and reptile and amphibian observation results from extensive survey efforts in 2000 (CH2M Hill 2000) and 1996 (Hoopes et al. 1996), among others.

Based on previous surveys and literature reviews, it was determined that several species of invertebrates, amphibians, reptiles, fish, birds, mammals, and rare plants have been known to or could occur in the vicinity of the Project site. Burrowing owl may forage in the area, but there were no reports of burrowing owls nesting in the park area (Engilis et al. 2007). Swainson's hawk nests have been observed throughout the area. A total of 117 species of birds were observed during 2006 and 2007 surveys (Engilis et al. 2007). Several shrimp species and CTS are known to occur within vernal pool habitat areas. Based on recent surveys, San Joaquin kit fox was historically observed within the park, but has not been observed in the last decade. Badgers have been historically known throughout the area, but have not recently been observed.

The following table lists the CNDDDB records that were located within the Project boundaries, and potential impacts to the species.

Table 1. CNDDDB Animal Species Records within the Project Area

Species Name	Common Name	Federal Status	State Status
Invertebrates			
<i>Branchinecta conservatio</i>	Conservancy fairy shrimp	FE	None
<i>Branchinecta longiantenna</i>	longhorn fairy shrimp	FE	None
<i>Lepidurus packardii</i>	vernal pool tadpole shrimp	FE	None
<i>Lindieriella occidentalis</i>	California linderiella or California fairy shrimp	None	None
Fish			
<i>Oncorhynchus mykiss irideus</i>	steelhead - Central Valley DPS	FT	None
Amphibians/Reptiles			
<i>Ambystoma californiense</i>	California tiger salamander	FT	ST
<i>Spea hammondi</i>	western spadefoot	None	None
Birds			
<i>Agelaius tricolor</i>	tricolored blackbird	None	None
Mammals			
<i>Taxidea taxus</i>	American badger	None	SSC
<i>Vulpes macrotis mutica</i>	San Joaquin kit fox	FE	ST
FE = Federally Endangered FT = Federally Threatened ST = State Threatened SCC = State Species of Special Concern			

The following table lists the sensitive plant CNDDDB records that were located within the Project boundaries, and potential impacts to the species.

Table 2. CNDDDB Plant Species Records within the Project Area

Species Name	Common Name	Federal Status	State Status
<i>Atriplex cordulata</i> Jeps. var. <i>cordulata</i>	heartscale	None	None
<i>Atriplex persistens</i>	vernal pool smallscale	None	None
<i>Eryngium racemosum</i>	Delta button celery	None	SE
<i>Navarretia prostrata</i>	prostrate vernal pool navarretia	None	None
SE = State Endangered			

The following table presents other selected species of concern potentially or known to occur within the Project Area. These species were selected based on recent survey data including those that occurred in 2006 and 2007.

Table 3. Other Selected Species of Concern Potentially or Known to Occur Within Project Area

Species Name	Common Name	Federal Status	State Status
<i>Athene cunicularia</i>	burrowing owl	None	SSC
<i>Branchinecta lynchi</i>	vernal pool fairy shrimp	FT	None
<i>Buteo swainsoni</i>	Swainson's hawk	None	SSC
<i>Emys marmorata</i>	western pond turtle	None	SSC
<i>Sylvilagus bachmani riparius</i>	riparian brush rabbit	None	None
<i>Thamnophis gigas</i>	giant garter snake	FT	ST
SSC = State Species of Special Concern FT = Federally Threatened ST = State Threatened			

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
IV. BIOLOGICAL RESOURCES: Would the project:				
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?				
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or US Fish and Wildlife Service?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

The project has been designed specifically to avoid impacts to biological resources. Detailed site surveys have been conducted to identify locations of sensitive species and inform selection of levee cut and fill locations. Additionally, levee removal is scheduled to occur during low-probability occurrence of sensitive species. The project will provide critical linkages to nearby wildlife refuges and will improve the regional corridors for wildlife along the San Joaquin River.

Discussion

- a) The project would not affect candidate, sensitive, or special status species because the designs for the project have specifically taken occurrence of such species into account during design.

- b) The project has the potential to have a short-term impact on riparian habitat during removal of levee segments, but following completion, the project will have a beneficial effect on riparian habitat.
- c) The project has the potential to have a short-term impact on wetlands during removal of levee segments, but following completion, the project will have a beneficial effect, with a net increase in wetlands on site.
- d) The project will improve habitat for native species, including migration opportunities for native species.
- e) The project is consistent with local plans regarding management of biological resources.
- f) The project will not conflict with provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

e. Tribal and Cultural Resources

Environmental Setting

Merced County occupies an archaeologically and historically rich part of the San Joaquin Valley. Only a small fraction of the county has been surveyed for archaeological or historic cultural resources. The Great Valley Grassland State park is a notable exception, having been surveyed extensively and has been recommended to be listed in the National and California Register.

Original occupation of the San Joaquin Valley occurred over 11,000 years ago. At the time of European contact, the area was occupied by the Northern Valley Yokuts. Early aboriginal settlements were built on the tops of low mounds on or near the banks of larger watercourses. Spanish missionary expeditions explored the area in the early 1800s, but no settlements were founded. The American period began when the Treaty of Guadalupe Hidalgo was signed between Mexico and the United States in 1848. As a result of the treaty, Alta California became part of the United States as the territory of California. Rapid population increase occasioned by the Gold Rush of 1849 allowed California to become a state in 1850. Most Mexican land grants were confirmed to the grantees by US courts, but usually with more restricted boundaries, which were surveyed by the US Surveyor General's office. When California was divided into 27 counties in 1850, the region fell under Mariposa County, which was then further divided in 1855 into ten other counties, including Merced County. The construction of the Central Pacific Railroad (the name was changed to Southern Pacific Railroad in 1885) through the San Joaquin Valley in 1872 led to the growth of the town of Merced, which, due to its location on the railroad route, allowed it to supersede the town of Snelling as the county seat in 1872. The project site is located adjacent to low bluffs along the San Joaquin River.

A cultural resources survey report will be completed by CDPR prior to project implementation. Prior investigations included a pedestrian survey, a records search at the Central California Information Center at California State University, Stanislaus, consultation with the Native

American community, and a Native American Heritage Commission (NAHC) sacred lands file search.

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
V. TRIBAL AND CULTURAL RESOURCES: Would the project:				
a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Disturb any human remains, including those interred outside of formal cemeteries?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

The project has been designed specifically to avoid impacts to cultural resources. Because none of the levee removals will occur on previously identified sensitive sites and because none of the fill will be placed on sensitive locations, there will not be impacts to known cultural resources. However, the project would include digging and relocation of soil with indeterminate materials, which could include historical, cultural, paleontological, or human remains -- although the likelihood of such an occurrence is considered very low.

Discussion

- a) The project would not likely cause a change in the significance of a historical resource, but if such a resource were encountered during implementation, mitigation would reduce impacts to a less-than-significant level.
- b) The project would not likely cause a change in the significance of an archaeological resource, but if such a resource were encountered during implementation, mitigation would reduce impacts to a less-than-significant level.
- c) The project would not likely affect paleontological resources or unique geologic features, but if such a resource were encountered during implementation, mitigation would reduce impacts to a less-than-significant level.

- d) The project has the potential to disturb currently unidentified human remains, but if such a resource were encountered during implementation, mitigation would reduce impacts to a less-than-significant level.

f. Geology and Soils

Environmental Setting

The California State Mining and Geology Board defines an “active fault” as one that has had subsurface displacement within the past 11,000 years (Holocene). “Potentially active faults” are defined as those that have ruptured between 11,000 and 1.6 million years before the present (Quaternary). Faults are generally considered inactive if there is no evidence of displacement during the Quaternary period. No known active or potentially active faults are shown on currently available geologic maps as being located within or adjacent to the project site.

The project site is not located within a designated Alquist-Priolo Earthquake Fault Zone identified by the California Geological Survey. There is only one active fault identified in the county by the Alquist-Priolo Earthquake Fault Zoning Act: the Ortigalita Fault, which is located in the western quarter of the county in the Coast Range. The Ortigalita Fault has not been active within historic times (1,800 years ago to present). However, surface rupture occurred within the Holocene period (11,000 years before present).

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
VI. GEOLOGY AND SOILS: Would the project:				
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
ii) Strong seismic ground shaking?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
iii) Seismic-related ground failure, including liquefaction?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

iv) Landslides?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Result in substantial soil erosion or the loss of topsoil?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of waste water?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

The project does not include the construction of buildings or facilities that would affect geologic resources or soils.

Discussion

- a) The project would not put people or structures at risk from any of the following:
 - i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault. Refer to Division of Mines and Geology Special Publication 42.
 - ii) Strong seismic ground shaking.
 - iii) Seismic-related ground failure, including liquefaction.
 - iv) Landslides.
- b) The project would not result in the loss of topsoil, although some natural erosion and deposition could occur following reconnection with the floodplain..
- c) The project does not include structures that could become unstable.
- d) The project does not include structures as defined in the Universal Building Code.
- e) The project does not include septic tanks or alternative wastewater disposal systems or the disposal of waste water.

g. Greenhouse Gas Emissions

Environmental Setting

Human activities, predominantly the burning of fossil fuels, are increasing greenhouse gas (GHG) emissions and contributing to global climate change. Assembly Bill (AB) 32 requires local governments to inventory greenhouse gas emissions and establish reduction targets.

The impact that GHG emissions have on global climate change does not depend on whether the emissions were generated by stationary, mobile, or area sources, or whether they were generated in one region or another. Thus, consistency with the state's requirements for GHG emissions reductions is the best metric for determining whether the proposed project would contribute to global warming. In the case of the proposed project, if the project substantially impairs the state's ability to conform to the mandate to reduce GHG emissions to 1990 levels by the year 2020, the impact of the project would be considered significant.

The San Joaquin Valley Air Pollution Control District provides guidance for addressing greenhouse gas emissions under CEQA. The SJVAPCD guidance for evaluating greenhouse gas significance states that projects implementing best performance standards, reducing project specific GHG emissions by at least 29 percent compared to "business as usual" and consistent with GHG emissions reduction targets established in the AB 32 Scoping Plan would be determined to have a less than significant individual and cumulative impact on global climate change. Business as usual is defined as unmitigated emissions (the California Air Resources Board Scoping Plan identifies the local equivalent of AB 32 targets as a 15 percent reduction below baseline GHG emissions level, with baseline interpreted as GHG emissions levels between 2003 and 2008).

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
VII. GREENHOUSE GAS EMISSIONS: Would the project:				
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

The project includes the use of construction equipment that would contribute greenhouse gases during implementation. However, implementation of the project would not include additional greenhouse emissions.

Discussion

- a) The project would produce minor emissions during implementation, but would be subject to air quality permitting by the SJVAPCD, and the long-term existence of the project would be environmentally beneficial.
- b) The project would be consistent with existing plans, policies and regulations for greenhouse gases.

h. Hazardous Materials

Environmental Setting

A material is considered hazardous if it appears on a list of hazardous materials prepared by a federal, state, or local agency or if it has characteristics defined as hazardous by such an agency. A hazardous material is defined in Title 22 of the California Code of Regulations (CCR), Title 22, Section 662601.10, as follows:

A substance or combination of substances which, because of its quantity, concentration, or physical, chemical or infectious characteristics, may either (1) cause, or significantly contribute to, an increase in mortality or an increase in serious irreversible, or incapacitating reversible, illness; or (2) pose a substantial present or potential hazard to human health or environment when improperly treated, stored, transported or disposed of or otherwise managed.

Most hazardous material regulation and enforcement in Merced County is managed by the Merced County Environmental Health Department, which refers large cases of hazardous materials contamination or violations to the Central Valley Regional Water Quality Control Board (RWQCB) and the California Department of Toxic Substances Control (DTSC). When issues of hazardous materials arise, it is not at all uncommon for other agencies to become involved, such as the San Joaquin Valley Air Pollution Control District and both the federal and state OSHA.

Under Government Code Section 65962.5, both the DTSC and the State Water Resources Control Board (SWRCB) are required to maintain lists of sites known to have hazardous substances present in the environment. Both agencies maintain up-to-date lists on their websites.

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
VIII. HAZARDS AND HAZARDOUS MATERIALS: Would the project:				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

The project includes the use of construction equipment that will require use of materials that are designated as hazardous to human health or the environment if they were improperly handled. Incorporation of standard Best Management Practices will be required as mitigation to minimize the potential for accidental release or spill of any hazardous materials during project implementation.

Discussion

- a) Implementation of the project will include use of hazardous materials as is typical for construction projects of this size. Any potential release of hazardous materials would be mitigated to a less than significant level through the implementation of standard mitigation measures to help prevent and contain any potential releases of hazardous materials.
- b) Potential public hazards will be minimized through the implementation of standard BMPs and mitigation measures typical for a construction effort of this magnitude.
- c) The project is not located near a school.
- d) The project is not located on an existing hazardous materials site.
- e) The project would not affect any airports.
- f) The project is not located near a private airstrip.
- g) The project would not affect an emergency response plan.
- h) The project does not affect residences near wildlands.

i. Hydrology and Water Quality

Environmental Setting

The project site is located in the eastern portion of the San Joaquin Valley portion of the Central Valley and has a Mediterranean climate, which is characterized by hot, dry summer months and cold, wet winter months. The annual precipitation in Merced is 12.4 inches (with the wettest period during November–March) and average daily temperatures ranging from 61 degrees Fahrenheit in December to 87 degrees Fahrenheit in July (NOAA 2002).

The local topography is the interface between the flat Central Valley floor and the gently rolling to hilly terrain of the Sierra Nevada foothills immediately to the east. The project site has a flat aspect and has an elevational range from 60 to 85 feet above mean sea level (MSL).

The project area is immediately adjacent to the San Joaquin River on the north side of the project and Salt Slough to the west. Existing levees surrounding the project site are maintained by the Lower San Joaquin Levee District. The levees along Great Valley Grasslands were built

in the 1950s as part of the Lower San Joaquin Flood Control Project, and do not currently protect any structures on the park.

Stormwater currently drains off the site through a series of culverts that are capped by flap gates to move water off the site during high flow events, but keep water from flowing backwards onto the site.

The project area is located within the Merced groundwater subbasin of the San Joaquin Valley groundwater basin as described by California Department of Water Resources Bulletin 118 (DWR 2003). The groundwater depth around the project site was about 60 feet during the spring of 2000 (DWR 2000). The information available at the project site is not as defined in the 2010 report; however, groundwater depth was estimated to be between 50 and 70 feet during the spring of 2010 (DWR 2010).

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
IX. HYDROLOGY AND WATER QUALITY: Would the project:				
a) Violate any water quality standards or waste discharge requirements?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Otherwise substantially degrade water quality?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
j) Inundation by seiche, tsunami, or mudflow	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

The primary purpose of the project is to alter flow patterns in the immediate vicinity to allow for flows through Great Valley Grasslands. In order to accomplish this, construction equipment will be used to remove sections of levee and place fill at selected locations within Great Valley Grasslands. Actively removing portions of the levee has the potential to affect waterways and wetlands both within and adjacent to Great Valley Grasslands. Long-term, removal of levee segments will cause adjacent portions of the levee to be removed from normal maintenance schedules. Most of the potential impacts have been avoided through design and coordination with vegetative surveys. However additional mitigation measures are also provided to assure that potential impacts are reduced to a less than significant level.

Discussion

- a) The use of equipment to move levee materials near wetlands and streams has the potential to result in significant impacts. Implementation of standard mitigation measures for similar types of construction efforts will reduce this potential impact to a less than significant level.
- b) The project would not affect groundwater in the area.

- c) The purpose of the project is to alter flow patterns in the project vicinity to achieve beneficial ecological results. Modeling has indicated that erosion would be minor, and would be balanced by deposition on-site.
- d) The project includes removal of levees that were designed to provide flood protection at Great Valley Grasslands. Removal of these levees will cause floodplain inundation on site. Removal of levees segments will also change the status of adjacent levees in the project area. Coordination with the Lower San Joaquin Levee District will be required to assure that flood protection continues for lands requiring flood protection.
- e) The project would not contribute runoff water.
- f) The project will include mitigation measures to protect water quality during implementation.
- g) The project would not place housing within a 100-year flood hazard area.
- h) The project would not place structures within a 100-year flood hazard area, but it would reduce flood flows in the immediate area by allowing high flows to access floodplain within Great Valley Grasslands.
- i) The project would not expose people or structures to a significant risk as the result of dam or levee failure. Levee removal has been designed to avoid such risk.
- j) The project would not affect inundation by seiche, tsunami, or mudflow

j. Land Use and Planning

Environmental Setting

The basis for land use planning in the county is the recently adopted Merced County 2030 General Plan. The 2030 General Plan Land Use Element provides the primary guidance on issues related to land use and land use intensity. The Land Use Element provides designations for land in the county and outlines goals and policies concerning development and use of that land. In concert with the General Plan, the Merced County Code establishes zoning districts in the county and specifies allowable uses and development standards for each district. Under state law, each jurisdiction's zoning ordinance must be consistent with its general plan. The project area generally is designated Agricultural.

The site is designated as Non-agricultural and Natural Vegetation, by the 2030 Merced County General Plan Recirculated Draft Program Environmental Impact Report (Merced County 2013, Figure 6-2). This designation includes heavily wooded, rocky, or barren areas, riparian and wetland areas, grassland areas that do not qualify for Grazing Land due to their size or land management restrictions, small water bodies, and recreational water ski lakes. Constructed wetlands are also included in this category.

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
X. LAND USE AND PLANNING: Would the project:				
a) Physically divide an established community?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

The project would improve the function of a designated park within Merced County by improving its ecological condition.

Discussion

- a) The project would not physically divide an established community.
- b) The project is consistent with land use plans, policy and regulation of applicable land management agencies.
- c) The project would improve the management plan for Great Valley Grasslands.

k. Mineral Resources

Environmental Setting

The State Mining and Geology Board (SMGB) has the responsibility to inventory and classify mineral resources and could, if appropriate, designate such mineral resources as having a statewide or regional significance. If such a designation occurs, the local agency (i.e., city or county) must adopt a management plan for such identified resources. Neither the SMGB nor the Merced County General Plan identify mineral resources within or adjacent to the project site. Further, there are no commercial mining activities in or immediately near the project area.

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
XI. MINERAL RESOURCES: Would the project:				
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

The project would not affect mineral resources.

Discussion

- a) The project would not result in the loss of availability of a known mineral resource.
- b) The project would not result in the loss of availability of a locally-important mineral resource recovery site.

I. Noise

Environmental Setting

There are no significant noise sources existing on the project site itself, as it is undeveloped. There are no noise-sensitive receptors in the vicinity of the project site. The noise environment in the vicinity of the project site is primarily influenced by minor roadway traffic on State Route 165 and agricultural operations.

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
XII. NOISE: Would the project result in:				
a) Exposure of persons to or generation of noise levels in excess of standards established in the	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

local general plan or noise ordinance, or applicable standards of other agencies?				
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Although construction equipment used to implement the project will generate noise, there are no nearby receptors to expose to the noise or other construction activities, and the implementation effort will be temporary.

Discussion

- a) The project would not expose people to noise levels in excess of standards in the local noise ordinance.
- b) The project would not expose persons to excessive ground borne vibration or noise.
- c) The project would not result in a substantial permanent increase in ambient noise levels in the project vicinity.
- d) The project would increase noise levels during construction, but there are no sensitive receptors in the vicinity.
- e) The project is not located near an airport.
- f) The project is not located near a private airstrip.

m. Population and Housing

Environmental Setting

According to the US Census Bureau (2012), the population for Merced County was 255,793 at the time of the 2010 Census, with an average household size of 3.32 persons per household. Between 2000 and 2010, the county's population increased by 45,239 persons or approximately 21.5 percent.

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
XIII. POPULATION AND HOUSING: Would the project:				
a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

The project would not affect population or housing in the region.

Discussion

- a) The project would not induce substantial population growth in the area, either directly or indirectly.
- b) The project would not displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere.
- c) The project would not displace substantial numbers of people.

n. Public Services

Environmental Setting

Police protection services in the unincorporated areas of Merced County are provided by the Merced County Sheriff's Department. The nearest sheriff's office is located in the community of Planada at 9215 Central Yosemite Highway (CA 140), about 13 miles from the project site.

Fire protection services in the unincorporated areas of Merced County are provided by the Merced County Fire Department in cooperation with the California Department of Forestry and Fire Protection (Cal Fire). The nearest fire station to the project site is located approximately three-quarters of a mile away at 9234 Broadway Avenue in Planada.

The Planada Elementary School District serves the project site for elementary school-aged children in kindergarten through fifth grade (K–5) and middle school-aged children in sixth through eighth grade (6–8). The Le Grand Union High School District serves high school-aged students in the area.

Recreational opportunities for both youth and adults are varied in Merced County. A well-rounded variety of programs and activities is available to county residents at public parks and recreational facilities throughout the county.

Other public facilities found in the county include Merced County Administration, Courts, Public Health, and Library systems; County Fairgrounds; Merced College; UC Merced; California Highway Patrol; Cal Fire; and a variety of other state and federal offices.

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
XIV. PUBLIC SERVICES				
a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:				
Fire protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Police protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Schools?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Parks?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Other public facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

The project would not affect public services in the project area.

Discussion

- a) The project would not result in a change in the ability or need for any of the following public services:
 - i) The project would not affect fire protection.
 - ii) The project would not affect police protection.
 - iii) The project would not affect schools
 - iv) The project temporarily restrict access to the Great Valley Grasslands, but would enhance the park experience following construction.
 - v) The project would not affect other public facilities.

o. Recreation

Environmental Setting

Merced County offers thousands of acres of federal, state, county, city, and private recreation facilities providing opportunities for a range of outdoor activities. Recreational facilities provide direct and indirect benefits to local residents. Great Valley Grasslands is an example of open space that allows opportunities for hiking, fishing, wildlife viewing, and more.

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
XV. RECREATION:				
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

The project would improve recreational opportunities in the project area.

Discussion

- a) The project would improve the function of an existing park.
- b) The project would not expand an existing facility, but would improve the natural function of the park.

p. Transportation / Traffic

Environmental Setting

State Route 165 is a two-lane north–south rural highway providing regional access to the project site. The project site is located adjacent to west of State Route 165, just south of the bridge over

the San Joaquin River. According to the Merced County General Plan Revised Draft Background Report (2012), SR 165 between Henry Miller Avenue and SR 140 had an average daily traffic (ADT) count of 4,800 in 2005, resulting in level of service (LOS) B. The LOS threshold for a major collector roadway is C or 17,400 ADT.

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
XVI. TRANSPORTATION/TRAFFIC: Would the project:				
a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Result in inadequate emergency access?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Conflict with adopted policies, plans or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

The project would not impact traffic in the project vicinity.

Discussion

- a) The relatively small number of construction vehicles would not affect traffic on SR 165.
- b) The project would not conflict with a congestion management program.
- c) The project would not affect air traffic.
- d) The project would not affect road safety.
- e) The project would not affect emergency access
- f) The project would not affect adopted policies, plans or programs regarding public transit, bicycle, or pedestrian facilities.

q. Utilities and Service Systems

Environmental Setting

No existing water, wastewater, or storm drainage facilities service the project site. During levee removal, water would be trucked in and portable toilets utilized.

Merced County does not provide solid waste pickup and disposal. No transfer stations exist in the county, so most waste is collected through drop boxes and curbside collection provided by private enterprise. During 2012, 201,860 tons of solid waste was disposed of by residents and businesses in the county. The majority of the solid waste was taken to either the Billy Wright Disposal Site (20 percent) or the Highway 59 Disposal Site (74 percent) (CalRecycle 2013). The project would not generate solid waste aside from small amounts of personal waste generated by construction workers during dam removal.

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
XVII. UTILITIES AND SERVICE SYSTEMS: Would the project				

a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g) Comply with federal, state, and local statutes and regulations related to solid waste?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

The project would not impact utilities in the project vicinity.

Discussion

- a) The project would not produce wastewater.
- b) The project would not affect wastewater treatment capacity.
- c) The project would not require new stormwater facilities.
- d) The project would not require water supply.

- e) The project will not require a determination from a water service provider.
- f) The project will not require landfill services.
- g) The project will not generate solid waste.

r. Mandatory Findings of Significance

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
XVIII. MANDATORY FINDINGS OF SIGNIFICANCE				
a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Discussion

Following completion, the project would have a beneficial impact on the environment, as it would reconnect isolated grasslands to the San Joaquin River, and would promote native ecological processes.

- a) The project would result in a beneficial effect on the quality of the environment, would increase habitat of a fish and wildlife species, likely helping recover special status

species. Temporary impacts during construction have been mitigated to a less than significant level.

- b) Impacts from the project are not cumulatively considerable.
- c) The project would not cause adverse effects on human beings, although some potential impacts during construction have been reduced to a less than significant level through the implementation of mitigation measures.

5. Avoidance, Minimization, Mitigation Measures

Air Quality Mitigation

Potential impacts to air quality would be reduced to a less-than significant level following implementation of the following actions.

Reporting:

1. All records shall be maintained on-site during construction and for a period of 10 years following the end of construction. Records shall identify the number and type of vehicles visiting the site, distance for travel to the site for each vehicle, the amount of hours each vehicle was operating (engine running) on the site (i.e. water truck), and what was done during the visit in order to determine the air emissions produced during the site visit. Records shall be made available for SJVAPCD inspection on request.
2. Maintain records of (1) the construction start and end dates and (2) the date of issuance of the first certificate of occupancy, if applicable. Otherwise, submit to the SJVAPCD a summary report of the construction start and end dates within 30 days of the end of each phase of construction.

Timing/Implementation: During construction

Enforcement/Monitoring: SJVAPCD; CDPR

Dust Control

Prior to issuance of a permit, the project applicant shall demonstrate compliance with SJVAPCD Regulation VIII for the control of fugitive dust emissions by preparing and submitting a Dust Control Plan for review and approval by the SJVAPCD prior to the start of construction.

Written notification to the air pollution control officer shall also be provided within 10 days prior to the commencement of earth-moving activities. The Dust Control Plan shall describe all

fugitive dust control measures to be implemented before, during, and after any dust-generating activity. The Dust Control Plan shall be endorsed by the SJVAPCD and copies provided to the County of Merced prior to commencing construction.

Current SJVAPCD-recommended dust control measures applicable to the proposed project include (but are not necessarily limited to) the following:

1. All disturbed areas that are not being actively utilized for construction purposes shall be effectively stabilized of dust emissions using water or vegetative ground cover.
2. All on-site unpaved construction roads shall be effectively stabilized of dust emissions using water.
3. All land clearing, grubbing, and scraping activities shall be effectively controlled of fugitive dust emissions utilizing application of water or by presoaking.
4. If materials are transported off-site, all material shall be covered and effectively wetted to limit visible dust emissions, or at least 6 inches of freeboard space from the top of the container shall be maintained.
5. All operations shall limit or expeditiously remove the accumulation of mud or dirt from adjacent public streets at least once every 24 hours when operations are occurring. (The use of dry rotary brushes is expressly prohibited except where preceded or accompanied by sufficient wetting to limit the visible dust emissions. Use of blower devices is expressly forbidden.)
6. Following the addition of materials to, or the removal of materials from, the surfaces of outdoor storage piles, piles shall be effectively stabilized of fugitive dust emissions utilizing sufficient water.
7. All equipment used on-site, such as the water truck, employee vehicles, graders, air compressors and other type equipment, shall be maintained and properly tuned in accordance with manufacturers' specifications.
8. Track-out shall be immediately removed when it extends 50 or more feet from the site and at the end of each workday.
9. Excavation and grading activities shall be suspended when wind speeds exceed 20 mph.
10. Install sandbags or other erosion control measures to prevent silt runoff to public roadways from sites with a slope greater than 1 percent.

11. Install wheel washers for all exiting trucks or wash off all trucks and equipment leaving the site.

Timing/Implementation: During implementation of project

Enforcement/Monitoring: SJVAPCD / CDPR

Vehicle Emissions

Use of heavy equipment on site will attempt to implement the following actions as practicable:

1. Use of alternative fueled or catalyst equipped diesel construction equipment
2. Minimize idling time (e.g., 5 minute maximum)
3. Limit the hours of operation of heavy-duty equipment and/or the amount of equipment in use.
4. Where possible, replace fossil-fueled equipment with electrically driven equivalents (provided they are not run via a portable generator set)

Timing/Implementation: During implementation of project

Enforcement/Monitoring: SJVAPCD / CDPR

Biological Resource Mitigation

The primary method for protection of biological resources on site is avoidance of impacts. The project has been designed specifically to avoid and minimize impacts to riparian and wetland resources through selection of cut and fill areas that minimize negative effects during construction, while maximizing opportunities for improvement following implementation. Preliminary surveys for wetlands, sensitive species, and vernal pools was conducted. These preliminary studies serve the basis for project design. Finalization of these studies will be incorporated into the final project design to assure minimization of potential impacts.

Riparian and Wetland Resources

Re-verification of the 2017 preliminary wetland delineation map could be requested from USACE as a part of the Section 404 CWA permit process. The survey conducted in June 2016, was used to configure project elements

The proposed project may have an effect on biological resources that utilize the river and adjacent habitat resources. The following mitigation measures to be implemented during construction will assure that impacts are less than significant.

1. Sensitive riparian areas will be marked with orange barrier fencing prior to implementation.
2. The final wetland determination will be used to develop a no-net-loss wetlands plan for the site.
3. Avoidance of heavy equipment in active river channels, river-adjacent construction in summer months
4. A qualified biologist shall survey the project site for western pond turtles. Should any turtles be identified they will be relocated to an area outside of the project site.
5. All graded or disturbed areas in the riparian corridor along the San Joaquin River and Salt Slough resulting from project implementation shall be revegetated with riparian species in accordance with project design specifications.
6. Contract specifications will include the following BMPs, where applicable, to reduce direct effects to biological resources during construction:
 - During project activities, all trash that may attract predators shall be properly contained, removed from the work site, and disposed of regularly. Following construction, all trash and construction debris shall be removed from work areas.
 - All fueling and maintenance of vehicles and other equipment and staging areas shall occur at least 20 meters from any riparian habitat or water body. All workers shall be informed of the importance of preventing spills and of the appropriate measures to take should a spill occur.

Timing/Implementation: During implementation of project

Enforcement/Monitoring: USACE and CDFW / CDPR

Tribal and Cultural Resource Mitigation

The primary method for protection of Tribal and Cultural Resources is through avoidance of sensitive areas. Known sensitive areas have been avoided through development of the project and coordination with CDPR resource experts. However, additional mitigation measures are required to address potential discovery of Sub-surface resources.

Discovery of Sub-surface Deposits

If subsurface deposits believed to be cultural or human in origin are discovered during construction, all work must halt within a 200-foot radius of the discovery. A qualified professional

archaeologist, meeting the Secretary of the Interior's Professional Qualification Standards for prehistoric and historic archaeologist, shall be retained to evaluate the significance of the find. A Native American monitor, following the Guidelines for Monitors/Consultants of Native American Cultural, Religious, and Burial Sites established by the Native American Heritage Commission, may also be required. Work cannot continue at the discovery site until the archaeologist conducts sufficient research and data collection to make a determination that the resource is either:

1. Not cultural in origin; or
2. Not potentially significant or eligible for listing on the National Register of Historic Places or the California Register of Historic Resources

If a potentially eligible resource is encountered, the archaeologist, lead agency, and project applicant shall arrange for either:

1. Total avoidance of the resource, if possible; or
2. Test excavations to evaluate eligibility and, if eligible, total data recovery as mitigation.

The determination shall be formally documented in writing and submitted to the lead agency, in particular close coordination with the Cultural Resources Department within the DPR, as verification that the provisions in CEQA/NEPA for managing unanticipated discoveries have been met.

If, during the course of project implementation, paleontological resources (e.g., fossils) are discovered, work shall be halted immediately within 50 feet of the discovery, the County of Merced Planning and Community Development Department shall be immediately notified, and a qualified paleontologist shall be retained to determine the significance of the discovery. The County shall consider the mitigation recommendations presented by a professional paleontologist and implement a measure or measures that the County deems feasible and appropriate. Such measures may include avoidance, preservation in place, excavation, documentation, curation, data recovery, or other appropriate measures.

If, during the course of project implementation, human remains are discovered, all work shall be halted immediately within 50 feet of the discovery, the County of Merced Planning and Community Development Department shall be immediately notified, and the county coroner must be notified, according to Section 5097.98 of the California Public Resources Code and Section 7050.5 of the California Health and Safety Code. If the remains are determined to be Native American, the coroner will notify the Native American Heritage Commission, and the procedures outlined in California Code of Regulations Section 15064.5(d) and (e) shall be followed.

Timing/Implementation: During implementation of project

Enforcement/Monitoring: CDPR / CDPR

Hazardous Materials

Hazardous materials usage and/or storage are typical for large construction efforts, and many standard procedures have been developed to protect resources from hazardous spills.

Construction staging and equipment storage will be located at a suitable location to control potential spills. Implementation of construction BMPs and development of a Spill Prevention Control and Countermeasures (SPCC) plan would minimize the risk of an uncontrolled spill and consequent contamination of the river during project operations. The identification of staging areas for fueling and maintenance of heavy equipment would limit potential spills to designated areas where observation and cleanup could be readily accomplished. Should an oil or fuel spill occur during construction or maintenance activities, all work would cease immediately, the Central Valley Regional Water Quality Control Board would be notified if the quantity of the spill were above state and/or federal reporting requirements, and cleanup procedures would begin immediately. In order to assure compliance the project contractor shall:

1. Develop a Spill Prevention Control and Countermeasures (SPCC) plan to minimize the risk of an uncontrolled spill and consequent contamination of the river during project operations.
2. SPCC would include identification of staging areas for fueling and maintenance of heavy equipment would limit potential spills to designated areas where observation and cleanup could be readily accomplished.

Additionally, should an oil or fuel spill occur during construction or maintenance activities, all work would cease immediately, the Central Valley Regional Water Quality Control Board would be notified if the quantity of the spill were above state and/or federal reporting requirements, and cleanup procedures would begin immediately.

Timing/Implementation: During implementation of project

Enforcement/Monitoring: CVRWQCB / CDPR

Hydrology Water Quality:

The primary purpose for the project is to improve floodplain connection and ecological function of the site. Adequate drainage at the site is an important ecological function following flood flows, and has been incorporated into project design.

To avoid or minimize impacts to potential increases in turbidity and settleable materials, the proposed project shall include, at a minimum, the following measures:

- Equipment would not be operated in the stream channels of flowing live streams except as may be necessary to construct crossings, cofferdams, and the interim diversion berm necessary to implement the proposed project.
- All construction equipment would be cleaned prior to use on site.
- When work in a flowing stream is unavoidable, the entire streamflow would be gradually diverted around the work area into the existing alternate channel to the north. The alternate channel would be prepared to minimize sediment discharges.

Construction areas would be isolated from the free-flowing river through construction of cofferdams, sediment berms, filter fabric and/or grass straw bales. Uncrushed, cleaned gravels would be used to construct an equipment work support floor, if necessary, inside the cofferdam. The support floor would help ensure construction equipment inside the cofferdam did not get stuck or fail in the river sediments.

Complete revegetation and stabilization of disturbed soils would include seeding and mulching of disturbed areas with native grass species.

Timing/Implementation: During implementation of project
Enforcement/Monitoring: CVRWQCB / CDPR

6. Report Preparation

This IS/MND is the product of a wide-ranging collaborative effort that has benefited from input, suggestions, and original content from the following individuals:

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7. Public and Agency Comment

To be completed following circulation of Public Draft.

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Appendix A: Wetland Delineation

Appendix B: Biological Resources Map