Planning and
Environmental Review
David Defanti, Director
Department of Community Development

County Executive
Ann Edwards

Mitigated Negative Declaration

Pursuant to Title 14, Division 6, Chapter 3, Article 6, Sections 15070 and 15071 of the California Code of Regulations and pursuant to the Procedures for Preparation and Processing of Environmental Documents adopted by the County of Sacramento pursuant to Sacramento County Ordinance No. SCC-116, the Environmental Coordinator of Sacramento County, State of California, does prepare, make, declare, publish, and cause to be filed with the County Clerk of Sacramento County, State of California, this Negative Declaration re: The Project described as follows:

1. **Control Number:** PLER2019-00135

2. **Title and Short Description of Project:** Stone Lakes Restoration Project
   The Stone Lakes Restoration Project (project or proposed project) is located within the Stone Lakes National Wildlife Refuge (NWR), bordered by Railroad Cut to the west, Hood Franklin Road to the north, Interstate 5 to the east, and Lambert Road to the South. Although located within the Stone Lakes NWR boundary, the central 45-acre seasonal wetland enhancement and restoration project area is privately owned and managed by the Serra Family Trust (Serra Property). The other project enhancement and restoration areas are owned by the USFWS, including project activities proposed within Headquarters units 7b, 8a, 8b, and 9 on the north side of the Stone Lakes NWR and in Ponds 1 and 7-11 in the Sun River Unit, located on the southern side of the Stone Lakes NWR. Stone Lake, riparian and wetland habitat, and privately-owned agricultural land consisting predominantly of row crops are located adjacent to the project area. The various properties and restoration areas discussed above are displayed in Plate IS-2. The County of Sacramento is serving as the California Environmental Quality Act (CEQA) Lead Agency for a proposed grading permit for the project. USFWS is serving as the National Environmental Policy Act (NEPA) Lead Agency for proposed improvements within the NWR.

3. **Assessor's Parcel Number:** 132-0120-099, 132-0120-100, and 132-0210-048 (USFWS properties); 132-0210-006 (privately owned Serra Family Trust)

4. **Location of Project:** The project site is located within and adjacent to the Stone Lakes National Wildlife Refuge (NWR), headquartered at 1624 Hood Franklin Road in western Sacramento County, southwest of the City of Elk Grove, within the Sacramento-San Joaquin Delta. The project site falls directly south of Hood Franklin Road and north of Lambert Road. The Stone Lakes NWR is located approximately one mile west of I-5 and west of a drainage canal. Specifically, work would occur within the Refuge Headquarter Units 7b, 8a, 8b, and 9, within the Refuge Sun River Units 1 and 7-11, and on private property.

5. **Project Applicant:** U.S. Fish and Wildlife Service (USFWS) and Serra Family Trust

6. Said project will not have a significant effect on the environment for the following reasons:
   a. It will not 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, 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.
   b. It will not have the potential to achieve short-term, to the disadvantage of long-term, environmental goals.
   c. It will not have impacts, which are individually limited, but cumulatively considerable.
   d. It will not have environmental effects, which will cause substantial adverse effects on human beings, either directly or indirectly.

7. As a result thereof, the preparation of an environmental impact report pursuant to the Environmental Quality Act (Division 13 of the Public Resources Code of the State of California) is not required.

8. The attached Initial Study has been prepared by the Sacramento County Office of Planning and Environmental Review in support of this Negative Declaration. Further information may be obtained by contacting the Office of Planning and Environmental Review at 827 Seventh Street, Room 225, Sacramento, California, 95814, or phone (916) 874-6141.

[Original Signature on File]
Joelle Inman
Environmental Coordinator
County of Sacramento, State of California

COUNTY OF SACRAMENTO
OFFICE OF PLANNING AND ENVIRONMENTAL REVIEW
INITIAL STUDY

PROJECT INFORMATION

CONTROL NUMBER: PLER2019-00135

NAME: Stone Lakes Restoration Project

LOCATION: The project site is located within and adjacent to the Stone Lakes National Wildlife Refuge (NWR), headquartered at 1624 Hood Franklin Road in western Sacramento County, southwest of the City of Elk Grove, within the Sacramento-San Joaquin Delta. The project site falls directly south of Hood Franklin Road and north of Lambert Road. The Stone Lakes NWR is located approximately one mile west of I-5 and west of a drainage canal. Specifically, work would occur within the Refuge Headquarter Units 7b, 8a, 8b, and 9, within the Refuge Sun River Units 1 and 7-11, and on private property.

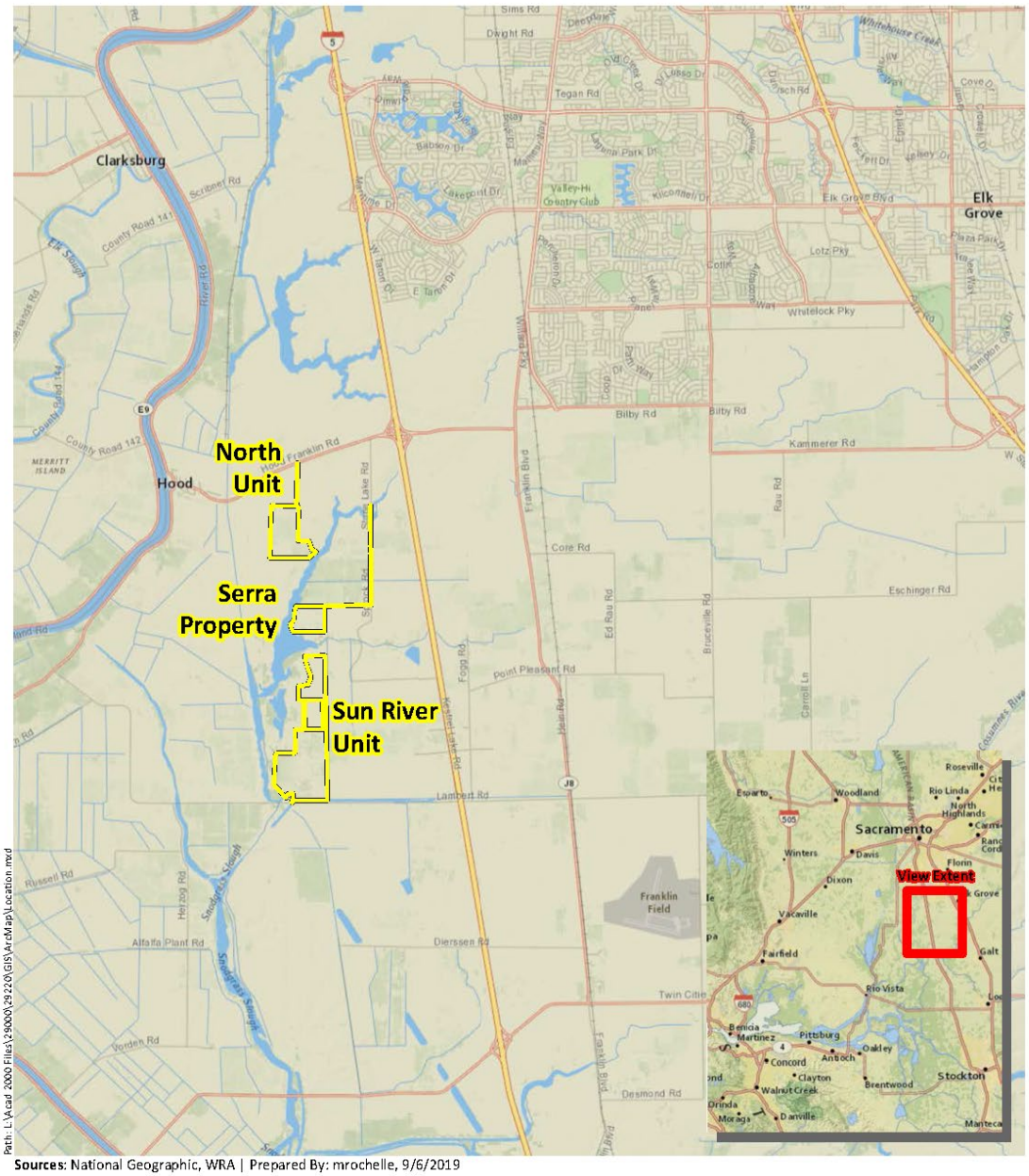
ASSESSOR'S PARCEL NUMBER: 132-0120-099, 132-0120-100, and 132-0210-048 (USFWS properties); 132-0210-006 (privately owned Serra Family Trust)

OWNER: U.S. Fish and Wildlife Service (USFWS) and Serra Family Trust

PROJECT DESCRIPTION

The Stone Lakes Restoration Project (project or proposed project) is located within the Stone Lakes National Wildlife Refuge (NWR), bordered by Railroad Cut to the west, Hood Franklin Road to the north, Interstate 5 to the east, and Lambert Road to the South (Plate IS-1). Although located within the Stone Lakes NWR boundary, the central 45-acre seasonal wetland enhancement and restoration project area is privately owned and managed by the Serra Family Trust (Serra Property). The other project enhancement and restoration areas are owned by the USFWS, including project activities proposed within Headquarters units 7b, 8a, 8b, and 9 on the north side of the Stone Lakes NWR and in Ponds 1 and 7-11 in the Sun River Unit, located on the southern side of the Stone Lakes NWR. Stone Lake, riparian and wetland habitat, and privately-owned agricultural land consisting predominantly of row crops are located adjacent to the project area. The various properties and restoration areas discussed above are displayed in Plate IS-2. The County of Sacramento is serving as the California Environmental Quality Act (CEQA) Lead Agency for a proposed grading permit for the project. USFWS is serving as the National Environmental Policy Act (NEPA) Lead Agency for proposed improvements within the NWR.

Plate IS-1: Project Site Location Map



Sources: National Geographic, WRA | Prepared By: mrochelle, 9/6/2019

Plate IS-1. Project Site Location Map

Stone Lakes Restoration Project
Sacramento County, California

0 1 2 Miles

N

wra ENVIRONMENTAL CONSULTANTS

Plate IS-2: Aerial Location Map (1 of 4)

Plate IS-2: Aerial Location Map (2 of 4)

Plate IS-2: Aerial Location Map (3 of 4)

Plate IS-2: Aerial Location Map (4 of 4)

Plate IS-2. Aerial Location Map (4 of 4)

Stone Lakes Restoration Project
Sacramento County, California

The project would restore and enhance freshwater emergent seasonal wetlands and valley foothill riparian communities for wildlife benefits and diversity in a 453-acre area. Ultimately, the project would restore approximately 260 acres of seasonal wetland, restore approximately 40 acres of riparian wetland, and enhance approximately 20 acres of existing low-quality wetland. These wetlands would be managed to provide optimum conditions for wetland-dependent species such as waterfowl, neo-tropical migratory birds, and shorebirds, including greater sandhill cranes (*Grus canadensis*), as well as giant garter snake (*Thamnophis gigas*). The restored areas would provide other critical ecosystem functions of wetlands as well, such as hydrologic and water quality services.

The project focuses on the restoration of palustrine emergent wetlands, complemented with riparian forest wetland to add diversity and habitat complexity. Restoration of wetlands would be accomplished by constructing (or improving existing) containment berms, contouring shallow swales, creating loafing and foraging islands for various bird species, and installing new infrastructure such as water control structures (weir boxes and overflow valves). The addition of habitat features such as loafing islands would provide wildlife nesting and resting opportunities.

Restoration of the riparian area would be accomplished by grading existing agricultural land and modifying existing water infrastructure. Native trees and shrubs would be transplanted on-site, from their current locations to the restored riparian areas, in order to encourage natural succession.

Operationally, the project would require managing water surface elevations in each wetland unit in order to maintain habitat and wildlife diversity. This is due to the context of the project site's location within the Sacramento-San Joaquin Delta, an area of significant natural seasonal flooding that has become highly managed over the years. Nearly 95 percent of historic wetlands have been lost in California's central valley, thereby putting greater pressure on the remaining wetlands to provide much needed resources for wetland-dependent species. While certain types of agricultural activities can offset some of the wetland losses related to species life cycle needs, seasonal wetlands play a critical role in supporting ecosystem and life processes for many wetland-dependent species, including several listed and endangered species.

PROJECT PURPOSE

The project goals are to maximize faunal diversity (predominantly birds) through restoration and enhancement of palustrine emergent wetlands and riparian habitats. The project objectives are to:

- Provide infrastructure and site conditions to promote shallow flooded wetland habitat suitable for shorebirds, waterfowl and sandhill cranes;

- Facilitate early successional processes for riparian habitat by grading agricultural fields and planting native trees and shrubs; and

- Improve water conveyance and management capacity to allow for better control of undesirable non-native plant species and establishment of diverse native wetland and riparian plant communities.

RESTORATION DESIGN FEATURES

The following summarizes the design features proposed under the project, as well as the specific restoration activities by unit. Design plans for each restoration and enhancement area are provided in Appendix A.

BERMS

The primary design goal of new and improved berm construction is to provide water containment and re-direction within the enhanced and restored managed wetland areas. Additionally, berms provide high refugia habitat and habitat transition zones for a diversity of bird species and for giant garter snake. Berms would be designed to provide a one-foot minimum freeboard from the managed water surface elevations to the tops of berms. The one-foot minimum prevents berms from being overtopped by wind-driven waves. Top elevations of berms would vary by unit (as dictated by designed water surface elevations) and would range from 6.5 to 14 feet above mean sea level. Berm side slopes would have a minimum slope of 3:1; however, a 5:1 side slope would be utilized where feasible to accommodate flood flows, reduce erosion potential, and to provide greater transitional habitat.

GRADING, SWALES, AND POTHOLES

Grading and the excavation of shallow swales would occur in most of the wetland units to facilitate water conveyance and management within the project area. Grading depths would vary by unit but would typically be to a ground surface elevation approximately 0.5 foot lower than the designed water surface elevation to support seasonal wetland conditions favorable to waterfowl and native wetland plant establishment. Systems of swales, or shallow channels with gently sloping sides, would be used to convey water through and between restoration areas. Small pothole-shaped depressions would also be located in some restoration areas to increase habitat complexity and to support native plant succession.

HABITAT FEATURES

A 90-acre area in the southern portion of the Stone Lakes NWR (associated with Sun River Ponds 10 and 11) would be restored from its current agricultural grazing use to provide shorebird-specific habitat. The existing ground surface in this area gradually slopes east to west from an elevation of eight to five feet above mean sea level. The area would be divided into two restoration units, Ponds 10 and 11, and would be graded to produce a final ground surface in each unit that would vary by approximately one foot in elevation across the unit. This more subtle change in elevation would allow for shorebird species to utilize a greater surface area for foraging and loafing.

Two types of island habitats have been designed for the project as well: shorebird-specific foraging islands and loafing habitat islands. Shorebird-specific foraging islands would be

located in Sun River Ponds 10 and 11, where shorebirds are expected to be present. The shorebird foraging islands would be longer and narrower than traditional loafing islands to maximize shorebird foraging opportunities, which occur mostly along the water surface-ground surface boundary. These islands would provide a constant water surface-ground surface boundary, even as the water surface elevations in the units change throughout the year. By installing these islands in the deeper parts of the units, the upper portion of the islands would be exposed when the water surface is at its highest design elevation and the lower portion of the islands would provide a water surface-ground surface boundary when the water surface is at its lowest design elevation.

Loafing habitat islands would be created in some of the restored wetland habitat areas to provide nesting and resting opportunities for other waterfowl and migratory birds. Loafing islands would be built to elevations above the maximum designed water surface elevations to provide habitat throughout the year. Loafing islands would be approximately 25 feet long and 15 feet wide, and designed with characteristics previously demonstrated to result in positive bird response. For example, loafing islands would be oriented with the convex side of the island facing the prevailing winds, to allow leeward protection on the opposite side of the island.

WATER CONTROL INFRASTRUCTURE

New and replacement water control structures would be installed through berms in various locations within the project area to facilitate the controlled movement of water into and out of the individual units. Proposed water control structures would utilize flashboards to control and vary the designed water surface elevation in each unit as needed. In some instances, redundant water control structures would be utilized to increase water circulation and provide for contingency if a single structure becomes plugged or damaged. In general proposed water control structures would consist of a prefabricated concrete box structure or circular high-density polyethylene (HDPE) structure outfitted with flashboard risers. HDPE pipe would be used in conjunction with either structure.

SITE CLEARANCE AND INFRASTRUCTURE MAINTENANCE AND REMOVAL ACTIVITIES

Prior to performing construction activities, existing vegetation in areas that would be disturbed would be cleared and grubbed. This material would be left on-site along the base of habitat islands and berms, or as designated on the engineering plans. Planting would be limited to riparian restoration areas, where native riparian tree and shrub species would be transplanted from other on-site areas or planted from acorn or cutting as appropriate.

In the Headquarters units on the northern side of the Stone Lakes NWR, three existing overflow valves would be removed and replaced. All other irrigation and utility piping would be protected in place and/or exists outside the limit of disturbance. Two PG&E electrical transmission poles are located in Headquarter Unit 9, but project designs call for a berm to be constructed southeast of these poles, maintaining full access and right-of-way.

The existing water control structure present on the Serra Property consists mainly of sand bags and would be removed and replaced with a new concrete water control structure with an HDPE discharge pipe. The existing non-native trees on the west side of the property would be removed, but all other existing pumps, piping, and fencing would be protected in place.

In the Sun River Unit, three water control structures would be replaced, two water control structures would be removed, and one overflow valve would be removed. Fencing along the east side of Ponds 7 and 8 and along the southern border of Pond 9 would be removed. Short lengths of HDPE connection piping would be removed at the northwest and southwest corners of Pond 9, as would the PVC piping that runs through the middle of Pond 9 and divides Ponds 10 and 11 into quadrants. A short piece of concrete connection piping would be removed from the west side of Pond 11. The trees and fencing in the perimeter ditch on the west side of Pond 11 would be removed as well, but all other piping would remain in place.

SUMMARY OF WETLAND RESTORATION ACTIVITIES

USFWS HEADQUARTERS UNITS

In Headquarters Unit 9, a new berm would be constructed running in a northeast to southwesterly direction. The area to the south and east of the berm would all be graded. Four pothole wetlands would be created, along with nine loafing islands and a swale complex throughout. One water control structure would be added.

Headquarters Units 8A and 8B would be graded to become a swale complex, with a new berm on the north side of both units and between them, and improvement of the existing berm on the east side of Unit 8A. Three new water control structures would be installed.

Headquarters Unit 7B contains existing wetlands on the east side, which would not be changed or disturbed. The goal for this unit is to modify the ground surface elevation so that the higher west side of the unit becomes an expansion of the existing wetland areas. Two new loafing islands would be created, two existing islands would be protected, and two existing islands would be regraded to create improved habitat.

SERRA PROPERTY

The existing berm that runs along the west and south side of the Serra Property would be improved, and the access road that runs along the north side would be regraded. The unit would be graded to create six pothole wetlands and twelve loafing islands. One water control structure would be installed.

USFWS SUN RIVER UNITS

The existing berms that run along the south and west side of Pond 8 and along the northwest, west, and south side of Pond 7 would be improved. The levee that runs along the north side of Pond 8 and along the east side of both units would be regraded. These units would be graded to create seven pothole wetlands, nine loafing islands, and a complex of swales. One new water control structure and two new overflow valves would

be installed. One of these overflow valves would connect to new irrigation piping on the east side of Pond 7, which would be connected to existing irrigation piping that continues south through the Refuge.

The existing berm on the north and west side of Pond 9 would be improved, and the existing levee on the east side of the unit would be regraded. The unit would be graded to create three pothole wetlands, seven loafing islands, and a swale complex. One new overflow valve would be installed on the east side of the unit as well.

New berms would be constructed on the north, west, and south sides of Ponds 10 and 11, as well as running between them from north to south. The existing levee on the east side of Pond 10 would be regraded. Both these units would be graded to create six shorebird foraging islands in total, as well as a swale complex. Three water control structures would be installed throughout the two ponds, along with one overflow valve on the east side of Pond 10.

Pond 1 does not require berm construction, and there are no existing berms or levees for improvement activities. The area would be graded to create two new pothole wetlands and a swale complex.

STAGING, CONSTRUCTION SCHEDULE AND EQUIPMENT

Primary access to the northern areas of the project site is obtained from Hood Franklin Road and through a gate located at the Stone Lakes NWR Headquarters. Primary access to the Serra Property is obtained from Stone Lake Road via Hood Franklin Road. Primary access to the Sun River Unit, the southern portion of the project site, is obtained from Lambert Road.

There are eleven areas on-site that would be used for staging of construction vehicles and equipment (Appendix B). Construction vehicles would avoid crossing any structures if the vehicle exceeds the weight-bearing capacity. If this is not possible, engineer-approved precautions would be taken to avoid damaging the structures. Staging will not occur in the vicinity of native trees.

A phased construction schedule could be utilized due to a need to secure grant funds for project implementation and to accommodate existing agricultural leases within the Headquarters Units. Pending permit approval, Phase 1 construction would take place over the course of one six-month construction season, beginning May 1 and ending October 31. Phase 1 would likely include the construction of Unit 7B of the Headquarters Units; Ponds 1, 7, 8, 9, 10, and 11 of the Sun River Unit; and the Serra Property. If work is not complete in Year 1, work would commence again the following year, or as funding is available. In Phase 1, it is anticipated that Unit 7B of the Headquarters Units and Serra Property would be completed first, over a two to three month period. Restoration activities in the Sun River Units would begin approximately two months later and would also require two to three months to complete. Some of these restoration efforts would occur concurrently.

Phase 2 would include construction of Units 8A, 8B, and 9 of the Headquarters Units, and would be likely phased over a 5 to 10 year period once existing agricultural leases expire and grant funding for implementation is secured. It is anticipated that these units would be constructed over a five month period during one or two construction seasons.

All construction activities would occur within permitted work windows to avoid impacts to special-status and other sensitive species. In-water construction would likely be limited to May 1 to October 1 due to giant garter snake environmental permits. Construction activities in bird nesting areas could be limited to February 1 to August 31. Pre-construction nesting surveys would be conducted prior to construction start.

Construction equipment to be used for the project would include:

- Tractors including disk attachments for disking and pull scraper attachments would be used to transport soils during the excavation of swales and pothole areas, creation of habitat islands, construction of interior and perimeter berms, etc.;
- Dozers would be needed for berm side slopes and pushing material;
- Excavators would be used to create ditches and for trenching, pipe installation/removal, rip rap installation, and water control structure installation;
- Backhoes would also be used for trenching, pipe installation/removal, and moving smaller objects;
- Motor graders would be needed for berm leveling and side slopes;
- Water trucks would be used for dust control and moisture conditioning; and
- Compactors would be used for fill material compaction.

Staging activities would include:

- Pre-construction water management, which includes lowering water levels in proposed work areas to their lowest possible levels;
- Mobilization of construction equipment to the site via ground transportation and stage equipment on the identified staging areas;
- Site preparation, which includes clearing and grubbing activities, scarifying slopes, and removing unnecessary infrastructure such as fencing and pipe;
- Installation of the water control infrastructure, which includes installing concrete and/or HDPE water control structures and HDPE pipe, extending the pump station discharge piping as needed, and replacing and installing new valves on pump station discharge piping;

- Creating the swales, potholes, and habitat Islands, which requires excavation for the swales and potholes, and then placing the cut material nearby to create habitat islands;

- Berm construction, which would utilize the excavated material taken from swales, potholes, and grading; and

- Demobilization of all equipment via ground transportation.

GRADING AND EXCAVATION DEPTHS

Approximately 370 acres would be graded for the proposed project (Appendix A). Soil would not be imported nor exported as part of the project. Approximately 300,000 cubic yards (cy) of material would be excavated from creation of swales and pothole features and generated from site grading operations. Some of this material would be used to re-contour lower elevation areas of select units to create a flatter more uniform ground surface. The remaining material generated would be used as fill material to construct habitat islands and new and improved berms. Installation of water control structures would require excavation depths ranging from zero to three feet below existing ground surface. Excavation depths for creation of potholes would also range from zero to three feet below existing ground surface, while excavation for swales would reach depths of four feet.

PROJECT-RELATED APPROVALS, AGREEMENTS, AND PERMITS

- Sacramento County – Grading Permit

- US Army Corps of Engineers – Clean Water Act Section 404

- Regional Water Quality Control Board – Clean Water Act Section 401

- USFWS/National Marine Fisheries Service – Endangered Species Act - Section 7 Endangered Species consultation

- State Historic Preservation Office National Historic Preservation Act (NHPA) Section 106 compliance

- Delta Stewardship Council – Consistency Determination with Delta Plan

- California Department of Fish and Wildlife – Section 2081 California Endangered Species Act consultation

ENVIRONMENTAL SETTING

The project site comprises approximately 320 acres of proposed wetland restoration within a 453-acre area, bounded by South Stone Lake to the west, and agriculture, wetlands, or managed wetlands to the north, east, and south. The project site consists of Headquarters units 7b, 8a, 8b, and 9 on the north side of Stone Lakes NWR and Ponds 7-12 in the Sun River Unit on the south side, as well as a 45-acre private parcel (Serra Property). The project site is located within the Bruceville U.S. Geological Survey (USGS) 7.5-minute quadrangle.[1]

The project site is generally situated on flat ground. Elevations within the project site range from approximately 5 to 10 feet in elevation. The project site is located within the historic flood plain basin of Stone Lakes. Based on aerial imagery review, the project site was historically agriculture ever since reclamation, surrounded by floodwater channels and levees; however, in 2004 through 2006 wetland restoration activities within portions of Stone Lakes NWR were conducted.[2] Remaining portions remain in agricultural and pasture use. Water containment berms are located along the edges of the project site with a series of excavated drainage ditches and pump stations providing infrastructure for managed hydrology at the site. The portions of the project site within Stone Lakes NWR are managed to promote wetlands and support wildlife. Management activities include grazing to manage grassland habitat for wildlife, and water manipulation to promote specific plant and bird species and to control invasive species. Most of the managed wetlands are left to dry out in the summer to prevent vegetation overgrowth and for mosquito control. Invasive species control methods include mowing, herbicide spraying, disking, grazing, and prescribed burning.[3]

The online soil survey of the project site[4] indicates that the project site has 11 native soil types: San Joaquin silt loam, leveled, 0 to 1 percent slope; Dierssen sandy loam, drained, 0 to 2 percent slope; Dierssen sandy clay loam, drained, 0 to 2 percent slopes; Fluvaquents, 0 to 2 percent slopes, frequently flooded; Valpac loam, partially drained, 0 to 2 percent slopes; Clear Lake clay, partially drained, 0 to 2 percent slopes; Tinnin loamy sand, 0 to 2 percent slopes; Egbert clay, partially drained, 0 to 2 percent slope; Dierssen clay loam, deep, drained, 0 to 2 percent slopes; Clear Lake Clay, hardpan substratum, drained, 0 to 1 percent slope; and Water.

Non-sensitive land cover types in the project site include roads, agriculture, Valley and Foothill grasslands dominating the uplands and berms, and several species associated with disturbed wetlands. Sensitive land cover types in the project site include Black Willow

---

[1] *[USGS] United States Geological Survey. 2018. Bruceville 7.5-minute Quadrangle map.*

[2] *Google Earth 1993-2019*

[3] *[USFWS] U.S. Fish and Wildlife Service. 2019. Stone Lakes National Wildlife Refuge website. Available at: https://www.fws.gov/refuge/stone_lakes/*

[4] *[CSRL] California Soil Resources Lab. 2019. Online Soil Survey. Online at: http://casoilresource.lawr.ucdavis.edu/drupal; most recently accessed: August 2019.*

Thickets Woodlands Alliance, Hardstem Bulrush Marsh Herbaceous Alliance, and Gumplant Patches Provisional Alliance; all of which are indicative of native, natural wetland systems. Semi-Natural alliances are those characterized by non-native plants. Provisional alliances are those where sufficient data has been collected to propose the type, but not enough research and regional information to be confident about status.[5]

ENVIRONMENTAL EFFECTS

Appendix G of the California Environmental Quality Act (CEQA) provides guidance for assessing the significance of potential environmental impacts. Based on this guidance, Sacramento County has developed an Initial Study Checklist (located at the end of this report). The Checklist identifies a range of potential significant effects by topical area. The topical discussions that follow are provided only when additional analysis beyond the Checklist is warranted.

LAND USE

This section supplements the Initial Study Checklist by analyzing if the proposed project would:

- Cause a significant environmental impact due to a conflict with any applicable land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect.

The project site falls under the jurisdiction of the County of Sacramento, the Stone Lakes NWR, and the Delta Stewardship Council. Relevant land use plans and policies for each of these agencies are included in the Sacramento County General Plan and Zoning Code, the Stone Lakes NWR Comprehensive Conservation Plan, and the Delta Plan, respectively.

The Sacramento County agricultural zoning of the parcel (AG-80) will not change as part of the proposed project and grazing activities will continue on the properties at the conclusion of the project. Plate IS-3 illustrates the zoning of the project site. Therefore, the project is consistent with the General Plan and Zoning Code.

[5] *[CNPS] California Native Plant Society. 2019. A Manual of California Vegetation, Online Edition. Sacramento, California. Available online at: http://vegetation.cnps.org/; most recently accessed: August 2019.*

Plate IS-3: Zoning Map

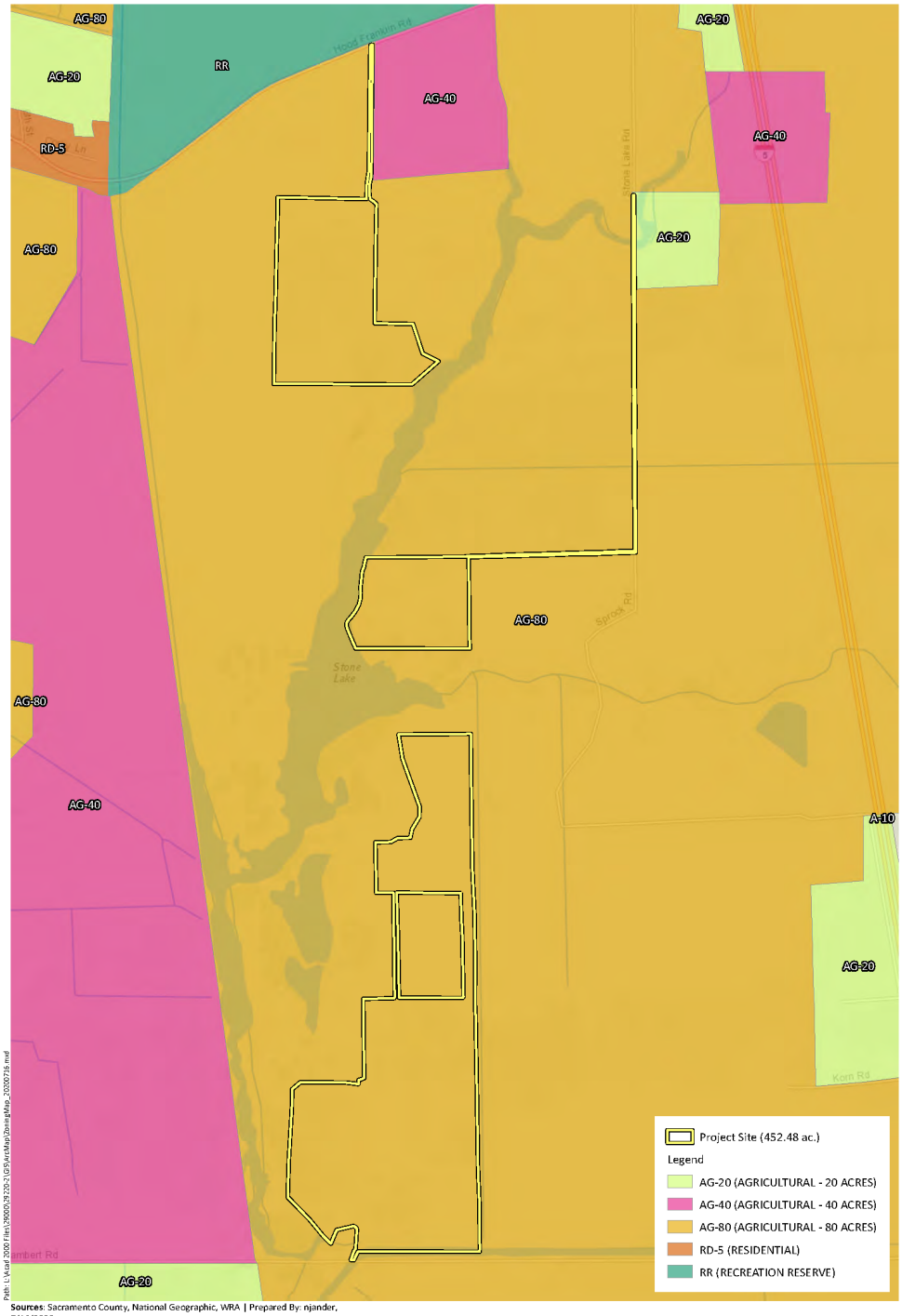


Plate IS-3: Zoning Map

Stone Lakes Restoration Project
Sacramento County, California

0 0.5 1 Miles

N

The National Wildlife Service adopted the Stone Lakes NWR Comprehensive Conservation Plan (CCP) in 2007, which provides a 15-year management direction for the Refuge. The goals, objectives, and strategies for improving Refuge conditions are described in the CCP. Stone Lakes NWR is owner and applicant for the proposed project and determined that the project is consistent with the goals and policies of the CCP.

The project site falls within the jurisdiction of the Delta Stewardship Council (DSC) and the project is considered a covered action under the Delta Plan. A state or local agency that proposes to undertake a covered action must submit a Certification of Consistency with the Delta Plan to the DSC, with detailed findings demonstrating that the covered action is consistent with the Delta Plan (Water Code Section 85225). The proposed project is on both private and federal property; however, the Delta Conservancy is funding the planning and permitting of the project through a Proposition 1 grant. Therefore, the applicant will submit a consistency determination to the DSC, demonstrating that the project is consistent with the Delta Plan and the following applicable Delta Plan policies:[6]

- GP 1 / 23 CCR Section 5002: Detailed Findings to Establish Consistency with the Delta Plan
- ER P2 / 23 CCR Section 5006: Restore Habitats at Appropriate Elevations
- ER P5 / 23 CCR Section 5009: Avoid Introductions of and Habitat Improvements for Invasive Nonnative Species
- DP P2 / 23 CCR Section 5011: Respect Local Land Use When Siting Water or Flood Facilities or Restoring Habitats

The project is consistent with relevant policies of all jurisdictions as applicable to the privately owned and federally owned portions of the site. The applicant will submit a full consistency analysis for Certification of Consistency with the Delta Plan. As such, impacts related to conflicts with land use plans, policies, or regulations will be ***less than significant***.

Agricultural Resources

This section supplements the Initial Study Checklist by analyzing if the proposed project would:

- Convert Prime Farmland, Unique Farmland, Farmland of Statewide Importance or areas containing prime soils to uses not conducive to agricultural production.
- Conflict with any existing Williamson Act contract.

[6] Available: https://deltacouncil.ca.gov/pdf/delta-plan.pdf

The project site is designated Agricultural Cropland, with a Resource Conservation Area overlay, by the County of Sacramento General Plan and it is zoned as Agricultural - 80 Acres (AG-80) by the Sacramento County Zoning Code. Within the project site, agricultural lands are currently being cultivated for wheat (*Triticum aestivum*) and alfalfa (*Medicago sativa*) production, and are currently grazed.[7] The agricultural areas and existing wetlands that make up the project site are a combination of Prime Farmland, Unique Farmland, Farmland of Statewide Importance, Farmland of Local Importance, and Grazing Land according to the California Department of Conservation Farmland Mapping and Monitoring Program (Plate IS-4).[8] The project will restore wetland habitat while agricultural and grazing activities remain on the properties. Therefore, there proposed project will not conflict with the current agricultural zoning.

Williamson Act

One USFWS-owned parcel (132-0210-048-0000) within the project area formerly participated in the Williamson Act. The parcel was removed from the Williamson Act contract at the time at which it was purchased by the USFWS in 2005; however, the Agricultural Preserve Contract (Resolution/Contract No: 73-AP-055) on the parcel remains active (see Appendix C).

The California Land Conservation Act of 1965 (commonly referred to as the Williamson Act) serves to preserve open spaces and agricultural land. The Williamson Act is a State program that allows agricultural landowners to pay reduced property taxes in return for their contractual agreement to retain the land in agricultural and open space uses for a period of 10 years. The legal contract is between the landowner and the County. The contract is automatically renewed each year for an additional year, unless a notice of non-renewal is filed or the contract is cancelled. Under the non-renewal process, the annual tax assessment gradually increases, and after 9 years the contract is terminated. Cancellation (immediate termination) of a contract is reserved for extraordinary situations; opportunities for another use of the property, or the uneconomic character of the existing agricultural use, are not sufficient reasons for contract cancellation. The landowner must pay a fee equal to 12.5% of the unrestricted current fair market value of the property if a contract is cancelled.

The intent of the Williamson Act is set forth in Government Code Section 51220 as follows:

a) That the preservation of a maximum amount of the limited supply of agricultural land is necessary to the conservation of the state's economic resources, and is necessary not only to the maintenance of the agricultural economy of the state, but

[7] *[WRA] WRA, Inc. 2019. Stone Lakes Restoration Project USFWS Section 7 Biological Assessment.*

[8] *California Natural Resources Agency. Sacramento County Important Farmland 2018. https://www.conservation.ca.gov/dlrp/fmmp/Pages/Sacramento.aspx. Most recently accessed: March 2020.*

also for the assurance of adequate, healthful and nutritious food for future residents of this state and nation.

b) That the discouragement of premature and unnecessary conversion of agricultural land to urban uses is a matter of public interest and will be of benefit to urban development patterns which unnecessarily increase the costs of community services to community residents.

The Sacramento County Assessor's Office removed the parcel from the Williamson Act contract at the time at which it was purchased by USFWS and was no longer financially eligible for participation in the tax benefits provided by the program. The Agricultural Preserve Contract on the parcel remains as an active zoning overlay on the parcel. The parcel include Ponds 1 and 7-11 in the Sun River Unit, located on the southern side of the Stone Lakes NWR. The Agricultural Preserve Contract specifies that the property is to remain zoned AG-80 and it lists permitted agricultural and compatible land uses allowed on the site. Prohibited uses include Recreational (R), and Open Space (0). Compatible uses include incidental recreational uses, which do not take land out of commercial agricultural production. The proposed project will create waterfowl and shorebird habitat, while maintaining active grazing on the properties. Management of the restored wetland areas within the project site may create incidental recreational uses, but will not take the properties out of agricultural use. Implementation of the project will not conflict with an existing Williamson Act or Agricultural Preserve contract; therefore, impacts would be ***less than significant***.

Plate IS-4: Important Farmland 2018 Map

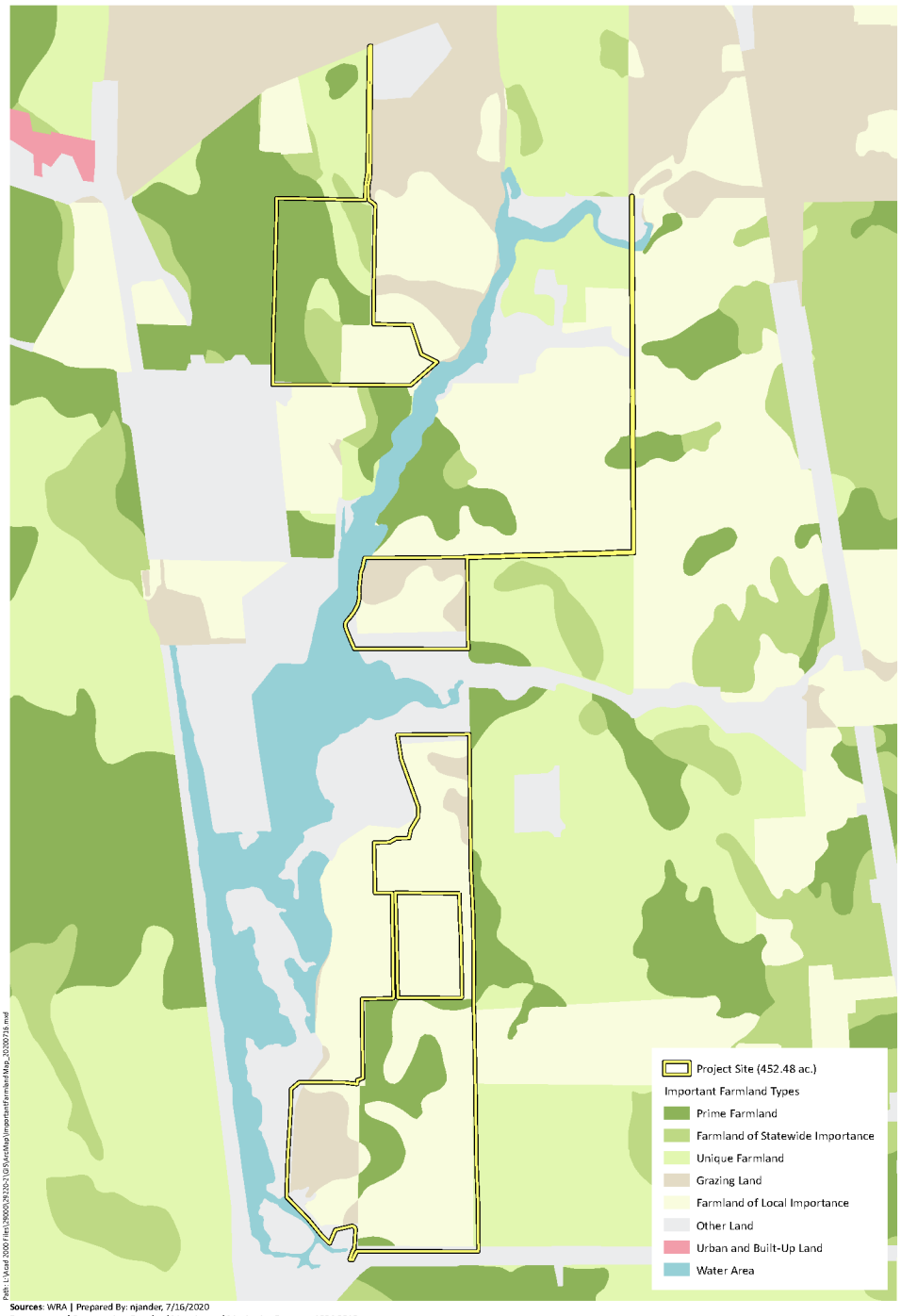


Plate IS-4: Important Farmland 2018 Map

Stone Lakes Restoration Project
Sacramento County, California

0 0.5 1 Miles

N

wra ENVIRONMENTAL CONSULTANTS

AIR QUALITY

This section supplements the Initial Study Checklist by analyzing if the proposed project would:

- Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in non-attainment under an applicable federal or state ambient air quality standard?

This question was addressed quantitatively by calculating emissions and comparing to the corresponding significance thresholds in the Sacramento Metropolitan Air Quality Management District (SMAQMD) CEQA Guidelines. SMAQMD is classified as nonattainment with respect to federal and state ambient air quality standards (AAQS) for respirable particulate matter (PM_{10}, meaning particles smaller than 10 microns in diameter), fine particulate matter ($PM_{2.5}$), and ozone. Accordingly, they (a) require that projects apply Best Management Practices (BMPs) for controlling particulate matter from construction operations and (b) have significance thresholds for emissions of nitrogen oxides (NO_x, the pollutant emitted in highest quantities from engines, which is a precursor to both ozone and particulate matter formation) and emissions of particulate matter. The BMPs have always included additional specificity beyond what is required by SMAQMD's regulation for fugitive dust control (Rule 403) and were recently updated in July 2019.

Emissions were quantified using the tool recommended by SMAQMD (Sacramento's Road Construction Emissions Model, v 9.0) for a worst-case day, involving the simultaneous operation of all equipment at two of the four planned work areas in the project site and land disturbance of up to 15 acres/day (Appendix D). This model provides an option to calculate emissions with a built-in assumption that SMAQMD's Enhanced Fugitive PM Dust Control Practices (Enhanced BMPs) will be utilized, which was done for this calculation.

Table 1 illustrates that emissions would be below SMAQMD's significance thresholds as long as the Enhanced BMPs are implemented. Of the 78 lb/day of PM_{10} emissions generated by the project, 75 lb/day are due to fugitive dust. These estimates are conservative given that they are based off of SMAQMD's conservative emission factor, which was developed based on data from building construction sites in relatively dry parts of the county, rather than wetland restoration projects on wet soils, such as this one.

Table 1. Project Construction Emissions Compared to SMAQMD Significance Thresholds (with incorporation of Enhanced Dust Control BMPs)

Emissions	Project (lb/day)	Significance Threshold (lb/day)*
NO_x	55	85
PM_{10}	78	80

$PM_{2.5}$	18	82

*SMAQMD also has annual significance thresholds for PM_{10} and $PM_{2.5}$, but compliance with the daily thresholds assures compliance with the annual thresholds (i.e., the annual thresholds are equal to the daily thresholds multiplied by 365 days/yr).

Appendix D includes details regarding how emissions were quantified. As emissions from the project would be below SMAQMD's significance thresholds, contingent on the implementation of the Enhanced BMPs (Mitigation Measure A), impacts to Air Quality topics listed would be ***less than significant with mitigation***.

HYDROLOGY AND WATER QUALITY

This section supplements the Initial Study Checklist by analyzing if the proposed project would:

- Create substantial sources of polluted runoff or otherwise substantially degrade ground or surface water quality.

WATER QUALITY

CONSTRUCTION WATER QUALITY: EROSION AND GRADING

Construction on undeveloped land exposes bare soil, which can be mobilized by rain or wind and displaced into waterways or become an air pollutant. Construction equipment can also track mud and dirt onto roadways, where rains will wash the sediment into storm drains and thence into surface waters. After construction is complete, various other pollutants generated by site use can also be washed into local waterways. These pollutants include; but are not limited to: vehicle fluids, heavy metals deposited by vehicles, and pesticides or fertilizers used in landscaping.

Sacramento County has a National Pollutant Discharge Elimination System (NPDES) Municipal Stormwater Permit issued by Regional Water Board. The Municipal Stormwater Permit requires the County to reduce pollutants in stormwater discharges to the maximum extent practicable and to effectively prohibit non-stormwater discharges. The County complies with this permit in part by developing and enforcing ordinances and requirements to reduce the discharge of sediments and other pollutants in runoff from newly developing and redeveloping areas of the County.

The County has established a Stormwater Ordinance (Sacramento County Code 15.12). The Stormwater Ordinance prohibits the discharge of unauthorized non-stormwater to the County's stormwater conveyance system and local creeks. It applies to all private and public projects in the County, regardless of size or land use type. In addition, Sacramento County Code 16.44 (Land Grading and Erosion Control) requires private construction sites disturbing one or more acres or moving 350 cubic yards or more of earthen material to obtain a grading permit. To obtain a grading permit, project proponents must prepare and submit for approval an Erosion and Sediment Control (ESC) Plan describing erosion and sediment control best management practices (BMPs) that will be implemented during

construction to prevent sediment from leaving the site and entering the County's storm drain system or local receiving waters. Construction projects not subject to SCC 16.44 are subject to the Stormwater Ordinance (SCC 15.12) described above.

In addition to complying with the County's ordinances and requirements, construction sites disturbing one or more acres are required to comply with the State's General Stormwater Permit for Construction Activities (CGP). CGP coverage is issued by the State Water Resources Control Board (State Board) http://www.waterboards.ca.gov/water_issues/programs/stormwater/construction.shtml and enforced by the Regional Water Board. Coverage is obtained by submitting a Notice of Intent (NOI) to the State Board prior to construction and verified by receiving a WDID#. The CGP requires preparation and implementation of a site-specific Stormwater Pollution Prevention Plan (SWPPP) that must be kept on site at all times for review by the State inspector.

Applicable projects applying for a County grading permit must show proof that a WDID # has been obtained and must submit a copy of the SWPPP. Although the County has no enforcement authority related to the CGP, the County does have the authority to ensure sediment/pollutants are not discharged and is required by its Municipal Stormwater Permit to verify that SWPPPs include the minimum components.

The project must include an effective combination of erosion, sediment and other pollution control BMPs in compliance with the County ordinances and the State's CGP.

Erosion controls should always be the first line of defense, to keep soil from being mobilized in wind and water. Examples include stabilized construction entrances, tackified mulch, 3-step hydroseeding, spray-on soil stabilizers and anchored blankets. Sediment controls are the *second line of defense*; they help to filter sediment out of runoff before it reaches the storm drains and local waterways. Examples include rock bags to protect storm drain inlets, staked or weighted straw wattles/fiber rolls, and silt fences.

In addition to erosion and sediment controls, the project must have BMPs in place to keep other construction-related wastes and pollutants out of the storm drains. Such practices include, but are not limited to: filtering water from dewatering operations, providing proper washout areas for concrete trucks and stucco/paint contractors, containing wastes, managing portable toilets properly, and dry sweeping instead of washing down dirty pavement.

It is the responsibility of the project proponent to verify that the proposed BMPs for the project are appropriate for the unique site conditions, including topography, soil type and anticipated volumes of water entering and leaving the site during the construction phase. In particular, the project proponent should check for the presence of colloidal clay soils on the site. Experience has shown that these soils do not settle out with conventional sedimentation and filtration BMPs. The project proponent may wish to conduct settling column tests in addition to other soils testing on the site, to ascertain whether conventional BMPs will work for the project.

If sediment-laden or otherwise polluted runoff discharges from the construction site are found to impact the County's storm drain system and/or Waters of the State, the property owner will be subject to enforcement action and possible fines by the County and the Regional Water Board.

Project compliance with requirements outlined above, as administered by the County and the Regional Water Board will ensure that project-related erosion and pollution impacts are ***less than significant***.

OPERATION WATER QUALITY: STORMWATER RUNOFF

Development and urbanization can increase pollutant loads, temperature, volume and discharge velocity of runoff over the predevelopment condition. The increased volume, increased velocity, and discharge duration of stormwater runoff from developed areas has the potential to greatly accelerate downstream erosion and impair stream habitat in natural drainage systems. Studies have demonstrated a direct correlation between the degree of imperviousness of an area and the degradation of its receiving waters. These impacts must be mitigated by requiring appropriate runoff reduction and pollution prevention controls to minimize runoff and keep runoff clean for the life of the project.

The County requires that projects include source and/or treatment control measures on selected new development and redevelopment projects. Source control BMPs are intended to keep pollutants from contacting site runoff. Treatment control measures are intended to remove pollutants that have already been mobilized in runoff. Examples include vegetated swales and water quality detention basins. These facilities slow water down and allow sediments and pollutants to settle out prior to discharge to receiving waters. Additionally, vegetated facilities provide filtration and pollutant uptake/adsorption.

The County requires developers to utilize the *Stormwater Quality Design Manual for the Sacramento Region, 2018* (Design Manual) in selecting and designing post-construction facilities to treat runoff from the project. Regardless of project type or size, developers are required to implement the minimum source control measures (Chapter 4 of the Design Manual). Low impact development measures and Treatment Control Measures are required of all projects exceeding the impervious surface threshold defined in Table 3-2 and 3-3 of the Design Manual. Further, depending on project size and location, hydromodification control measures may be required (Chapter 5 of the Design Manual).

Updates and background on the County's requirements for post-construction stormwater quality treatment controls, along with several downloadable publications, can be found at the following websites:

http://www.waterresources.saccounty.net/stormwater/Pages/default.aspx

http://www.beriverfriendly.net/Newdevelopment/

The final selection and design of post-construction stormwater quality control measures is subject to the approval of the County Department of Water Resources; therefore, they should be contacted as early as possible in the design process for guidance. Project

compliance with requirements outlined above will ensure that project-related stormwater pollution impacts are ***less than significant***.

BIOLOGICAL RESOURCES

This section supplements the Initial Study Checklist by analyzing if the proposed project would:

- Have a substantial adverse effect on any special status species, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, or threaten to eliminate a plant or animal community.

- Have a substantial adverse effect on riparian habitat or other sensitive natural communities.

- Have a substantial adverse effect on streams, wetlands, or other surface waters that are protected by federal, state, or local regulations and policies.

- Conflict with the provisions of an adopted Habitat Conservation Plan or other approved local, regional, state or federal plan for the conservation of habitat?

The project site is located within the Stone Lakes NWR and on the Serra Property. As stated previously, the Stone Lakes NWR is home to a variety of biological communities and habitats. Within the limits of the project site, non-sensitive communities include approximately 221.5 acres of non-sensitive valley and foothill grasslands dominating upland agricultural areas and berms, 23.0 acres of roadways and other development, 1.4 acres of sandbar willow thicket, and 11.3 acres of upland smartweed cocklebur patches. An additional 10.4 acres of the project site are covered by a gumplant patch. Although this would typically be considered a sensitive natural community by the California Department of Fish and Wildlife (CDFW), the gumplant patch within the project site occurs in a managed upland landscape and in the absence of salt marsh and alkaline habitats. This community is therefore not representative of the natural ecosystems that are typically sampled and classified by the CDFW, and the sensitivity rank applied to more natural stands is not applicable to the gumplant patch located within the project site.

Sensitive biological communities at the project site include approximately 2.3 acres of black willow thicket, 1.84 acres of lake (South Stone Lake), 4.4 acres of perennial wetland dominated by non-native species, 2.3 acres of riparian black willow thicket and sandbar willow thicket along the fringes of South Stone Lake and a tributary to the lake, and 174.2 acres of seasonal wetland (127.2 acres of which are currently under a management regime). Plate IS-5 displays both sensitive and non-sensitive communities throughout the project site and their acreages.

Waters of the United States were delineated on June 13, 14, 17, 18, and 27, and July 23, 2019 (Ducks Unlimited, Inc. 2019) (Appendix E). The delineation was conducted in accordance with the standards specified by the U.S. Army Corps of Engineers (Corps)

Wetland Delineation Manual (Environmental Laboratory 1987) and the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (version 2.0) (U.S. Army Engineer Research and Development Center, 2008). Numerous soil pits were dug, and information about vegetation, soils, and hydrology was recorded at thirty-one locations.

A background information search was conducted to identify potential special-status plant and wildlife species and sensitive natural communities that may occur in the project site vicinity. Special-status species database searches were conducted for known occurrences in the Bruceville USGS 7.5-minute quadrangle and the eight surrounding quadrangles. Database searches for sensitive natural communities were conducted for Sacramento County as well. Sources included: the California Natural Diversity Database (CNDDB), the California Native Plant Society (CNPS) Inventory, USFWS Information for Planning and Consultation (IPaC), and the Consortium of California Herbaria.

Based on database searches and remote assessment using aerial imagery,[9] all special-status plant species documented within the vicinity of the project site were assessed based on associated vegetation communities, soil affinity, topographic position, shade tolerance, disturbance tolerance, elevation, and population distribution to determine the potential for these species to occur in the project site.

Protocol-level special-status plant surveys were conducted on August 7, 8, and 9, 2019, and a rare plant survey report was completed in September 2019.[10] The surveys used intuitive meandering transects across the entirety of the project site, with a disproportionate focus in areas thought to be suitable for rare species and sensitive natural communities. The survey dates correspond to the periods for observing and accurately identifying hundreds of plant species in Sacramento County, including the special-status species with a moderate or high potential to occur in the project site.

The surveys followed the protocol for plant surveys described in recommended resource agency guidelines.[11][12][13] Additionally, on November 13, 2019 a wildlife-focused site visit was performed. The site assessment was intended to identify the presence or absence of suitable habitat for each special-status species known to occur in the vicinity in order to determine its potential to occur in the project site.

---

[9] *Google Earth 1993-2019*

[10] *WRA, September 2019. Special-Status Plant Survey Report.*

[11] *[CDFW] California Department of Fish and Wildlife. 2018a. Protocols for Surveying and Evaluating Impacts to Rare Native Plant Populations and Natural Communities. State of California, California Natural Resources Agency, Department of Fish and Wildlife, Sacramento. March 20.*

[12] *[CNPS] California Native Plant Society. 2001. CNPS Botanical Survey Guidelines. Sacramento, California.Availableonlineat:http://cnps.org/cnps/rareplants/pdf/cnps_survey_guidelines.pdf;*

[13] *[USFWS] United States Fish and Wildlife Service. 1996. Guidelines for Conducting and Reporting Botanical Inventories for Federally Listed, Proposed, and Candidate Plants. Sacramento Fish and Wildlife Office. September.*

Plate IS-5. Biological Communities (Page 1 of 4)

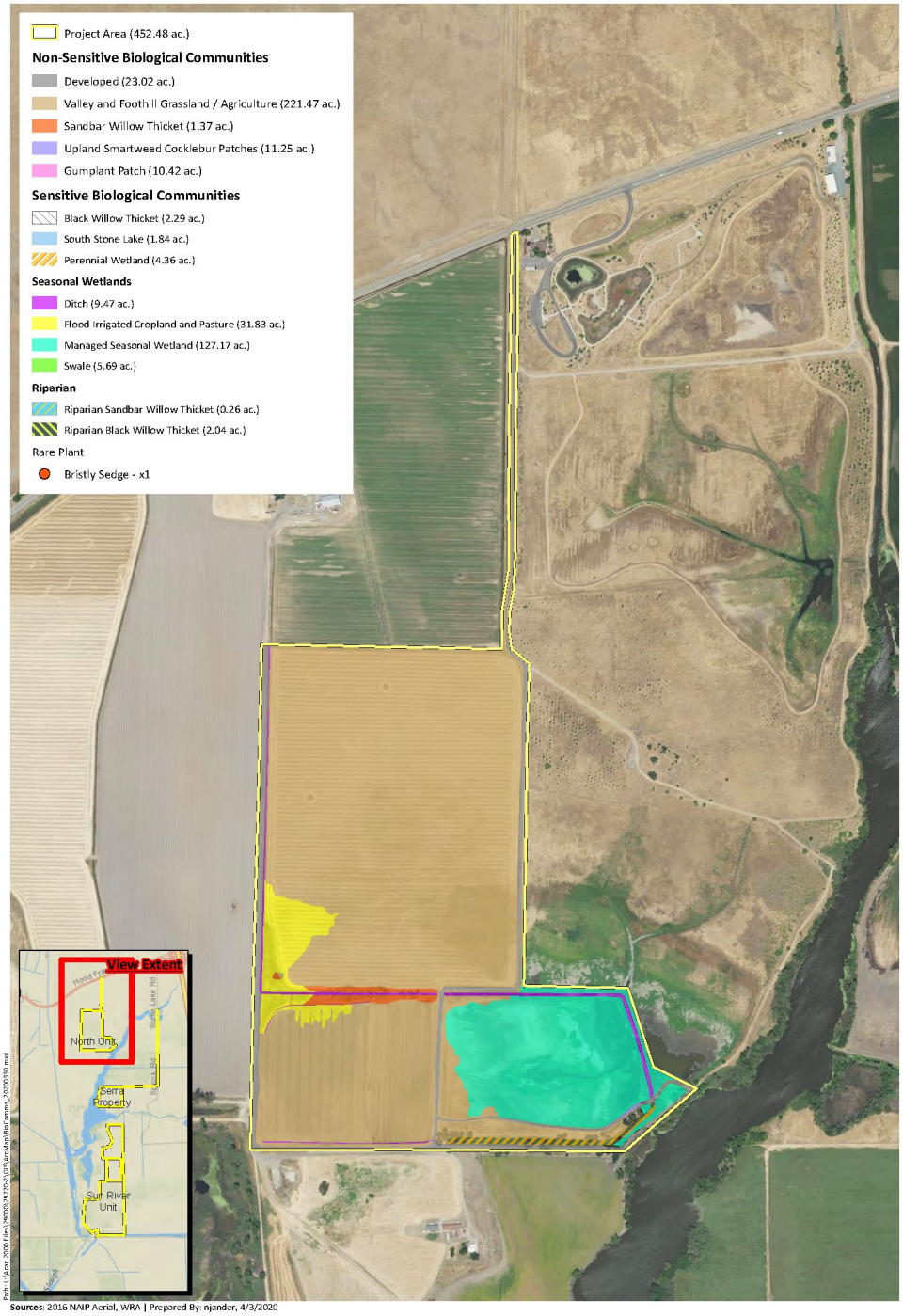


Plate IS-5. Biological Communities (1 of 4)

Stone Lakes Restoration Project
Sacramento County, California

0 500 1,000 Feet

N

wra ENVIRONMENTAL CONSULTANTS

Plate IS-5. Biological Communities (Page 2 of 4)

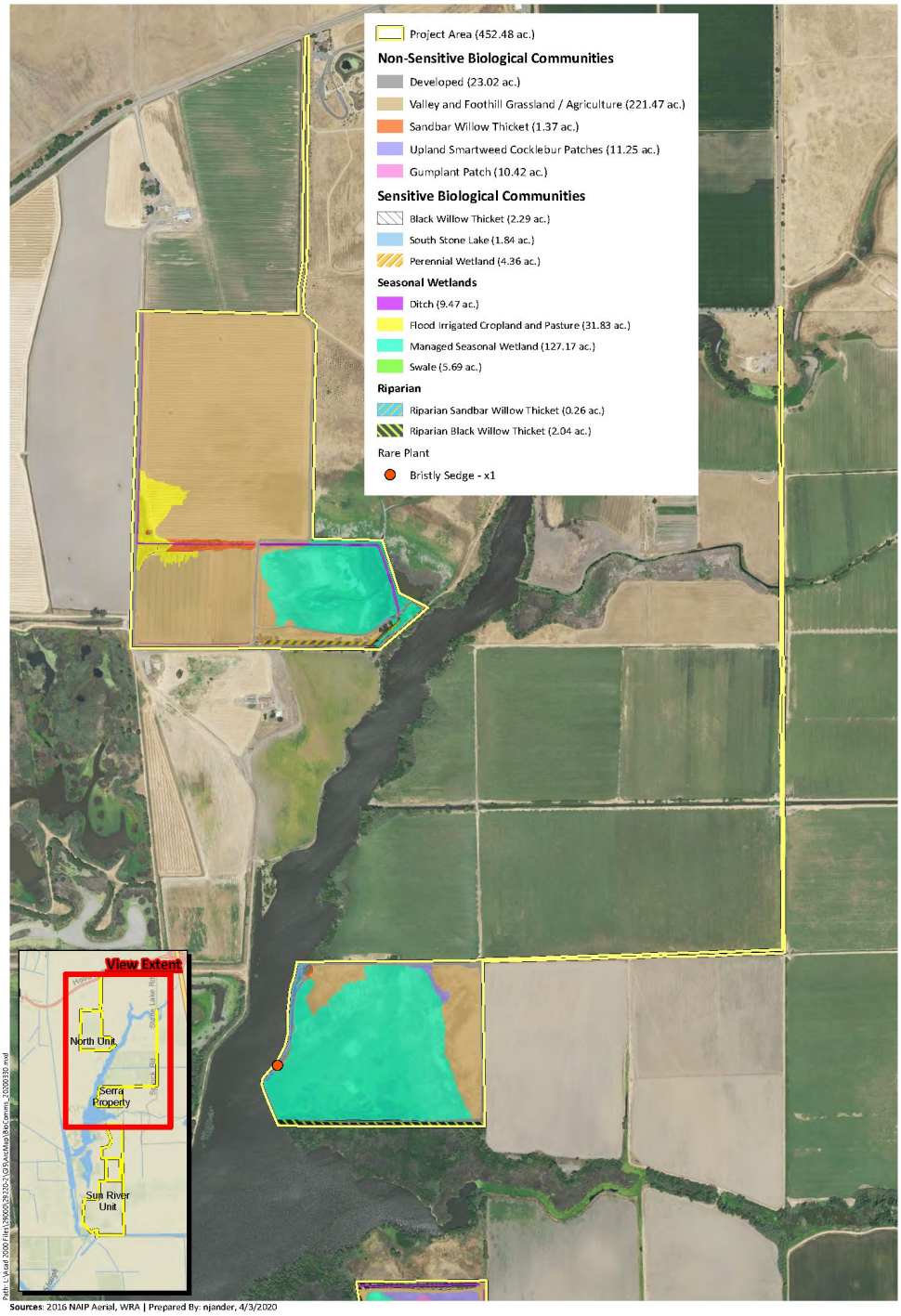


Plate IS-5. Biological Communities (2 of 4)

Stone Lakes Restoration Project
Sacramento County, California

0 500 1,000 Feet

N

wra ENVIRONMENTAL CONSULTANTS

Plate IS-5. Biological Communities (Page 3 of 4)

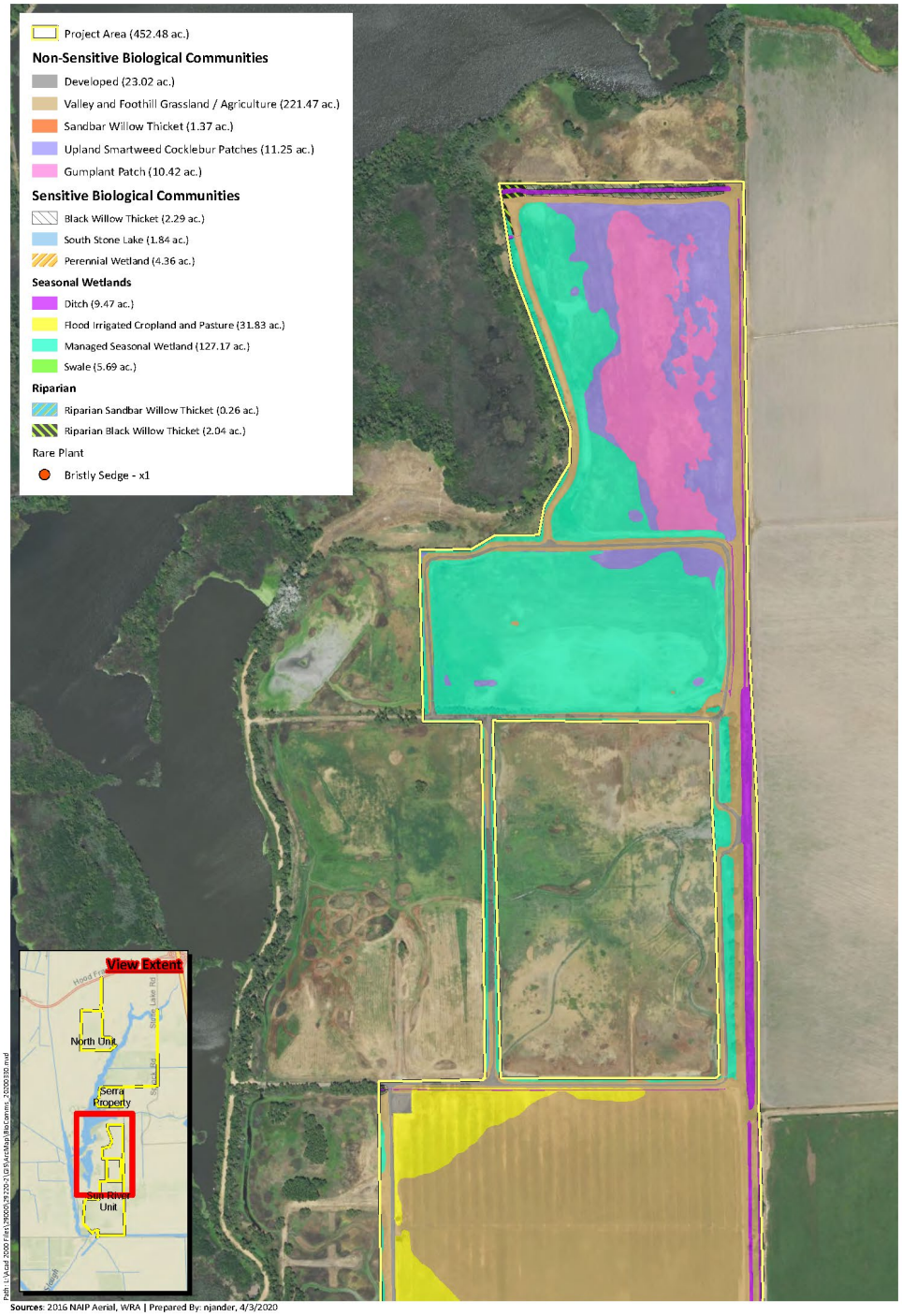


Plate IS-5. Biological Communities (3 of 4)

Stone Lakes Restoration Project
Sacramento County, California

0 500 1,000 Feet

N

wra ENVIRONMENTAL CONSULTANTS

Plate IS-5. Biological Communities (Page 4 of 4)

Plate IS-5. Biological Communities (4 of 4)

Stone Lakes Restoration Project
Sacramento County, California

0 500 1,000 Feet

N

wra ENVIRONMENTAL CONSULTANTS

SPECIAL-STATUS SPECIES

Special-status plants and wildlife include species/taxa that have been listed as endangered or threatened, or are formal candidates for such listing, under the federal Endangered Species Act (ESA) and/or California Endangered Species Act (CESA). Wildlife species included on California's list of Fully Protected (CFP) species are considered special status. Plant species on the California Native Plant Society (CNPS) Rare and Endangered Plant Inventory (Inventory) with California Rare Plant Ranks (CRPR) of 1, 2, and 3 are also considered special-status plant species and must be considered under CEQA. Rank 4 species are typically only afforded protection under CEQA when such species are particularly unique to the locale (e.g., range limit, low abundance/low frequency, limited habitat) or are otherwise considered locally rare. A description of the CRP Ranks is provided below in Table 2.

Table 2. California Rare Plant Ranks and Threat Codes

California Rare Plant Ranks (formerly known as CNPS Lists)	
Rank 1A	Presumed extirpated in California and either rare or extinct elsewhere
Rank 1B	Rare, threatened, or endangered in California and elsewhere
Rank 2A	Presumed extirpated in California, but more common elsewhere
Rank 2B	Rare, threatened, or endangered in California, but more common elsewhere
Rank 3	Plants about which more information is needed - A review list
Rank 4	Plants of limited distribution - A watch list
Threat Ranks	
0.1	Seriously threatened in California
0.2	Moderately threatened in California
0.3	Not very threatened in California

The federal Bald and Golden Eagle Protection Act also provides broad protections to both eagle species that in some regards are similar to those provided by ESA. In addition, CDFW Species of Special Concern, which are species that face extirpation in California if current population and habitat trends continue, are considered special-status species. Although CDFW Species of Special Concern generally have no special legal status, they are given special consideration under CEQA. Bat species are also evaluated for

conservation status by the Western Bat Working Group (WBWG), a non-governmental entity. Bats named as a "High Priority" or "Medium Priority" species for conservation by the WBWG are typically considered special-status and also considered under CEQA. In addition to regulations for special-status species, most native birds in the United States (including non-status species) are protected by the California Fish and Game Code (CFGC; Sections 3503, 3503.5, and 3513), and guidance for protection is provided by the Migratory Bird Treaty Act of 1918. Under the CFGC, destroying active nests, eggs, or young is illegal.

SPECIAL-STATUS PLANTS: BRISTLY SEDGE

Based on a review of the resource databases listed previously, 40 special-status plant species were documented in the vicinity of the project site, which includes the Bruceville USGS 7.5-minute quadrangle and eight surrounding quadrangles (Appendix E). Of the 40 plant species, 26 species are unlikely or have no potential to occur within the project site due to absence of suitable habitat. Fourteen have a moderate or high potential to occur within the project site but only one, bristly sedge (*Carex comosa),* was observed during the field survey and is discussed below. The remaining 13 are not present within the project site.

One individual of bristly sedge (*Bristly sedge* CRPR 2B.1) was observed within the Serra Property portion of the project site, located along a slough to Stone Lake, on a portion of slough bank that is slumped (Plate IS-5, sheet 2 of 4). The slumped area is otherwise unvegetated with water hyacinth occurring at water level in association with bristly sedge. No grading is proposed in the location of the one individual of bristly sedge; therefore, impacts will be ***less than significant***.

SPECIAL-STATUS WILDLIFE

Based on a review of the resource databases discussed previously, 36 special-status wildlife species have been documented in the vicinity of the project site. Of the 36 wildlife species, 24 species are unlikely or have no potential to occur within the project site due to absence of suitable habitat. Eight species have a moderate or high potential to occur within the project site and four species are present. The 12 species that are present, or that have a moderate or high potential to occur in the project site, are discussed below. A species table detailing potential for occurrence is included on page 170 of the PDF of Appendix E.

GIANT GARTER SNAKE (THAMNOPHIS GIGAS), STATE THREATENED SPECIES, FEDERAL THREATENED SPECIES

This endemic species of snake is found only in the Sacramento and San Joaquin Valleys. The giant garter snake prefers freshwater marshes and low gradient streams but has adapted to drainage channels and irrigation ditches. The giant garter snake inhabits agricultural wetlands and other waterways such as irrigation and drainage canals, sloughs, ponds, small lakes, low gradient streams, and adjacent uplands in the Central Valley. It is active when water temperatures are at 20 degrees or more and is dormant underground when their aquatic habitat is below this temperature. Fish and frogs form a large portion of the diet of the giant garter snake.

The Programmatic Formal Consultation[14] defines giant garter snake habitat as 2 acres of upland for every one acre of aquatic habitat – or put another way, it encompasses the water plus 200 feet of upland on either side. This establishes that a 200-foot setback from aquatic habitat must be implemented in order to achieve complete avoidance. If this is not possible, an applicant with relatively small impacts, categorized as Level 1, 2, or 3 may rely on the compensation requirements of the Programmatic Formal Consultation. The compensation measures are described in Table 3. The applicant will also be required to implement the following avoidance and minimization measures:

1. Construction activity within habitat should be conducted between May 1 and October 1. This is the active period for giant garter snakes and direct mortality is lessened, because snakes are expected to actively move and avoid danger. Between October 2 and April 30 contact the USFWS's Sacramento office to determine if additional measures are necessary to minimize and avoid take.

2. Confine clearing to the minimal area necessary to facilitate construction activities. Flag and designate avoided giant garter snake habitat within or adjacent to the project area as Environmentally Sensitive Areas. This area should be avoided by all construction personnel.

3. Construction personnel should receive Service-approved worker environmental awareness training. This training instructs workers to recognize giant garter snakes and their habitat(s).

4. 24-hours prior to construction activities, the project area should be surveyed for giant garter snakes. Survey of the project area should be repeated if a lapse in construction activity of two weeks or greater has occurred. If a snake is encountered during construction, activities shall cease until appropriate corrective measures have been completed or it has been determined that the snake will not be harmed. Report any sightings and any incidental take to the USFWS.

5. Any dewatered habitat should remain dry for at least 15 consecutive days after April 15 and prior to excavating or filling of the dewatered habitat.

6. After completion of construction activities, remove any temporary fill and construction debris and, wherever feasible, restore disturbed areas to pre-project conditions. Restoration work may include such activities as replanting species removed from banks or replanting emergent vegetation in the active channel.

[14] United States Fish and Wildlife Service. November 13, 1997. Programmatic Formal Consultation for U.S. Army Corps of Engineers 404 Permitted Projects with Relatively Small Effects on the Giant Garter Snake within Butte, Colusa, Glenn, Fresno, Merced, Sacramento, San Joaquin, Solano, Stanislaus, Sutter and Yolo Counties, California.

Table 3: Summary of Giant Garter Snake Conservation Measures

Impact Level	Impacts: Duration	Impacts: Acres	Conservation Measure
LEVEL 1	1 season	Less than 20 and temporary	Restoration
LEVEL 2	2 season	Less than 20 and temporary	Restoration plus 1:1 replacement
LEVEL 3	More than 2 seasons and temporary	Less than 20 and temporary	3:1 replacement (or restoration plus 2:1 replacement)
	Permanent loss	Less than 3 acres total giant garter snake habitat AND less than 1 acre aquatic habitat OR less than 218 linear feet bank habitat	3:1 replacement

This species has multiple documented occurrences within 5 miles of the project site, with the most recent occurrences from 1992 (CDFW 2019a). The nearest occurrence is from a CNDDB record of giant garter snake and is described as "Stone Lake; southwest of the intersection of Hood Franklin Road and I-5". This record maps to about a half mile east of the project area. This record is from at least 34 years ago and is characterized as follows: "prior to 1986, but not during a study by G. Hansen in 1986-1987". Given this information and that no recent sightings have been documented, it may be that giant garter snake is extirpated from the project area. However, due to the historical occurrence, the continued existence of potential habitat, the cryptic nature of the species and the lack of any targeted surveys for giant garter snake in the project area, giant garter snake is still presumed to be present in suitable habitat.

Individuals may be present in aquatic habitat or may seek refuge in upland habitat. Individuals may be harassed, harmed, or killed during project activities, including vegetation removal and grading. Giant garter snake may also be impacted by temporary loss of habitat. No permanent loss of habitat is anticipated because the creation of an overall wetter condition in the swales and potholes created by the project will improve the overall condition of giant garter snake aquatic foraging habitat. Upland habitat is anticipated to remain as it is, or slightly increase, in terms of overall acreage, though some enhancements may result through the levee improvements. Currently, the levees may be fully inundated during flood events and it is expected that in the post project condition, all levees will retain a minimum of one foot of freeboard during flooding.

In accordance with the Programmatic Formal Consultation, construction activity will occur from May 1 to October 31, during the active period for giant garter snake to lessen potential for direct mortality. Construction personnel will receive environmental awareness training on giant garter snake and its habitat. Prior to construction, habitat will be dewatered or lowered to the lowest possible level, for at least 15 consecutive days after April 15. A giant garter snake survey will be conducted 24 hours prior to construction activities. In addition to these measures, the project will observe the additive provisions of the project's Biological Opinion and/or other permits (if issued). Though the project will

temporarily result in the loss of potentially suitable GGS upland refugia habitat, the project is expected to enhance much of the existing suitable upland refugia habitat for GGS, by decreasing the overall degree and frequency of inundation in this habitat type. Likewise the project will enhance the existing aquatic foraging habitat in several areas, ensuring no net loss of habitat. Temporary impacts are expected to affect active construction areas for less than one year. Implementation of Mitigation Measure B described herein and conditions in permits issued by the USFWS and/or CDFW will ensure impacts to giant garter snake are ***less than significant with mitigation***.

SWAINSON'S HAWK (BUTEO SWAINSONI), STATE THREATENED, USFWS BIRD OF CONSERVATION CONCERN

Swainson's hawk is a summer resident and migrant in California's Central Valley and scattered portions of the southern California interior. Nests are constructed of sticks and placed in trees located in otherwise largely open areas. Areas typically used for nesting include the edge of narrow bands of riparian vegetation, isolated patches of oak woodland, lone trees, and also planted and natural trees associated with roads, farmyards and sometimes adjacent residential areas. Foraging occurs in open habitats, including grasslands, open woodlands, and agricultural areas. While breeding adults feed primarily on rodents (and other vertebrates); for the remainder of the year, large insects (e.g., grasshoppers, dragonflies) comprise most of the diet. In many areas, Swainson's hawks have adapted to foraging primarily in and around agricultural plots (particularly alfalfa, wheat and row crops), as prey is both numerous and conspicuous at harvest and/or during flooding or burning.[15]

The project site provides suitable foraging habitat outside of the flooding season. The project does not propose a permanent change to the land use, and therefore there is no impact to Swainson's hawk foraging habitat.

Swainson's hawk have been documented nesting in the project site and several suitable nesting trees are present within the project site. Construction will occur from May 1 through October 31, which overlaps with the Swanson's hawk nesting season. The project has the potential to impact individuals by causing disturbance that could lead to nest abandonment.

For determining impacts to and establishing mitigation for nesting Swainson's hawks in Sacramento County, CDFW recommends utilizing the methodology set forth in the Recommended Timing and Methodology for Swainson's Hawk nesting Surveys in California's Central Valley (Swainson's Hawk Technical Advisory Committee 2000). The document recommends that surveys be conducted for the two survey periods immediately prior to the **start of construction**. The five survey periods are defined by the timing of migration, courtship, and nesting in a typical year (refer to Table 4). Surveys should

[15] *Bechard, M. J., C. S. Houston, J. H. Sarasola and A. S. England. 2010. Swainson's Hawk (Buteo swainsoni), The Birds of North America Online (A. Poole, Ed.). Ithaca: Cornell Lab of Ornithology; Retrieved from the Birds of North America Online: http://bna.birds.cornell.edu/bna/species/265*

extend a ½-mile radius around all project activities, and if active nesting is identified, CDFW should be contacted.

Table 4: Recommended Survey Periods for Swainson's Hawk (TAC 2000)

Period #	Timeframe	# of surveys required	Notes
I.	Jan. 1 – Mar. 20	1	Optional, but recommended
II.	Mar. 20 – Apr. 5	3	
III.	Apr. 5 – Apr. 20	3	
IV.	Apr. 21 – June 10	N/A	Initiating surveys is not recommended during this period
V.	June 10 – July 30	3	

For example, if a project is scheduled to begin on June 20, three surveys should be completed in Period III and three surveys in Period V, as surveys should not be initiated in Period IV. It is always recommended that surveys be completed in Periods II, III and V. To avoid impacts to nesting birds, surveys will be conducted following the Recommended Timing and Methodology for Swainson's Hawk Nesting Surveys in California's Central Valley (Swainson's Hawk Technical Advisory Committee 2000). Subsequent to these surveys, active nests will be avoided through the establishment of an avoidance buffer that considers the type of disturbance and observations of the active nest by a biologist, in consultation with CDFW. Buffers will be sufficient to avoid nest abandonment or other types of failure that could result from project activities.

Implementation Mitigation Measure C will ensure impacts to Swainson's hawk are ***less than significant with mitigation***.

TRICOLORED BLACKBIRD (AGELAIUS TRICOLOR), STATE THREATENED, CDFW SPECIES OF SPECIAL CONCERN

The tricolored blackbird is a locally common resident in the Central Valley and along coastal California. Most tricolored blackbirds reside in the Central Valley March through August, then moving into the Sacramento-San Joaquin Delta and east to Merced County and coastal locations during winter (Meese et al. 2014). This species breeds adjacent to fresh water, preferring emergent wetlands with tall, dense cattails or tules, thickets of willow or blackberry, and/or tall herbs. Flooded agricultural fields with dense vegetation are also used (Shuford and Gardali 2008). This species is highly colonial; nesting habitat must be large enough to support a minimum of 30 pairs, and colonies are commonly substantially larger (up to thousands of pairs). The tricolored blackbird often intermingles with other blackbird species during the non-breeding season. Individuals typically forage

up to 5.6 miles (9 kilometers) from their colonies although in most cases only a small part of the area within this range provides suitable foraging (Hamilton and Meese 2006).

The majority of the project site does not provide suitable nesting habitat for this species. Freshwater marshes with dense emergent vegetation on the margins of the site, especially in the southeastern portion of the North Unit, could potentially support habitat for a breeding colony. This portion of the project site is not proposed for grading. Project construction activities have the potential to impact nesting birds if construction is initiated during the breeding bird season (February 1 through August 31). Potential impacts include direct destruction of nests as well as indirect visual and acoustic disturbance to nesting birds from construction in adjacent areas that has the potential to result in nest abandonment. If construction activities are proposed during the breeding season (March 1 through July 31) pre-construction surveys shall be conducted where suitable nesting habitat is present within 300 feet of the project site. If tricolored blackbirds are found nesting within 300 feet of the survey area, the CDFW shall be contacted and appropriate avoidance and impact minimization measures shall be implemented. This may include establishing a buffer or postponing construction until fledging of all nestlings (about July 31). Specific measures cannot be outlined at this time, because the extent and type of measures required are highly situational, depending on distance to the nest, the number of nesting individuals, the type of nesting substrate, and other factors. If no tricolored blackbirds are found during the pre-construction survey, no further mitigation would be required. Preconstruction surveys for nesting birds as detailed in Mitigation Measure D and establishment of appropriate buffer zones around nesting birds will ensure impacts to tricolored blackbird are ***less than significant with mitigation***.

GREATER SANDHILL CRANE (GRUS CANADENSIS TABIDA), STATE THREATENED SPECIES, CDFW FULLY PROTECTED

In California, this species breeds only in Siskiyou, Modoc and Lassen Counties and in Sierra Valley, Plumas and Sierra Counties (James 1977, Remsen 1978, McCaskie et al. 1979). In summer, this species occurs in and near wet meadow, shallow lacustrine, and fresh emergent wetland habitats. It winters primarily in the Sacramento and San Joaquin valleys, where it frequents annual and perennial grassland habitats, moist croplands with rice or corn stubble, and open, emergent wetlands. It prefers relatively treeless plains.

The project site provides winter foraging when the species seasonally migrates to the region. The project will occur from May 1 through October 31 when greater sandhill crane are not present in the region. The project will result in a net gain of suitable wetland habitat for sandhill cranes. Impacts to greater sandhill crane will be ***less than significant***.

BURROWING OWL (ATHENE CUNICULARIA), CDFW SPECIES OF SPECIAL CONCERN

The burrowing owl occurs as a year-round resident and winter visitor in much of California's lowlands, inhabiting open areas with sparse or non-existent tree or shrub canopies. Typical habitat is annual or perennial grassland, although human-modified

areas such as agricultural lands and airports are also used.[16] This species is dependent on burrowing mammals to provide the burrows that are characteristically used for shelter and nesting, and in northern California is typically found in close association with California ground squirrels (*Spermophilus beecheyi*). Manmade substrates such as pipes or debris piles may also be occupied in place of burrows. Prey consists of insects and small vertebrates. Breeding typically takes place from March to July.

Burrowing owls require small mammal burrows (i.e. ground squirrel), or burrow surrogates in order to nest. The majority of the project site is in flood irrigated agricultural production, or is seasonally flooded for waterfowl hunting, which results in disruption or flooding of burrows. The developed roads and levees have potential to support ground squirrel colonies. Scattered burrows were observed along some of the dirt roads, primarily in the North Unit. While the majority of the project site is unsuitable for burrowing owl, this species has a moderate potential to occur due to nearby documented occurrences and scattered burrows within the project site along berms and levees.

According to the CDFW "Staff Report on Burrowing Owl Mitigation" (March 2012), surveys for burrowing owl should be conducted whenever suitable habitat is present within 500 feet of a proposed impact area; this is also consistent with the "Burrowing Owl Survey Protocol and Mitigation Guidelines" published by The California Burrowing Owl Consortium (April 1993). Occupancy of burrowing owl habitat is confirmed whenever one burrowing owl or burrowing owl sign has been observed at a burrow within the last three years.

The CDFW Staff Report on Burrowing Owl Mitigation indicates that the impact assessment should address the factors which could impact owls, the type and duration of disturbance, the timing and duration of the impact, and the significance of the impacts. The assessment should also take into account existing conditions, such as the visibility and likely sensitivity of the owls in question with respect to the disturbance area and any other environmental factors which may influence the degree to which an owl may be impacted (e.g. the availability of suitable habitat).

Construction activities may directly impact burrowing owl individuals through ground disturbance and vehicle traffic, or they may impact potential habitat through ground disturbance or staging or stockpiling construction materials, which would be considered potentially significant impacts. Implementation of the Mitigation Measure E will ensure impacts to burrowing owl are ***less than significant with mitigation***.

WESTERN POND TURTLE (ACTINEMYS MARMORATA), CDFW SPECIES OF SPECIAL CONCERN

The western pond turtle (WPT) is the only native freshwater turtle in California. This turtle is uncommon to common in suitable aquatic habitat throughout California, west of the Sierra-Cascade crest and Transverse Ranges. Western pond turtle inhabits annual and

[16] *Poulin, Ray, L. D. Todd, E. A. Haug, B. A. Millsap and M. S. Martell. 2011. Burrowing Owl (Athene cunicularia), The Birds of North America Online (A. Poole, Ed.). Ithaca: Cornell Lab of Ornithology; Retrieved from the Birds of North America Online: http://bna.birds.cornell.edu/bna/species/061doi:10.2173/bna.61*

perennial aquatic habitats, such as coastal lagoons, lakes, ponds, marshes, rivers, and streams from sea level to 5,500 feet in elevation. Pond turtle also occupies man-made habitats such as stock ponds, wastewater storage, percolation ponds, canals, and reservoirs. This species requires low-flowing or stagnant freshwater aquatic habitat with suitable basking structures, including rocks, logs, algal mats, mud banks and sand. Warm, shallow, nutrient-rich waters are ideal as they support WPT prey items, which include aquatic invertebrates and occasionally fish, carrion, and vegetation. Turtles require suitable aquatic habitat for most of the year; however, WPT often occupies creeks, rivers, and coastal lagoons that become seasonally unsuitable. To escape periods of high water flow, high salinity, or prolonged dry conditions, WPT may move upstream and/or take refuge in vegetated, upland habitat for up to four months.[17] Although upland habitat is utilized for refuging and nesting, this species preferentially utilizes aquatic and riparian corridors for movement and dispersal.

Western pond turtle nests from late April through July. This species requires open, dry upland habitat with friable soils for nesting and prefer to nest on unshaded slopes within 15 to 330 feet of suitable aquatic habitat.[18] The nest site can be up to 1,300 feet from the aquatic habitat, but it is more typical for the nest to be within 650 feet of aquatic habitat. The Life History Account conservatively recommends a buffer of 1,650 feet to ensure that neither adults nor nests will be impacted. Females venture from water for several hours in the late afternoon or evening during the nesting season to excavate a nest, lay eggs, and bury the eggs to incubate and protect them. Nests are well-concealed, though native mammals are occasionally able to locate and predate upon eggs. Hatchlings generally emerge in late fall but may overwinter in the nest and emerge in early spring of the following year.

The project site contains freshwater habitat, foraging opportunities and basking sites such as downed trees and rocks that may support this species. Grassland habitat on the existing levees and within the project site provide potential nesting habitat.

The CDFW has not published mitigation or other regulatory guidance for the treatment of impacts to this species. As a result, mitigation is focused on preventing construction activities from resulting in direct mortality of a western pond turtle. The developer will be required to perform surveys 24-hours prior to ground-disturbing activity to ensure that there are no western pond turtles within or near the construction area. Implementation of Mitigation Measure F will ensure impacts to western pond turtle are ***less than significant with mitigation***.

---

[17] *Rathbun, GB, NJ Scott, Jr., and TG Murphey. 2002. Terrestrial habitat use by Pacific pond turtles in a Mediterranean climate. The Southwestern Naturalist 47: 225-235.*

[18] *Rathbun, GB, N Seipel and DC Holland. 1992. Nesting behavior and movements of western pond turtles, Clemmys marmorata. The Southwestern Naturalist 37: 319-324.*

SONG SPARROW - MODESTO POPULATION (MELOSPIZA MELODIA), CDFW SPECIES OF SPECIAL CONCERN

The Modesto population of the song sparrow is endemic to the north-central portion of the Central Valley. Highest densities occur in the Butte Sink area. This song sparrow has an affinity for emergent freshwater marshes, but will also nest in willow thickets, valley oak riparian forests, and along vegetated irrigation canals and levees. Song sparrow nest within the marsh and riparian habitats within the project site. Measures to reduce potential impacts to this species are included in the Mitigation Measure G. With implementation of the described measures, impacts would be ***less than significant with mitigation***.

NORTHERN HARRIER (CIRCUS HUDSONIUS [CYANEUS]), CDFW SPECIES OF SPECIAL CONCERN

The northern harrier occurs as a resident and winter visitor in open habitats throughout most of California, including freshwater and brackish marshes, grasslands and fields, agricultural areas, and deserts. Harriers typically nest in treeless areas within patches of dense, relatively tall, vegetation, the composition of which is highly variable; nests are placed on the ground and often located near water or within wetlands.[19] Harriers are birds of prey and subsist on a variety of small mammals and other vertebrates. Marsh and agricultural areas may provide suitable foraging and nesting habitat for this species.

To avoid impacts to nesting northern harrier, mitigation involves pre-construction nesting surveys to identify any active nests and to implement avoidance measures if nests are found – if construction will occur during the nesting season of February 1 to August 31. The purpose of the survey requirement is to ensure that construction activities do not agitate or harm nesting raptors, potentially resulting in nest abandonment or other harm to nesting success. If nests are found, the developer is required to contact CDFW to determine what measures need to be implemented in order to ensure that nesting raptors remain undisturbed. The measures selected will depend on many variables, including the distance of activities from the nest, the types of activities, and whether the landform between the nest and activities provides any kind of natural screening. If no active nests are found during the focused survey, no further mitigation will be required. Measures to reduce potential impacts to this species are included in Mitigation Measure H. With implementation of the described measures, impacts would be ***less than significant with mitigation***.

WHITE-TAILED KITE (ELANUS LEUCURUS), CDFW FULLY PROTECTED SPECIES

The white-tailed kite is resident in open to semi-open habitats throughout the lower elevations of California, including grasslands, savannahs, woodlands, agricultural areas and wetlands. Vegetative structure and prey availability seem to be more important habitat elements than associations with specific plants or vegetative communities. Nests are constructed mostly of twigs and placed in trees, often at habitat edges. Nest trees are highly variable in size, structure, and immediate surroundings, ranging from shrubs

[19] *Shuford, W. David, and Thomas Gardali. 2008. California Bird Species of Special Concern: A ranked assessment of species, subspecies, and distinct populations of birds of immediate conservation concern in California. No. 1. Western Field Ornithologists.*

to trees greater than 150 feet tall.[20] This species preys upon a variety of small mammals, as well as other vertebrates and invertebrates. This species typically may use grassland or agricultural fields within the project site for foraging. Additionally, scattered trees throughout the area may provide nesting habitat for the species.

To avoid impacts to nesting white-tailed kite, mitigation involves pre-construction nesting surveys to identify any active nests and to implement avoidance measures if nests are found – if construction will occur during the nesting season of February 1 to August 31. The purpose of the survey requirement is to ensure that construction activities do not agitate or harm nesting raptors, potentially resulting in nest abandonment or other harm to nesting success. If nests are found, the developer is required to contact CDFW to determine what measures need to be implemented in order to ensure that nesting raptors remain undisturbed. The measures selected will depend on many variables, including the distance of activities from the nest, the types of activities, and whether the landform between the nest and activities provides any kind of natural screening. If no active nests are found during the focused survey, no further mitigation will be required. Measures to reduce potential impacts to this species are included in Mitigation Measure H. With implementation of the described measures, impacts would be ***less than significant with mitigation***.

WESTERN RED BAT (LASIURUS BLOSSEVILLII), CDFW SPECIES OF SPECIAL CONCERN, WBWG HIGH PRIORITY

This species is highly migratory and broadly distributed, ranging from southern Canada through much of the western United States. Western red bats are believed to make seasonal shifts in their distribution, although there is no evidence of mass migrations (Pierson et al. 2006). They are typically solitary, roosting primarily in the foliage of broad-leafed trees or shrubs. Day roosts are commonly in edge habitats adjacent to streams or open fields, in orchards, and sometimes in urban areas possibly and association with riparian trees (particularly willows, cottonwoods, and sycamores; Pierson et al. 2006). It is believed that males and females maintain different distributions during pupping, where females take advantage of warmer inland areas and males occur in cooler areas along the coast. Western red bat has potential to roost within the project site and may be disturbed during vegetation removal activities. California Fish and Game Code offers protection to bat species and their roosting habitat, including individual roosts and maternity colonies. With the implementation of Mitigation Measure I, potential impacts to roosting bats will be ***less than significant with mitigation***.

DELTA SMELT (HYPOMESUS TRANSPACIFICUS), CRITICAL HABITAT, USFWS ENDANGERED, CDFW

According to the Recovery Plan for Sacramento Delta fish[21], Delta smelt (*Hypomesus transpacificus*) are an estuarine fish species which can tolerate a wide range of salinities. The species is only found in the upper Sacramento-San Joaquin estuary and is federally-

[20] *Dunk, JR. 1995. White-tailed Kite (Elanus leucurus), The Birds of North America Online (A Poole, Ed.). Ithaca: Cornell Lab of Ornithology; Retrieved from the Birds of North America Online: http://bna.birds.cornell.edu/bna/species/178.*

[21] United States Fish and Wildlife Service, "Recovery Plan for the Sacramento/San Joaquin Delta Native Fishes", November 1996.

listed as Threatened and state-listed as Endangered. Designated critical habitat includes the Sacramento River south of downtown Sacramento (approximate boundary is the I-Street bridge), impoundments and channels just east of the Sacramento River (which includes Stone Lakes), all of the portions of the Mokelumne River which lie within Sacramento County, Dry Creek to a point just west of Galt (approximately even with Orr Road), and all of the sloughs and estuaries within Sacramento County which are part of the Delta.

In Sacramento County the species occurs in the Delta, primarily below Isleton on the Sacramento River. They move into freshwater when spawning, which occurs from the period of January through July, with peak spawning occurring April through mid-May. In Sacramento County, most spawning occurs in sloughs and shallow edge-waters of channels in the Delta and Sacramento River above Rio Vista, where eggs are broadcast and stick to hard substrates (e.g. rock, tree roots, and submerged vegetation).

The project site is within designated delta smelt critical habitat. Currently, the Lambert Road flood control structure excludes the project site from providing biological or physical components of this species' critical habitat. The project has been designed to avoid indirect impacts to water quality and will be required to meet all County requirements related to water quality protection during construction and operation. Impacts would be ***less than significant***.

SENSITIVE NATURAL COMMUNITIES

Sensitive natural communities include habitats that fulfill special functions or have special values. Natural communities considered sensitive are those identified in local or regional plans, policies, regulations, or by the CDFW. CDFW ranks natural communities and keeps records of their occurrences in its California Natural Diversity Database.[22] CNDDB vegetation alliances are ranked 1 through 5 based on NatureServe's (2018) methodology, with those alliances ranked globally (G) or statewide (S) as 1 through 3 considered sensitive. Impacts to sensitive natural communities identified in local or regional plans, policies, or regulations or those identified by the CDFW must be considered and evaluated under CEQA (CCR Title 14, Div. 6, Chap. 3, Appendix G).

There are nine documented sensitive natural communities within Sacramento County. None are mapped within the project site according to CNDDB data, but one was identified at the project site during the field survey and is described below. Biological communities at the site can be viewed in Plate IS-5.

BLACK WILLOW THICKETS (*SALIX GOODDINGII* WOODLAND ALLIANCE). CDFW RANK: G4 S3

Black willow thickets typically occur on terraces along large rivers, canyons, and along rocky floodplains of small, intermittent streams, seeps, and springs within California. The canopy is open to continuous, dominated or co-dominated by black willow. Within the

[22] *[CDFW] California Department of Fish and Wildlife. 2019b. California Natural Diversity Database. California Department of Fish and Wildlife. Biogeographic Data Branch, Vegetation Classification and Mapping Program, Sacramento, California. Available online at: http://www.dfg.ca.gov/biogeodata/cnddb/mapsanddata.asp; most recently accessed: August 2019.*

project site, black willow is dominant or co-dominant in the canopy, with cottonwood (*Populus fremontii*) characteristic in the canopy along with several willow species, including Pacific willow (*Salix lasiandra*) and arroyo willow (*Salix lasiolepis*). There is a large even-aged, monotypic stand of black willow within the managed area of the Sun River Unit. Otherwise, black willow occurs along the ditches and the interior of levees surrounding Stone Lake. The understory is sparse to intermittent due to shading and flooding, which precludes many plants. Himalayan blackberry, California blackberry (*Rubus ursinus*), and California grape (*Vitis californica*) are present along the sunny edges of the woodlands. The project site contains 2.29 acres of black willow thicket and the proposed project will impact 0.17 acre of this community, 0.04 of which is located on the Serra Property and the rest on federally owned land. This impact will be temporary, as individual black willow trees will be transplanted to enhanced wetland areas of the project site. No net loss of black willow thicket acreage will occur and therefore the impact will be ***less than significant***.

RIPARIAN VEGETATION

A riparian habitat is defined as a distinct community of plants and animals found in and alongside a stream or river that supported by and enhances the existing stream or river. These communities can be up to a mile wide adjacent to large rivers, or a narrow border along the banks of small creeks.

The Sacramento County General Plan recognizes that riparian areas are an integral and vital element of the County's natural landscape. These communities provide a rich and diverse habitat that serves as a permanent or seasonal home to a plethora of wildlife species and provide open space and flood control. In 1993, in the Sacramento River Valley, only 25,000 of the estimated 500,000 acres of riparian habitat existing in 1850 remained.

In Section V (Vegetation and Wildlife) of the Sacramento County General Plan, Conservation Element, the introduction provides a setting of the vegetation and wildlife resources found throughout the County. It is stated that wetland and riparian areas in the County include historic backwater basins along the Sacramento River, the American River Parkway and the nationally significant valley oak riparian forest along the lower Cosumnes River.

Riparian areas within the project site consist of 0.26 acre of riparian sandbar willow thicket and 2.04 acres of black willow thicket associated with Stone Lake. The proposed project would impact 0.49 acre of existing riparian habitat, all of which is located on the privately owned Serra Property. However, the project is designed to restore approximately 40 acres of riparian wetland. The restoration process will largely rely upon the existing buried native seed bank, transplanting certain willow trees to other areas of the project site, and maintaining conditions for the native riparian vegetation to succeed. The proposed project will result in an increase in riparian habitat and function.

The project would result in a net increase of riparian vegetation and is consistent with the County's following policies to protect and enhance riparian habitat. The project is therefore consistent with the applicable polices from the County's General Plan:

CO-58. Ensure no net loss of wetlands, riparian woodlands, and oak woodlands.

CO-59. Ensure mitigation occurs for any loss of or modification to the following types of acreage and habitat function:

- Vernal pools
- Wetlands
- Riparian
- Native vegetative habitat
- Special status species habitat

CO-89. Protect, enhance and maintain riparian habitat in Sacramento County.

CO-90. Increase riparian woodland, valley oak riparian woodland and riparian scrub habitat along select waterways within Sacramento County.

The project will result in a net increase of riparian habitat, as well as enhanced ecological function of the seasonal wetlands on site. The impact of the proposed project on riparian habitat loss is considered ***less than significant***.

WETLANDS AND OTHER WATERS

Wetlands are regulated by both the federal and State government, pursuant to the Clean Water Act Section 404 (federal) and Section 401 (State). The US Army Corps of Engineers (Corps) is generally the lead agency for the federal permit process, and the Regional Water Quality Control Board (Regional Water Board) is generally the lead agency for the State permit process. The Clean Water Act protects all "navigable waters", which are defined as traditional navigable waters that are or were used for commerce, or may be used for interstate commerce; tributaries of covered waters; and wetlands adjacent to covered waters, including tributaries. Isolated wetlands are wetlands that are not hydrologically connected to other "navigable" surface waters (or their tributaries), and are not considered to be subject to the Clean Water Act.

In addition to the Clean Water Act, the state also has jurisdiction over impacts to surface waters through the Porter-Cologne Water Quality Control Act, which does not require that waters be "navigable". For this reason, federal non-jurisdictional waters – isolated wetlands – can be regulated by the State of California pursuant to Porter-Cologne.

The Clean Water Act establishes a "no net" loss" policy regarding wetlands for the State and federal governments, and General Plan Policy CO-58 establishes a "no net loss" policy for Sacramento County. Pursuant to these policies, any wetlands to be excavated or filled require 1:1 mitigation, and construction within the wetlands cannot take place until the appropriate permit(s) have been obtained from the Corps, the U.S. Fish and Wildlife Service, the Regional Water Board, and any other agencies with authority over surface waters. Any loss of delineated wetlands not mitigated for through the permitting process must be mitigated, pursuant to County policy. Appropriate mitigation may include establishment of a conservation easement over wetlands, purchase of mitigation banking credits, or similar measures.

The project site currently consists mainly of fallow agricultural land, and non-sensitive grassland and low-quality seasonal and perennial wetlands. A total of 174.2 acres of seasonal wetlands occur within the project site, including 9.5 acres of ditches, 31.8 acres of flood irrigated cropland and pasture, 5.7 acres of engineered swales, and 127.12 acres of managed seasonal wetlands (Appendix E). The project site also contains an additional 4.4 acres of perennial wetlands, which occur within excavated irrigation ditches that support water primrose (*Ludwigia* spp.) vegetation. Non-wetland waters within the project site consist of 1.8 acres of South Stone Lake.

Proposed project activities would impact 0.03 acres of Stone Lake and 135.7 acres of seasonal wetlands. As the project would convert the site to managed seasonal wetland post-project, impacts to 102.0 acres of existing managed wetlands would be temporary. In total, 33.76 acres of ditches, flood irrigated cropland and pasture, and engineered swales would be permanently converted to managed seasonal wetland post-project. As the project is designed to restore approximately 260 acres of seasonal wetland and enhance approximately 20 acres of existing low-quality wetland, impacted low-quality wetlands would be replaced with higher quality wetlands. The construction of the new wetland habitat would alter (and enhance) most of the existing wetland habitat by re-introducing native plant species and successional patterns. The hydrologic function of the site will remain and continue to meet Corps wetland criteria, providing habitat for fish and wildlife species.

MBK Engineers prepared a Hydraulic Impact Analysis Technical Memorandum to analyze how the proposed grading of the project site might impact drainage and flooding in the project vicinity (Appendix F). The Department of Water Resources (DWR, Furlan, 11/18/2020) reviewed the memorandum and concluded that no adverse impacts would result for the 100 year - 24 hour event.

All work within on-site waters of the State or waters of the U.S. will require applicable U.S. Army Corps of Engineers and State Regional Water Board permits prior to ground disturbance. Procurement and adherence to all permits would ensure impacts to wetlands and other waters are ***less than significant***.

HABITAT CONSERVATION PLAN

The project site falls within the Plan Area of the South Sacramento Habitat Conservation Plan (SSHCP). The Plan Area is divided into two components: inside and outside the Urban Development Area (UDA). All proposed urbanization and some preserves will occur inside the UDA, while most preservation will occur outside the UDA. The project site is located outside the UDA. The project is not a Covered Activity under the SSHCP, and therefore not subject to participation in the SSHCP.

Although the proposed project is not a Covered Activity under the SSHCP, mitigation Measures B through I ensure that the proposed improvements would be consistent with all applicable avoidance and minimization measures outlined in the SSHCP. These include General Avoidance and Minimization Measures outlined in Section 5.4.1, as well as Covered Species Take Avoidance and Minimization Measures outlined in Section 5.4.2 for species potentially affected by the project and covered by the SSHCP.

Additionally, restoring the area to natural habitat aids in the overall conservation strategy for the SSHCP area. Impacts would be ***less than significant with mitigation***.

CULTURAL RESOURCES

This section supplements the Initial Study Checklist by analyzing if the proposed project would:

- Cause a substantial adverse change in the significance of a historical resource.
- Have a substantial adverse effect on an archaeological resource.
- Disturb any human remains, including those interred outside of dedicated cemeteries.

Under CEQA, lead agencies must consider the effects of projects on historical resources and archaeological resources. A "historical resource" is defined as a resource listed in, or determined to be eligible for listing in, the California Register of Historical Resources (CRHR), a resource included in a local register of historical resources, and any object, building, structure, site, area, place, record, or manuscript which a lead agency determines to be historically significant (Section 15064.5[a] of the Guidelines). Public Resources Code (PRC) Section 5042.1 requires that any properties that can be expected to be directly or indirectly affected by a proposed project be evaluated for CRHR eligibility. Impacts to historical resources that materially impair those characteristics that convey its historical significance and justify its inclusion or eligibility for the NRHP or CRHR are considered a significant effect on the environment (CEQA guidelines 15064.5)).

In addition to historically significant resources, an archeological site may meet the definition of a "unique archeological resource" as defined in PRC Section 21083.2(g). If unique archaeological resources cannot be preserved in place or left in an undisturbed state, mitigation measures shall be required (PRC Section 21083.2 (c)).

CEQA Guidelines Section 15064.5 (e) outlines the steps the lead agency shall take in the event of an accidental discovery of human remains in any location other than a dedicated cemetery.

CULTURAL SETTING

Tom Origer & Associates prepared cultural resources report for the project. The following information and analysis is based on this report. On September 9, 2019, Tom Origer & Associates conducted a records search of the North Central Information Center (NCIC), Sacramento State University, for the project site and areas within 0.5 mile of the project site. The records search identified two previously recorded resources within the APE:

- the Sun River Levee (P-34-001596), and
- Indigenous archaeological site (P-34-000351).

The first resource, the Sun River Levee, is an earthen levee first recorded in 2002. The resource extends along the perimeter of nearly all of the Sun River Unit of the project site. This resource was evaluated as not eligible for the California Register. Upon examination of the original documentation of the second resource, P-34-000351, Tom Orriger and Associates determined that the resource had been incorrectly mapped. P-34-001596 is not located within the project site.

In September and December of 2019, Tom Origer & Associates conducted a cultural resources pedestrian survey of the project site, covering all portions of the project site. Intensive pedestrian survey methods were used, consisting of walking parallel transects spaced no more than approximately 15 meters apart and inspecting the surface for cultural material or evidence thereof. Hoes were also used as needed to clear patches of vegetation to expose the ground surface. The bullet-point list below summarizes the findings of the built environment and historic archaeological surveys.

- The Brighton-Grand Island Transmission Line, an electrical transmission line located in Headquarter Unit 9. The resource was not evaluated for the California Register; Tom Origer and Associates concluded that the proposed project might impact the setting of the resource, but would not impact the resource or its significance.

- Headquarters Features, comprised of two agricultural ditches, a road, and a levee, located in the North Unit. The resource was previously unevaluated and was not found through this project to be eligible for the California Register.

- Sun River Ditches and Road located within the Sun River Unit, comprised of eight (8) agricultural ditches and a road. The resource was previously unevaluated and was found not eligible for the California Register.

- P-34-001596, the Sun River Levee, is located along the perimeter of the Sun River Unit portion of the project site. The levee was found not eligible for the California Register.

Therefore, no built environment or historic archaeological resources eligible for the California Register of Historical Resources were identified through research or survey.

The Stone Lakes National Wildlife Refuge includes known repatriated human remains protected by the Native American Graves Protection and Repatriation Act (NAGPRA). The USFWS has records of these sacred sites and is working with tribes to avoid disturbance to these known burials; however, the project area is also sensitive to burials not previously surveyed or recorded. Therefore, tribal representatives have worked with USFWS to develop NAGPRA Plan of Action (POA) in the event that human remains are uncovered during ground disturbing activities. For more discussion regarding consultation with tribes and development of the POA, please see the Tribal Cultural Resources section.

PROJECT IMPACTS: CULTURAL RESOURCES

A NAGPRA POA was prepared by tribal representatives and USFWS which includes a protocol for the unanticipated discovery of human remains during ground disturbing activities. In the event that human remains buried outside of formal cemeteries or known repatriation areas are encountered during construction within the Refuge properties, the POA will be implemented. Compliance with the POA includes compliance with Sections 5097.97 and 5097.98 of the State Public Resources Code, and Section 7050.5 of the State Health and Safety Code.

In the event that remains are discovered on the Serra property, outside of the Refuge, all work shall immediately halt within 100 feet of the find and the Sacramento County Coroner shall be contacted to evaluate the remains and follow the procedures and protocols set forth in CEQA Guidelines Section 15064.5(e)(1). If the county coroner determines that the remains are Native American, the County shall contact the California Native American Heritage Commission, in accordance with California Health and Safety Code Section 7050.5(c) and PRC Section 5097.98.

With the aforementioned NEPA and CEQA mitigation in place, project impacts to cultural resources will be ***less than significant***.

TRIBAL CULTURAL RESOURCES

This section supplements the Initial Study Checklist by analyzing if the proposed project would:

- Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with a cultural value to a California Native American tribe, that is:

    - Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or

    - A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

Under PRC Section 21084.3, public agencies shall, when feasible, avoid damaging effects to any tribal cultural resource. California Native American tribes traditionally and culturally affiliated with a geographic area may have expertise concerning their tribal cultural resources (21080.3.1(a)).

TRIBAL CULTURAL RESOURCE SETTING

On September 4, 2019, Tom Origer & Associates contacted the California Native American Heritage Commission (NAHC), requesting a search of the NAHC's Sacred Lands File (SLF) and a list of Native American representatives who may be interested in the proposed project. The NAHC replied on September 24, 2019, stating that the SLF has no record of sacred sites in the project site. The reply also included a list of Native American representatives to contact regarding the proposed project.

In October 2019, Tom Origer & Associates sent letters with proposed project information to the Native American contacts identified by the NAHC: Ione Band of Miwok Indians, Shingle Springs Band of Miwok Indians, United Auburn Indian Community of the Auburn Rancheria (UAIC), and Wilton Rancheria. In addition, letters were sent to the following individuals: Leland Daniels, and Randy Yonemura. Tom Origer & Associates sent follow-up emails to the same contacts in November 2019. Anna Starkey of the UAIC responded via email on September 13, 2019, requesting a copy of the draft cultural resources study. Gene Whitehouse of the UAIC responded on September 19, 2019, requesting copies of any drafted or completed archaeological reports and cultural resources assessments for the proposed project. Wilton Rancheria responded via email on September 20, 2019, providing information about how to avoid tribal cultural resources and consulting with tribal monitors; additionally, they requested a copy of the cultural resources reports for the proposed project.

In accordance with Assembly Bill (AB) 52, codified as Section 21080.3.1 of CEQA, formal notification letters were sent to those tribes who had previously requested to be notified of Sacramento County projects on April 13, 2020. The UAIC responded on April 15, 2020 to indicate that the area is sensitive for tribal cultural resources. On April 22, 2020, Wilton Rancheria responded to the AB52 notification letter to request consultation. On May 20, 2020, UAIC emailed and indicated that because Wilton Rancheria had also requested consultation on the project, the UAIC would defer consultation to Wilton Rancheria.

Consultation was conducted with Wilton Rancheria, Sacramento County, and the United States Fish and Wildlife Service (Stone Lakes National Wildlife Refuge), and included the following:

- 11/5/2020: Site visit with Steven Hutchason and Sacramento County to discuss the Wilton Rancheria's concerns with the project.
- 2/12/2021: Initial meeting via Teams with Steven Hutchason and Sacramento County to discuss the wetland restoration project, construction monitoring and potential areas of cultural sensitivity.
- 3/5/2021: Meeting at the Refuge with Randy Yonemura and Steven Hutchason from the Wilton Rancheria to discuss developing a NAGPRA Plan of Action for the two Refuge units. The tribe requested that the project sites APE be staked with areas of deep cut and earth moving (swales, ditches, staging areas and entry points) be flagged so they could conduct visual pedestrian surveys to determine high areas of sensitivity.

- 4/22/2021: Follow up meeting with Randy Yonemura and Steven Hutchason from the Wilton Rancheria to discuss the survey logistics and the draft POA.

Tribes have identified the project area as a Tribal Cultural Landscape (TCL) or Traditional Cultural Property (TCP), a "historic property of religious and cultural significance to Indian tribes." USFWS prepared a Native American Graves Protection and Repatriation Act (NAGPRA) Plan of Action (POA) for an integrated resources management approach on the Stone Lakes National Wildlife Refuge parcels identified as a TCL. Wilton Rancheria conducted surveys of the areas in the Refuge where earth moving and construction is proposed, to determine the highest areas of sensitivity for cultural resources. The POA outlines specific actions to take in the event of an inadvertent discovery, whom to inform and how the inadvertent discovery may be treated and protected with the use of tribal methods and participation.

The POA is applicable to those parcels within the Refuge Project Boundary. The Service prepared a NAGPRA Plan of Action (POA) with the Wilton Rancheria tribe. The POA outlines specific actions to take and whom to inform in case of discovery during construction. It also indicates how tribal cultural properties and resources will be addressed and protected on the federal properties. The POA will be provided to the other 3 tribes (Buena Vista Rancheria, Auburn Rancheria [UAIC], Ione Band of Miwok) that expressed some concerns and requested construction monitoring during the initial tribal consultation (USFWS Memorandum, *Initiation of Section 106 Consultation for Stone Lakes Restoration* 3/9/2020).

The portion of the project area located on a private parcel (the Serra Property) is not covered in the POA; however, the property is also considered highly sensitive for the discovery of tribal cultural resources. Mitigation measures have been incorporated into the CEQA document to remain consistent with those proposed in the POA.

DISCUSSION OF PROJECT IMPACTS – TRIBAL CULTURAL RESOURCES

Through consultation under Section 106 and CEQA, tribes confirmed that the project area contains tribal cultural properties and tribal cultural resources of significance. The tribes and lead agencies mutually agreed that tribal cultural resources mitigation measures were appropriate and feasible for the project. Avoidance and mitigation measures include a NAGPRA POA and Native American and archeological monitors during ground disturbing activities. With mitigation, project impacts to tribal cultural resources will be ***less than significant***.

GREENHOUSE GAS EMISSIONS

This section supplements the Initial Study Checklist by analyzing whether the proposed project would:

- Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

This question was addressed quantitatively by calculating GHG emissions and comparing to the corresponding significance thresholds in the SMAQMD CEQA Guidelines. Emissions were quantified using the tool recommended by SMAQMD (Sacramento's Road Construction Emissions Model, v 9.0) for the expected construction duration of five months, conservatively assuming simultaneous operation of all equipment at two of the four planned work areas within the project site for the entire five months. Table 4 below illustrates that emissions would be well below SMAQMD's significance thresholds.

Table 4. Project Emissions Compared to Significance Thresholds

Emissions	Project (MT CO_2e/year)	Significance Threshold (MT CO_2e/year)
GHG	311	1,100

Appendix D includes details regarding how emissions were quantified. As emissions would be below SMAQMD's established thresholds of significance, impacts would be ***less than significant*** related to the listed topic area.

ENVIRONMENTAL MITIGATION MEASURES

Mitigation Measures A – L are critical to ensure that identified significant impacts of the project are reduced to a level of less than significant. Pursuant to Section 15074.1(b) of the CEQA Guidelines, each of these measures must be adopted exactly as written unless both of the following occur: (1) A public hearing is held on the proposed changes; (2) The hearing body adopts a written finding that the new measure is equivalent or more effective in mitigating or avoiding potential significant effects and that it in itself will not cause any potentially significant effect on the environment.

As the applicant, or applicant's representative, for this project, I acknowledge that project development creates the potential for significant environmental impact and agree to implement the mitigation measures listed below, which are intended to reduce potential impacts to a less than significant level.

Applicant [Original Signature on File]_____ Date: _____

MITIGATION MEASURE A: ENHANCED FUGITIVE DUST CONTROL MEASURES

SMAQMD's Basic Construction Emission Control Practices (Best Management Practices or BMPs)[23] and Enhanced Fugitive PM Dust Control Practices[24] shall be utilized, which include:

- Limiting vehicle speeds on unpaved roads to 15 mph;
- Watering exposed soil with adequate frequency for continued moist soil without overwatering to the extent that sediment flows off the site;
- Suspending excavation/grading activity when wind speeds exceed 20 mph;
- Use of existing foliage as wind breaks on the windward sides of construction areas
- Install wheel washers or wash off all equipment leaving the site;
- Treat site accesses to a distance of 100 feet from the paved road with a 6 to 12-inch layer of wood chips, mulch, or gravel to reduce generation of road dust and road dust carryout onto public roads; and

[23] *SMAQMD, "Basic Construction Emission Control Practices (Best Management Practices)", Appendix to Chapter 3 of "Guide to Air Quality Assessment in Sacramento County", July 2019. Available from http://www.airquality.org/LandUseTransportation/Documents/Ch3BasicEmissionControlPracticesBMPSFinal7-2019.pdf.*

[24] *SMAQMD, "Enhanced Fugitive PM Dust Control Practices)", Appendix to Chapter 3 of "Guide to Air Quality Assessment in Sacramento County", December 2009. Available from http://www.airquality.org/LandUseTransportation/Documents/Ch3EnhancedFugitiveDustControlFINAL12-2009.pdf.*

- Post a publicly visible sign with the telephone number and person to contact at the County (and the phone number of the Sacramento Metropolitan AQMD) regarding dust complaints.

MITIGATION MEASURE B: GGS AVOIDANCE AND MINIMIZATION MEASURES

Due to the potential for adverse impacts to giant garter snake, consultation and permitting with the USFWS and CDFW are required. As part of the permitting process, the Applicant shall consult with USFWS and CDFW and implement all avoidance and minimization measures as required. In addition, the following measures shall be implemented prior to and during construction to avoid or minimize impacts to giant garter snake:

- All workers shall receive a worker environmental awareness training program describing GGS, its status, required avoidance and minimization measures, and penalties for take.

- Project related vehicles and equipment shall be staged outside of GGS habitat, at locations approved by the qualified biologist.

- Drainages/suitable aquatic habitat shall be dewatered and allowed to dry for at least 15 days prior to ground disturbance.

- In areas identified as having potential to support GGS and which been cannot be adequately dewatered, a qualified biologist shall be present for all vegetation removal and initial ground disturbance.

- Work windows shall restrict initial ground disturbance activities in potentially occupied GGS habitat to times of year (May 1 to October 15) when GGS are active and easier to detect and avoid/relocate.

- The qualified biologists shall have stop-work authority if GGS are detected in an area where it may be injured or killed by activities, and if approved by USFWS and CDFW, the qualified biologist shall relocate the individual(s).
    - Any GGS relocated shall be reported to the USFWS and CDFW within 24 hours.

- If GGS are observed by the qualified biologist at any time, the individual(s) shall be captured and relocated outside of the project site in an area determined to be suitable by the qualified biologist.

- No monofilament or plastic netting shall be used in erosion control materials.

- To avoid entrapment of GGS, trenches shall be covered overnight or escape ramps installed. Any pipes or hoses shall be sealed with duct tape or equally

effective means so that no GGS can enter them. Alternatively, pipes and hoses may be stored at least 3 feet above ground or within a part of the staging area surrounded by exclusionary fence.

- Vehicles shall observe a speed limit of 15 miles per hour and operators shall remain vigilant when operating in areas identified as potential GGS habitat. Speed limit in areas not identified as suitable habitat shall be 25 miles per hour.

- If construction personnel observe GGS within the Action Area, they shall stop work in the area and inform the qualified biologist.

- If construction personnel observe a dead or injured GGS or if a GGS is killed or injured during construction-related activities, the worker shall report the incident to the qualified biologist and the USFWS, and if necessary CDFW, within 24-hours of the incident.

- To reduce potential for attraction of opportunistic predators of GGS, all food-related trash items such as wrappers, cans, bottles, and food scraps shall be enclosed in sealed containers and removed at least once every week.

MITIGATION MEASURE C: SWAINSON'S HAWK NESTING AVOIDANCE

If construction, grading, or project-related improvements are to commence between February 1 and September 15, focused surveys for Swainson's hawk nests shall be conducted by a qualified biologist within a ½-mile radius of project activities, in accordance with the Recommended Timing and Methodology for Swainson's Hawk Nesting Surveys in California's Central Valley (Swainson's Hawk TAC 2000). To meet the minimum level of protection for the species, surveys should be completed for the two survey periods immediately prior to commencement of construction activities in accordance with the 2000 TAC recommendations. If active nests are found, CDFW shall be contacted to determine appropriate protective measures, and these measures shall be implemented prior to the start of any ground-disturbing activities. If no active nests are found during the focused survey, no further mitigation will be required.

MITIGATION MEASURE D: TRICOLOR BLACKBIRD

Pre-construction surveys will be required to determine if active nests are present within a project footprint or within 500 feet of a project footprint if existing or potential nest sites were found during design surveys and construction activities will occur during the breeding season (March 1 through September 15). An approved biologist will conduct pre-construction surveys within 30 days and again within 3 days of ground-disturbing activities, and within the proposed project footprint and 500 feet of the proposed project footprint to determine the presence of nesting tricolored blackbird. The surveys should be separated by at least three weeks. Pre-construction surveys will be conducted during the breeding season (March 1 through September 15). Surveys conducted in February (to meet pre-construction survey requirements for work starting in March) must be conducted

within 14 days and 3 days in advance of ground-disturbing activities. If a nest is present, then TCB-3 and TCB-4 will be implemented. The approved biologist will inform the Land Use Authority Permittee and the Implementing Entity of species locations, and they in turn will notify the Wildlife Agencies.

MITIGATION MEASURE E: BURROWING OWL

Prior to the commencement of construction activities (which includes clearing, grubbing, or grading) within 500 feet of suitable burrow habitat, a survey for burrowing owl shall be conducted by a qualified biologist. The survey shall occur within 30 days of the date that construction will encroach within 500 feet of suitable habitat. Surveys shall be conducted in accordance with the following:

1) A survey for-burrows and owls should be conducted by walking through suitable habitat over the entire project site and in areas within 150 meters (~500 feet) of the project impact zone.

2) Pedestrian survey transects should be spaced to allow 100 percent visual coverage of the ground surface. The distance between transect center lines should be no more than 30 meters (~100 feet), and should be reduced to account for differences in terrain, vegetation density, and ground surface visibility. To efficiently survey projects larger than 100 acres, it is recommended that two or more surveyors conduct concurrent surveys. Surveyors should maintain a minimum distance of 50 meters (~160 feet) from any owls or occupied burrows. It is important to minimize disturbance near occupied burrows during all seasons.

3) If no occupied burrows or burrowing owls are found in the survey area, a letter report documenting survey methods and findings shall be submitted to the Environmental Coordinator and no further mitigation is necessary.

4) If occupied burrows or burrowing owls are found, then a complete burrowing owl survey is required. This consists of a minimum of four site visits conducted on four separate days, which must also be consistent with the Survey Method, Weather Conditions, and Time of Day sections of Appendix D of the California Fish and Wildlife “Staff Report on Burrowing Owl Mitigation” (March 2012). Submit a survey report to the Environmental Coordinator which is consistent with the Survey Report section of Appendix D of the California Fish and Wildlife “Staff Report on Burrowing Owl Mitigation” (March 2012).

5) If occupied burrows or burrowing owls are found the applicant shall contact the Environmental Coordinator and consult with California Fish and Wildlife prior to construction, and will be required to submit a Burrowing Owl Mitigation Plan (subject to the approval of the Environmental Coordinator and in consultation with California Fish and Wildlife). This plan must document all proposed measures, including avoidance, minimization, exclusion, relocation, or other measures, and include a plan to monitor mitigation success. The California Fish and Wildlife “Staff

Report on Burrowing Owl Mitigation" (March 2012) should be used in the development of the mitigation plan.

MITIGATION MEASURE F: WESTERN POND TURTLE

To avoid impacts to western pond turtles the following shall apply:

1) Twenty-four hours prior to the commencement of ground-disturbing activity (i.e. clearing, grubbing, or grading) suitable habitat within the project area shall be surveyed for western pond turtle by a qualified biologist. The survey shall include aquatic habitat and 1,650 feet of adjacent uplands surrounding aquatic habitat within the project area. The biologist shall supply a brief written report (including date, time of survey, survey method, name of surveyor and survey results) to the Environmental Coordinator prior to ground disturbing activity.

2) Construction personnel shall receive worker environmental awareness training. This training instructs workers how to recognize western pond turtles and their habitat.

3) If a western pond turtle is encountered during active construction, all construction shall cease until the animal has moved out of the construction area on its own or relocated by a qualified biologist. If the animal is injured or trapped, a qualified biologist shall move the animal out of the construction area and into a suitable habitat area. California Fish and Wildlife and the Environmental Coordinator shall be notified within 24-hours that a turtle was encountered.

MITIGATION MEASURE G: MIGRATORY BIRD NEST PROTECTION

To avoid impacts to nesting migratory birds the following shall apply:

1. If construction activity (which includes clearing, grubbing, or grading) is to commence within 50 feet of nesting habitat between February 1 and August 31, a survey for active migratory bird nests shall be conducted no more than 14 day prior to construction by a qualified biologist.

2. Trees slated for removal shall be removed during the period of September through January, in order to avoid the nesting season. Any trees that are to be removed during the nesting season, which is February through August, shall be surveyed by a qualified biologist and will only be removed if no nesting migratory birds are found.

3. If active nest(s) are found in the survey area, a non-disturbance buffer, the size of which has been determined by a qualified biologist, shall be established and maintained around the nest to prevent nest failure. All construction activities shall be avoided within this buffer area until a qualified biologist determines that nestlings have fledged, or until September 1.

MITIGATION MEASURE H: NESTING RAPTORS

Project construction activities have the potential to impact nesting birds (migratory birds, special-status birds, and raptors) if construction is initiated during the breeding bird season (February 1 through August 31). Potential impacts include direct destruction of nests as well as indirect visual and acoustic disturbance to nesting birds from construction in adjacent areas that has the potential to result in nest abandonment.

If construction initiation during the nesting season cannot be avoided, pre-construction nesting bird surveys shall be conducted within 14 days of initial ground disturbance or vegetation removal to avoid disturbance to active nests, eggs, and/or young of nesting birds. Surveys can be used to detect the nests of special-status as well as non-special-status birds. Surveys shall encompass on-site trees, shrubs and suitable ground nesting habitat to be removed and the surrounding 500 feet, where accessible. An exclusion zone where no construction would be allowed shall be established around any active nests of any avian species found in the project site until a qualified biologist has determined that all young have fledged and are independent of the nest. Suggested exclusion zone distances differ depending on species, location, and placement of nest, and shall be at the discretion of the biologist and, if necessary, USFWS and CDFW. These surveys would remain valid as long as construction activity is consistently occurring in a given area and shall be completed again if there is a lapse in construction activities of more than 14 consecutive days during the breeding bird season.

MITIGATION MEASURE I: ROOSTING BATS

Pre-construction survey(s) for bat roosts shall be conducted in any large trees (dbh >24 inches) or broadleaf trees in riparian woodland habitat in areas proposed for vegetation removal. Surveys shall occur no more than 14 days prior to the start of work. If an active maternity or special-status bat roost is found and is proposed to be removed or directly impacted as a result of project activities, consultation with CDFW shall be required. If large trees (dbh >24 inches) without maternity or special-status roosts are to be removed, they shall be allowed to lay on the ground for one night to allow any undetected roosting bats to leave the tree before it is chipped or taken offsite.

MITIGATION MEASURE J: UNANTICIPATED CULTURAL RESOURCES

1. In the event of an inadvertent discovery of cultural resources (excluding human remains) during construction, all work must halt within a 100-foot radius of the discovery. A qualified professional archaeologist, meeting the Secretary of the Interior's Professional Qualification Standards for prehistoric and historic archaeology, shall be retained at the Applicant's expense to evaluate the significance of the find. If it is determined due to the types of deposits discovered that a Native American monitor is required, the Guidelines for Monitors/Consultants of Native American Cultural, Religious, and Burial Sites as established by the Native American Heritage Commission shall be followed, and the monitor shall be retained at the Applicant's expense.

a. Work cannot continue within the 100-foot radius of the discovery site until the archaeologist and/or tribal monitor conducts sufficient research and data collection to make a determination that the resource is either 1) not cultural in origin; or 2) not potentially eligible for listing on the National Register of Historic Places or California Register of Historical Resources.

b. If a potentially-eligible resource is encountered, then the archaeologist and/or tribal monitor, Planning and Environmental Review staff, and project proponent shall arrange for either 1) total avoidance of the resource, if possible; or 2) test excavations or total data recovery as mitigation. The determination shall be formally documented in writing and submitted to the County Environmental Coordinator as verification that the provisions of CEQA for managing unanticipated discoveries have been met.

MITIGATION MEASURE K: UNANTICIPATED-DISCOVERY HUMAN REMAINS

If human remains are uncovered during proposed project construction, all work shall immediately halt and the Sacramento County Coroner shall be contacted to evaluate the remains and follow the procedures and protocols set forth in CEQA Guidelines Section 15064.5(e)(1). If the county coroner determines that the remains are Native American, the County shall contact the California Native American Heritage Commission, in accordance with California Health and Safety Code Section 7050.5(c) and PRC Section 5097.98. As required by PRC Section 5097.98, the County shall ensure that further development activity avoids damage or disturbance in the immediate vicinity of the Native American human remains, according to generally accepted cultural or archaeological standards or practices, until the County has conferred with the most likely descendants regarding their recommendations, if applicable, taking into account the possibility of multiple human remains.

MITIGATION MEASURE L: TRIBAL CONSTRUCTION MONITORING

To minimize the potential for destruction of or damage to existing or previously undiscovered archaeological and cultural resources and to identify any such resources at the earliest possible time during project-related earthmoving activities, the project applicant and its construction contractor(s) will implement the following measures:

1. Paid Native American Monitors from Wilton Rancheria will be invited to monitor the vegetation grubbing, stripping, grading, or other ground-disturbing activities in the project area to determine the presence or absence of any cultural resources. Native American Representatives from culturally affiliated tribes act as a representative of their Tribal government and shall be consulted before any cultural studies or ground-disturbing activities begin.

2. Native American Representatives and Native American Monitors have the authority to identify sites or objects of significance to Native Americans and to request that work be stopped, diverted, or slowed if such sites or objects are

identified within the direct impact area; however, only a Native American Representative can recommend appropriate treatment of such sites or objects.

MITIGATION MEASURE COMPLIANCE

Comply with the Mitigation Monitoring and Reporting Program (MMRP) for this project as follows:

1. It shall be the responsibility of the project applicant to reimburse the County for all expenses incurred in the implementation of the MMRP, including any necessary enforcement actions. The applicant shall pay an initial deposit of **$3,132.00**, which includes administrative costs of **$948.00**. Over the course of the project, the Office of Planning and Environmental Review will regularly conduct cost accountings and submit invoices to the applicant when the County monitoring costs exceed the initial deposit.

2. Until the MMRP has been recorded and the administrative portion of the MMRP fee has been paid, no final parcel map or final subdivision map for the subject property shall be approved. Until the balance of the MMRP fee has been paid, no encroachment, grading, building, sewer connection, water connection or occupancy permit from Sacramento County shall be approved.

INITIAL STUDY CHECKLIST

Appendix G of the California Environmental Quality Act (CEQA) provides guidance for assessing the significance of potential environmental impacts. Based on this guidance, Sacramento County has developed the following Initial Study Checklist. The Checklist identifies a range of potential significant effects by topical area. The words "significant" and "significance" used throughout the following checklist are related to impacts as defined by the California Environmental Quality Act as follows:

1. Potentially Significant indicates there is substantial evidence that an effect MAY be significant. If there are one or more "Potentially Significant" entries an Environmental Impact Report (EIR) is required. Further research of a potentially significant impact may reveal that the impact is actually less than significant or less than significant with mitigation.

2. Less than Significant with Mitigation applies where an impact could be significant but specific mitigation has been identified that reduces the impact to a less than significant level.

3. Less than Significant or No Impact indicates that either a project will have an impact but the impact is considered minor or that a project does not impact the particular resource.

	Potentially Significant	Less Than Significant with Mitigation	Less Than Significant	No Impact	Comments
1. **LAND USE** - Would the project:					
a. Cause a significant environmental impact due to a conflict with any applicable land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?			X		The project is consistent with the environmental requirements of all applicable land use plans and policies. Refer to the Agricultural Resources discussion in the Environmental Effects section above for more detail.
b. Physically disrupt or divide an established community?				X	The project will not create physical barriers that substantially limit movement within or through the community. The project is on a National Wildlife Refuge and a single private property, so there is no community to divide. No impact would occur.
2. **POPULATION/HOUSING -** Would the project:					
a. Induce substantial unplanned population growth in an area either directly (e.g., by proposing new homes and businesses) or indirectly (e.g., through extension of infrastructure)?				X	The proposed project is the restoration of riparian habitat and will neither directly nor indirectly induce substantial unplanned population growth. The proposed project does not include the development of new homes or businesses. It extends and repairs water control and irrigation infrastructure slightly, but only insofar as to improve, create, and maintain wetland habitat for waterfowl and other special status species. No impact would occur.
b. Displace substantial amounts of existing people or housing, necessitating the construction of replacement housing elsewhere?				X	The project will not result in the removal of existing housing, and thus will not displace substantial amounts of existing housing. No impact would occur.
3. **AGRICULTURAL RESOURCES** - Would the project:					
a. Convert Prime Farmland, Unique Farmland, Farmland of Statewide Importance or areas containing prime soils to uses not conducive to agricultural production?			X		The wetland restoration project will occur while maintaining Grazing Land and Farmland of Local Importance (as noted on the current Sacramento County Important Farmland Map published by the California Department of Conservation). Refer to the Agricultural Resources discussion in the Environmental Effects section above.

	Potentially Significant	Less Than Significant with Mitigation	Less Than Significant	No Impact	Comments
b. Conflict with any existing Williamson Act contract?			X		There is no Williamson Act contract in effect for the portion of the project site on land within the County's jurisdiction; however, there is an active Agricultural Preserve Contract for one USFWS-owned parcel. Refer to the Agricultural Resources discussion in the Environmental Effects section above.
c. Introduce incompatible uses in the vicinity of existing agricultural uses?			X		Though in an area where agricultural uses occur, the project will not substantially interfere with agricultural operations because it does not substantially change the nature of the landscape, nor its management, from existing conditions such that it would affect surrounding lands. The project includes conversion of some agricultural lands used for alfalfa and wheat production and for irrigated pasture to seasonal wetland. Much of the project site is already low-quality wetland. Impacts would be less than significant.
4. **AESTHETICS -** Would the project:					
a. Substantially alter existing viewsheds such as scenic highways, corridors or vistas?			X		The project site is located between two designated scenic corridors. The River Road (State Route 160) State and County Scenic Highway located approximately 1 mile to the west of planned project activities, runs along the Sacramento River levees in the Delta. Highway 5 is located approximately 1 mile to the east of planned project activities, and Sacramento County protects a 660-foot scenic corridor on either side of all freeways for purposes of beautification activities. Given its nature, the project is not expected to substantially alter the viewshed associated with these scenic corridors. Both are located approximately 1 mile away from project construction activities, and from this distance the change from current land use (irrigated pasture and low-quality wetland) to the planned land use (high quality wetland) will not be perceptible. Further, River Road was designated due to its

	Potentially Significant	Less Than Significant with Mitigation	Less Than Significant	No Impact	Comments
					views of the river, rich farmland, and recreational areas. These characteristics would not change due to the project. Highway 5 was designated to make the drive more pleasant for heavy commuter traffic, and these views would not be affected by the project either. Impacts would be less than significant.
b. In a non-urbanized area, substantially degrade the existing visual character or quality of public views of the site and its surroundings?			X		Construction will not substantially degrade the visual character or quality of the project site. Short-term impacts may occur from the use of heavy construction equipment such as graders and bulldozers, but this will be temporary, occurring over a period of five months in one construction season. Long-term, the project site will look very similar to its current condition. In fact, as the project would convert low-quality wetland and irrigated pasture to higher quality wetland, the long-term impacts to visual character or quality would likely be beneficial. Impacts would be less than significant.
c. If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?				X	The project is not located in an urbanized area. No impact would occur.
d. Create a new source of substantial light, glare, or shadow that would result in safety hazards or adversely affect day or nighttime views in the area?				X	The project will not result in a new source of substantial light, glare, or shadow that would result in safety hazards or adversely affect day or nighttime views in the area. New lighting is not a proposed aspect of the project, and as the proposed project would convert grazing land and low quality wetlands to high quality wetlands and habitat, no change in light, glare, or shadow would be perceptible to residents in the surrounding area or by Refuge visitors under the operational phase of the project. Construction is proposed for daylight hours and will not require temporary lighting to be installed. No impact would occur.

	Potentially Significant	Less Than Significant with Mitigation	Less Than Significant	No Impact	Comments
5. **AIRPORTS -** Would the project:					
a. Result in a safety hazard for people residing or working in the vicinity of an airport/airstrip?			X		The proposed project site is located approximately 3.3 miles northwest of County-operated Franklin Field, a small general aviation airport frequently used for flight training. Franklin Field has an adopted airport land use compatibility plan that delineates three levels of airport safety restriction areas. The project site is located approximately 1.5 miles outside even the least restrictive safety zone according to this plan, called the overflight zone, which is designed to capture the area underneath traffic patterns. Impacts would be less than significant.
b. Expose people residing or working in the project area to aircraft noise levels in excess of applicable standards?			X		The project occurs outside of any identified public or private airport/airstrip noise zones or contours as designated by the Franklin Field Comprehensive Land Use Plan, adopted by the Airport Land Use Commission. Impacts would be less than significant.
c. Result in a substantial adverse effect upon the safe and efficient use of navigable airspace by aircraft?			X		The project does not affect navigable airspace. It is located approximately 1.5 miles outside even the least restrictive safety zone according to Franklin Field's land use compatibility plan, called the overflight zone, which is designed to capture the area underneath traffic patterns. Impacts would be less than significant.
d. 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?			X		The project does not involve or affect air traffic movement. While the project would attract more wildlife (e.g. ducks and other water fowl), it is located outside of the overflight zone and would therefore not introduce safety risks or affect air traffic. Impacts would be less than significant.
6. **PUBLIC SERVICES -** Would the project:					
a. Have an adequate water supply for full buildout of the project?				X	The water service provider has adequate capacity to serve the water needs of the proposed project. No impact would occur.

	Potentially Significant	Less Than Significant with Mitigation	Less Than Significant	No Impact	Comments
b. Have adequate wastewater treatment and disposal facilities for full buildout of the project?				X	The project will not require wastewater services. No impact would occur.
c. Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?				X	The Kiefer Landfill has capacity to accommodate solid waste until the year 2050. No impact would occur.
d. Result in substantial adverse physical impacts associated with the construction of new water supply or wastewater treatment and disposal facilities or expansion of existing facilities?				X	The project will not require construction or expansion of new water supply, wastewater treatment, or wastewater disposal facilities. No impact would occur.
e. Result in substantial adverse physical impacts associated with the provision of storm water drainage facilities?				X	Project construction would not require the addition of new stormwater drainage facilities. No impact would occur.
f. Result in substantial adverse physical impacts associated with the provision of electric or natural gas service?				X	The project will not require electric or natural gas service. No impact would occur.
g. Result in substantial adverse physical impacts associated with the provision of emergency services?			X		The project would incrementally increase demand for emergency services during the construction phase, but would not cause substantial adverse physical impacts as a result of providing adequate service. Impacts would be less than significant.
h. Result in substantial adverse physical impacts associated with the provision of public school services?				X	The project will not require the use of public school services. No impact would occur.
i. Result in substantial adverse physical impacts associated with the provision of park and recreation services?				X	The project will not introduce additional human population that would require park and recreation services. No impact would occur.
7. **TRANSPORTATION** - Would the project:					
a. Result in a substantial increase in vehicle trips that would exceed, either individually or			X		The completed project will not increase vehicle trips. A temporary and slight increase in construction-related trips

	Potentially Significant	Less Than Significant with Mitigation	Less Than Significant	No Impact	Comments
cumulatively, a level of service standard established by the County?					will occur on area roadways for the duration of project construction. Impacts would be less than significant.
b. Result in a substantial adverse impact to access and/or circulation?			X		This area of the County is rural, the roads are narrower and vehicles often have to share the road with slower moving farm equipment. The temporary increase in large construction vehicles and haul trucks will not impact existing access and/or circulation patterns. Impacts would be less than significant.
c. Result in a substantial adverse impact to public safety on area roadways?				X	No changes to existing access and/or circulation patterns would occur as a result of the project; therefore, no impacts to public safety on area roadways will result.
d. Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?			X		The project does not conflict with alternative transportation policies of the Sacramento County General Plan, with the Sacramento Regional Transit Master Plan, or other adopted policies, plans or programs supporting alternative transportation. The project site is not located near existing or planned transit stops or nodes nor bus or bicycle routes. The project would not alter transit use or needs in or around the project site. Impacts would be less than significant.
8. **AIR QUALITY** - Would the project:					
a. Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in non-attainment under an applicable federal or state ambient air quality standard?		X			The project region is designated as nonattainment with respect to federal and state AAQS for PM and ozone. However, the project will not result in a cumulatively considerable net increase of either of these pollutants (or their precursors). Emissions are below the significance thresholds established by the Sacramento Metropolitan Air Quality Management District. Emissions were estimated quantitatively using the tool recommended by the District (Sacramento's Road Construction Emissions Model, v 9.0). As identified by the District's CEQA Guidelines, the determination of insignificant impacts is contingent on the

	Potentially Significant	Less Than Significant with Mitigation	Less Than Significant	No Impact	Comments
					project utilizing Enhanced Fugitive PM Dust Control Practices (as identified by Sacramento AQMD). Refer to the Air Quality discussion of the Environmental Effects section for more detail.
b. Expose sensitive receptors to pollutant concentrations in excess of standards?			X		This project is located in a rural area and spread out over 370 acres. There are no sensitive receptors (i.e., schools, nursing homes, hospitals, daycare centers, etc.) near the project site. Impacts would be less than significant.
c. Create objectionable odors affecting a substantial number of people?			X		This project does not involve objectionably odorous substances, nor are there a substantial number of people in the nearby vicinity. While construction equipment can create odors from diesel and other chemicals in the immediate vicinity of its use, this would be temporary and would not occur in the vicinity of a substantial number of people. Impacts would be less than significant.
9. **NOISE -** Would the project:					
a. Result in generation of a temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established by the local general plan, noise ordinance or applicable standards of other agencies?			X		The project is not in the vicinity of any uses that generate substantial noise, nor will the completed project generate substantial noise. Construction will increase noise temporarily, but it will not result in exposure of persons to, or generation of, noise levels in excess of applicable standards.
b. Result in a substantial temporary increase in ambient noise levels in the project vicinity?			X		Project construction will result in a temporary increase in ambient noise levels in the project vicinity. This impact is less than significant due to the temporary nature of the these activities, limits on the duration of noise, and evening and nighttime restrictions imposed by the County Noise Ordinance (Chapter 6.68 of the County Code).
c. Generate excessive groundborne vibration or groundborne noise levels.				X	The project will not involve the use of pile driving or other methods that would produce excessive groundborne vibration or noise levels at the property boundary. No impact would occur.

	Potentially Significant	Less Than Significant with Mitigation	Less Than Significant	No Impact	Comments
10. **HYDROLOGY AND WATER QUALITY** - Would the project:					
a. Substantially deplete groundwater supplies or substantially interfere with groundwater recharge?			X		The project will not substantially increase water demand over the existing use. The project site is currently under a managed water regime and will continue to be so. The project does not involve groundwater pumping or construction of large impervious areas. There are therefore no activities that would affect groundwater supplies or recharge in the area. Impacts would be less than significant.
b. Substantially alter the existing drainage pattern of the project area and/or increase the rate or amount of surface runoff in a manner that would result in flooding on- or off-site?			X		The project does not involve any modifications that would substantially alter the existing drainage pattern and or/increase the rate or amount of surface runoff in a manner that would lead to flooding. While the project would alter the grade and some topographic features of the site, these activities would occur within the confines of a system that is managed for water, surrounded by berms and levees that contain management activities to the site, and would not alter the drainage pattern of the surrounding lands. Further, the project would not create new sources of runoff nor would it introduce impervious surfaces that would alter the rate of surface runoff. Impacts would be less than significant.
c. Develop within a 100-year floodplain as mapped on a federal Flood Insurance Rate Map or within a local flood hazard area?			X		The project site is in a Special Flood Hazard Area, as mapped on a federal Flood Insurance Rate Map (Flood Zone AE) but it does not call for any development. The project requires regrading of existing low-quality wetland and irrigated agricultural lands, with no physical structures or other development. Impacts would be less than significant.
d. Place structures that would impede or redirect flood flows within a 100-year floodplain?			X		The project site is not within a 100-year floodplain and would not create physical structures significantly different than baseline conditions. Impacts would be less than significant.

	Potentially Significant	Less Than Significant with Mitigation	Less Than Significant	No Impact	Comments
e. Develop in an area that is subject to 200 year urban levels of flood protection (ULOP)?				X	The project is not located in an area subject to 200-year urban levels of flood protection (ULOP). No impact would occur.
f. Expose people or structures to a substantial risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?			X		The project will not expose people or structures to a substantial risk of loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or dam. The project will not alter any dams and includes only small improvements to local levee roads. The project will not create new structures or housing that would increase the number of people living or working in the area and would therefore not create an increased risk to people or structures. Impacts would be less than significant.
g. Create or contribute runoff that would exceed the capacity of existing or planned stormwater drainage systems?			X		The project does not propose any physical changes that would affect runoff from the site that would exceed stormwater infrastructure capacity or cause flooding. The project site is currently low-quality managed wetland and irrigated agricultural land and would remain a managed, confined wetland system after the project. The project would not create new sources of runoff nor would it introduce impervious surfaces that would alter the rate of surface runoff. Long-term runoff would therefore not change from baseline conditions. Impacts would be less than significant.
h. Create substantial sources of polluted runoff or otherwise substantially degrade ground or surface water quality?			X		Compliance with the Stormwater Ordinance and Land Grading and Erosion Control Ordinance (Chapters 15.12 and 14.44 of the County Code respectively) will ensure that the project will not create substantial sources of polluted runoff or otherwise substantially degrade ground or surface water quality. Refer to the Hydrology discussion in the Environmental Effects section above.

	Potentially Significant	Less Than Significant with Mitigation	Less Than Significant	No Impact	Comments
11. **GEOLOGY AND SOILS** - Would the project:					
a. Directly or indirectly cause potential substantial adverse effects, including risk of loss, injury or death involving 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?			X		Sacramento County is not within an Alquist-Priolo Earthquake Fault Zone. Although there are no known active earthquake faults in the project area, the site could be subject to some ground shaking from regional faults. The Uniform Building Code contains applicable construction regulations for earthquake safety that will ensure less than significant impacts.
b. Result in substantial soil erosion, siltation or loss of topsoil?			X		Compliance with the County's Land Grading and Erosion Control Ordinance will reduce the amount of construction site erosion and minimize water quality degradation by providing stabilization and protection of disturbed areas, and by controlling the runoff of sediment and other pollutants during the course of construction. Impacts would be less than significant.
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, soil expansion, liquefaction or collapse?			X		The project is not located on an unstable geologic or soil unit and does not include the construction of physical structures or buildings. Impacts would be less than significant.
d. Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available?				X	The project will not require the use of septic tanks or other wastewater disposal systems. The project will not produce housing or an increase in population or need for new housing and will therefore not change the existing need for septic tanks or other wastewater treatment infrastructure. No impact would occur.
e. Result in a substantial loss of an important mineral resource?				X	The project is not located within an Aggregate Resource Area as identified by the Sacramento County General Plan Land Use Diagram, nor are any important mineral resources known to be located on the project site. No impact would occur.

	Potentially Significant	Less Than Significant with Mitigation	Less Than Significant	No Impact	Comments
f. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?			X		No known paleontological resources (e.g., fossil remains) or sites occur at the project location.. Impacts would be less than significant.
12. **BIOLOGICAL RESOURCES** - Would the project:					
a. Have a substantial adverse effect on any special status species, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, or threaten to eliminate a plant or animal community?		X			The project site contains suitable habitat for several special-status species. Mitigation is included to reduce impacts to less than significant levels. Refer to the Biological Resources discussion in the Environmental Effects section above.
b. Have a substantial adverse effect on riparian habitat or other sensitive natural communities?			X		The project will result in a net increase of riparian habitat, as well as enhanced ecological function of the seasonal wetlands on site. The impact of the proposed project on riparian habitat loss would be less than significant. Refer to the Biological Resources discussion in the Environmental Effects section above.
c. Have a substantial adverse effect on streams, wetlands, or other surface waters that are protected by federal, state, or local regulations and policies?			X		Overall, the project will improve and enhance the quality of seasonal wetland throughout the site, and there would be no net-loss of seasonal wetland. Impacts would be less than significant. Refer to the Biological Resources discussion in the Environmental Effects section above.
d. Have a substantial adverse effect on the movement of any native resident or migratory fish or wildlife species?			X		Resident and/or migratory wildlife may be displaced by project construction; however, impacts are not anticipated to result in significant, long-term effects upon the movement of resident or migratory fish or wildlife species, and no major wildlife corridors would be affected.
e. Adversely affect or result in the removal of native or landmark trees?			X		No native and/or landmark trees occur on the project site, nor would any native and/or landmark trees would be affected by off-site improvement required as a result of the project. No impact would occur.

	Potentially Significant	Less Than Significant with Mitigation	Less Than Significant	No Impact	Comments
f. Conflict with any local policies or ordinances protecting biological resources?			X		The project is consistent with local policies/ordinances protecting biological resources. Impacts would be less than significant.
g. Conflict with the provisions of an adopted Habitat Conservation Plan or other approved local, regional, state or federal plan for the conservation of habitat?		X			The project is not a Covered Activity under the SSHCP, however, the mitigation included for potentially present species would be consistent with all applicable avoidance and minimization measures outlined in the SSHCP. These include General Avoidance and Minimization Measures outlined in Section 5.4.1, as well as Covered Species Take Avoidance and Minimization Measures outlined in Section 5.4.2 for species potentially affected by the project and covered by the SSHCP. Refer to the Biological Resources discussion in the Environmental Effects section above.
13. **CULTURAL RESOURCES -** Would the project:					
a. Cause a substantial adverse change in the significance of a historical resource?				X	No historical resources would be affected by the proposed project. Refer to the Cultural Resources discussion in the Environmental Effects section above.
b. Have a substantial adverse effect on an archaeological resource?		X			Because the potential exists for previously unrecorded archaeological deposits to be present in the project site, impacts of the proposed project on the resources would be potentially significant but can be reduced to less than significant with mitigation. Refer to the Cultural Resources discussion in the Environmental Effects section above
c. Disturb any human remains, including those interred outside of formal cemeteries?		X			There are known repatriated human remains on the site; however, the project has been designed to avoid these known sites. Due to the sensitivity for tribal cultural resources, mitigation is included to ensure appropriate treatment should remains be uncovered during project implementation. Refer to the Cultural Resources discussion in the Environmental Effects section above

	Potentially Significant	Less Than Significant with Mitigation	Less Than Significant	No Impact	Comments
d. Would the project cause a substantial adverse change in the significance of a tribal cultural resource as defined in Public Resources Code 21074?		X			Notification pursuant to Public Resources Code 21080.3.1(b) was provided to the tribes and request for consultation was/was not received. Tribal cultural resources were identified in the project area. Refer to the Cultural Resources discussion in the Environmental Effects section above.
14. **HAZARDS AND HAZARDOUS MATERIALS** - Would the project:					
a. Create a substantial hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?			X		The project does not involve the transport, use, and/or disposal of hazardous material in the operational phase. During construction, diesel-powered construction equipment would be used. Compliance with local, state and federal safety standards would ensure less than significant impacts.
b. Expose the public or the environment to a substantial hazard through reasonably foreseeable upset conditions involving the release of hazardous materials?			X		The project does not involve the transport, use, and/or disposal of hazardous material in the operational phase. During construction, diesel-powered construction equipment would be used. Compliance with local, state and federal safety standards would ensure less than significant impacts.
c. Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances or waste within one-quarter mile of an existing or proposed school?				X	The project site is not located within ¼ mile of an existing /proposed school. No impact would occur.
d. Be located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5, resulting in a substantial hazard to the public or the environment?				X	The project is not located on a known hazardous materials site. No impact would occur.

	Potentially Significant	Less Than Significant with Mitigation	Less Than Significant	No Impact	Comments
e. Impair implementation of or physically interfere with an adopted emergency response or emergency evacuation plan?			X		The project would not interfere with any known emergency response or evacuation plan. Construction and staging of construction equipment would occur on-site, within the Refuge and on one private property, away from all major roads or thoroughfares. Impacts would be less than significant.
f. Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to or intermixed with urbanized areas?			X		The project is on a National Wildlife Refuge and one private property comprised of managed wetlands and irrigated pasture, all of which are saturated for much of the year with water. The project site is located in the unincorporated County and encompasses land in both Federal and Local Responsibility Areas, but it is not within or near a Very High Fire Hazard Severity Zone. The project site is currently intermixed with wildlands (e.g., valley grasslands or oak woodlands), but the project is not proposing new homes or other structures that would expose an increased number of people or structures to wildfire risk. Impacts would be less than significant.
15. ENERGY – Would the project:					
a. Result in potentially significant environmental impacts due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction?			X		During construction, energy resources would be required to transport equipment, workers, and solid waste to and from the site as well as to power construction equipment. On-site vehicle staging and minimization of equipment idling pursuant to California law would ensure that energy resources would not be used in a wasteful or inefficient manner during construction. Long-term energy usage at the site would likely decrease from baseline conditions, as the project site is occasionally disced under baseline conditions, using equipment that utilize energy resources; these uses would decrease on site. Impacts would be less than significant.
b. Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?			X		The project will comply with Title 24, Green Building Code, for all project efficiency requirements.

	Potentially Significant	Less Than Significant with Mitigation	Less Than Significant	No Impact	Comments
16. GREENHOUSE GAS EMISSIONS – Would the project:					
a. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?			X		Emissions from construction equipment were estimated quantitatively using the tool recommended by the District (Sacramento's Road Construction Emissions Model, v 9.0) and found to be well below the District's significance threshold of 1,100 MT CO_2e/yr, without attempting to quantify any benefits associated with the restoration of wetlands. The project will not have the potential to interfere with the County meeting the goals of AB 32 (reducing greenhouse gas emissions to 1990 levels by 2020); therefore, the climate change impact of the project is considered less than significant.
b. Conflict with an applicable plan, policy or regulation for the purpose of reducing the emission of greenhouse gases?			X		The project is consistent with County policies adopted for the purpose or reducing the emission of greenhouse gases. See response to 16a. Impacts would be less than significant.

SUPPLEMENTAL INFORMATION

LAND USE CONSISTENCY	Current Land Use Designation	Consistent	Not Consistent	Comments
General Plan	Agricultural Cropland	X		Resource Conservation Area overlay
Community Plan	N/A	N/A		
Land Use Zone	AG-40	X		

INITIAL STUDY PREPARERS

Environmental Coordinator: Joelle Inman

Senior Environmental Analyst: Meg De Courcy

Office Manager: Belinda Wekesa-Batts

Administrative Support: Justin Maulit

Consultant Support: WRA, Inc.