

CITY OF LEMOORE/LEPRINO FOODS RIVER RANCH RECYCLED WATER PROJECT

Biological Resources Technical Report

Prepared for
Central Valley Regional Water Quality
Control Board
1685 "E" Street
Fresno, CA 93706-2007

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CITY OF LEMOORE/LEPRINO FOODS RIVER RANCH RECYCLED WATER PROJECT

Biological Resources Technical Report

1. Introduction

1.1 Background and Project Description

This report presents the findings of a biological resources assessment conducted by Environmental Science Associates (ESA) for the City of Lemoore/Leprino Foods River Ranch Recycled Water Project (Proposed Project), in Kings County, California. Leprino Foods Company (Leprino) owns and operates two cheese production facilities in the City of Lemoore that process approximately fourteen million pounds of milk, producing an average of 1.5 million pounds of mozzarella cheese per day. Together the two cheese production facilities generate approximately 2.75 million gallons per day (mgd) of process water that is conveyed to Leprino's wastewater treatment plant (WWTP), located adjacent to the City of Lemoore's WWTP. The source of water used at the Leprino facilities is supplied by the City of Lemoore.

The City of Lemoore's WWTP provides sanitary wastewater treatment for its 27,000 residents and produces approximately 1.7 mgd of secondary disinfected effluent. In accordance with Waste Discharge Requirements (WDRs) Order R5-2019-0008, Leprino's treated effluent is combined with the City's treated and disinfected effluent. The combined effluent complies with standards for water recycling established under California Code of Regulations, title 22, section 60301.225 (Title 22). The combined effluent is conveyed from the Lemoore WWTP to the Stone Ranch Property where it enters distribution canals to irrigate 1,900 acres of animal feed and fiber crops consisting of alfalfa, triticale, and cotton.

On May 6, 2022, the Central Valley Regional Water Quality Control Board (Central Valley Water Board) received a Report of Waste Discharge (ROWD) from the City of Lemoore (Lemoore or City) and Leprino for the discharge of up to seven million gallons per day (mgd) of treated effluent. The Proposed Project would increase flows by 40 percent over the current permitted flow and expand the land application area. The current WDR Order authorizes the discharge of combined effluent of up to 5.0 mgd for irrigation of crops on approximately 1,900 acres of farmland (i.e., Stone Ranch Property) owned by Leprino. The Proposed Project would increase the average monthly discharge from five to seven mgd and expand the land application area to include an adjoining 520-acre parcel, formally known as the Nederend property. Stone Ranch and the adjacent Nederend property are collectively referred to as the River Ranch.

1.2 Sources

This report is based on information compiled through field reconnaissance and appropriate reference materials. A reconnaissance-level biological survey and vegetation mapping was conducted in the Biological Study Area by ESA. The information sources used in the preparation of this report are provided in Section 8, References.

1.3 Location

The Biological Study Area includes the approximately 520- acre Project Area and 500-foot buffer, which comprises the Nederend Property. The Biological Study Area is in Kings County, California, approximately three miles west of the City of Lemoore (**Figure 1**). It is an agricultural plot bordered on the east by the Kings River and more agriculture on the north, west, and south. The Biological Study Area can be found on the U.S. Geological Survey (USGS) 7.5' Vanguard and Lemoore topographic quadrangle maps within Sections 1, 2, and 12 of Township 19 South, Range 19 East, as shown in **Figure 2**. (USGS 1966).

1.4 Scope of Study

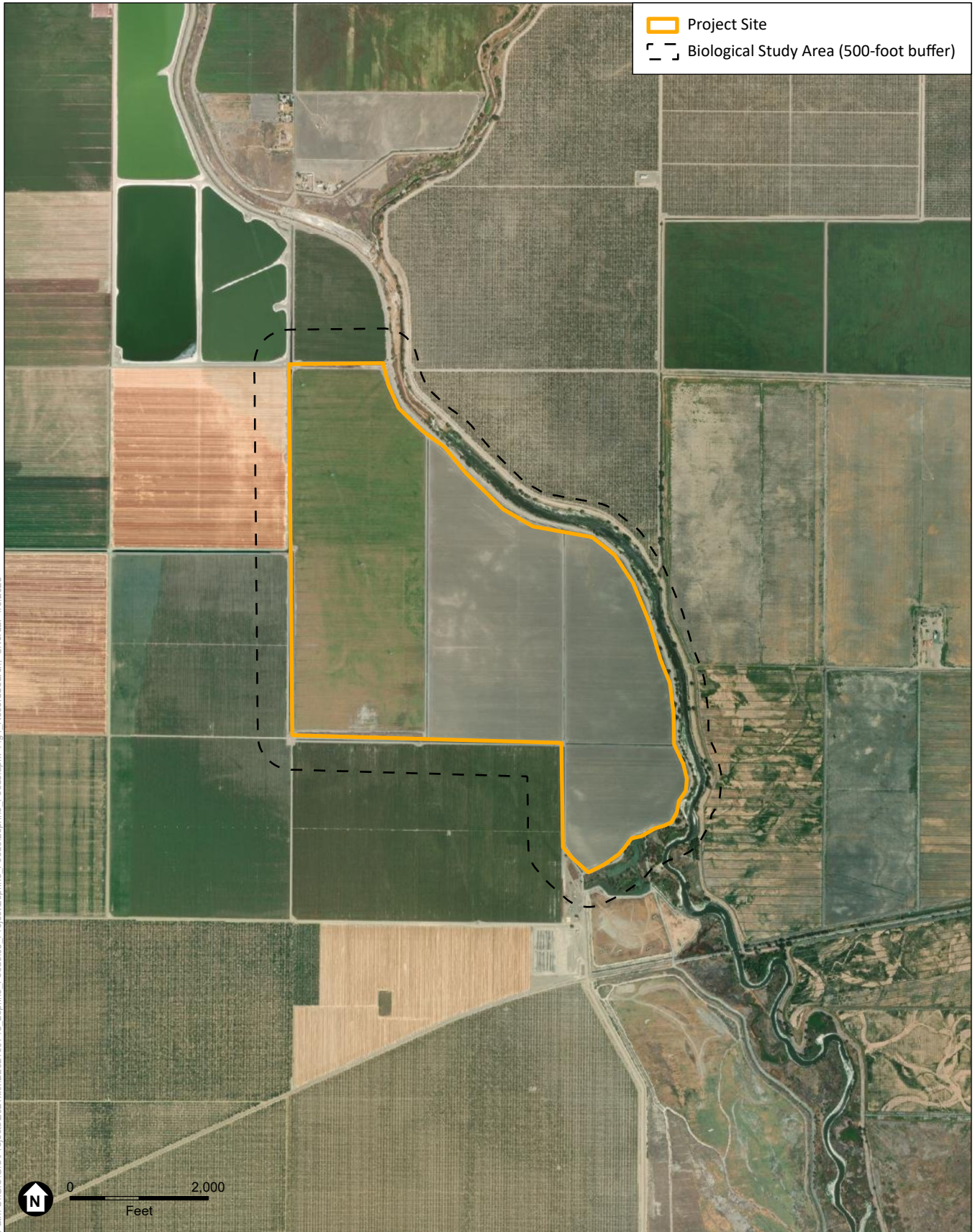
The scope of this report includes a description of the Proposed Project, methods of study, and existing Biological Study Area conditions (including vegetation communities and the potential for special-status biological resources), followed by an evaluation of potential impacts to biological resources pursuant to the California Environmental Quality Act (CEQA), Appendix G Checklist thresholds and regulatory requirements.

2. Regulatory Framework

2.1 Federal Resource Protections

2.1.1 *Federal Endangered Species Act*

The Federal Endangered Species Act (FESA) of 1973 defines an endangered species as “any species which is in danger of extinction throughout all or a significant portion of its range.” A threatened species is defined as “any species which is likely to become an Endangered species within the foreseeable future throughout all or a significant portion of its range.” Under provisions of Section 9(a)(1)(B) of the FESA, unless properly permitted, it is unlawful to “take” any listed species. “Take” is defined in Section 3(18) of the FESA: “... harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct.” Further, the USFWS, through regulation, has interpreted the terms “harm” and “harass” to include certain types of habitat modification as forms of “take.” These interpretations, however, are considered and applied on a case-by-case basis and often vary from species to species. In a case where a property owner seeks permission from a federal agency for an action which could affect a federally listed plant or animal species, the property owner and agency are required to consult with USFWS pursuant to Section 7 of the FESA if there is a federal nexus or consult with USFWS and potentially obtain a permit pursuant to Section 10 of the FESA in the absence of a federal nexus. Section 9(a)(2)(b) of the FESA addresses the protections afforded to listed plants.



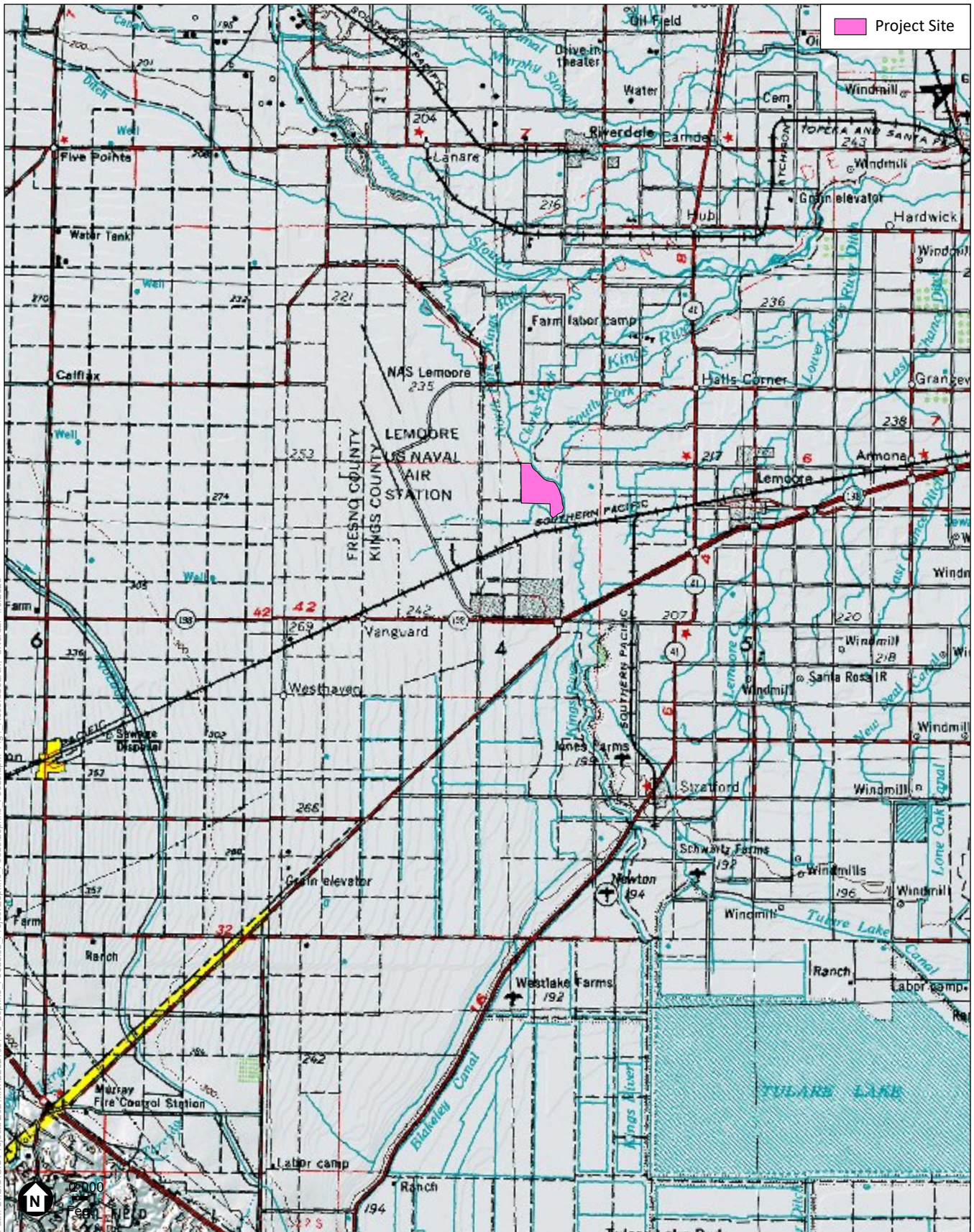
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SOURCE: USGS Topoquads Vanguard and Lemoore

Leprino Wastewater Discharge Project

Figure 1
Project Site & Biological Study Area





SOURCE: USGS Topoquads Vanguard and Lemoore

Leprino Wastewater Discharge Project

Figure 2
Project Vicinity



2.1.2 Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA) (U.S. Code Title 16 Section 703–711), first enacted in 1918, domestically implements a series of treaties between the United States and Great Britain (on behalf of Canada), Mexico, Japan, and the former Soviet Union that provide for international migratory bird protection. The MBTA prohibits, except as permitted by regulations, “to pursue, take, or kill any migratory bird, or any part, nest or egg of any such bird ...” The MBTA protects over 800 species, including geese, ducks, shorebirds, raptors, songbirds, and many relatively common species. Permits for take of nongame migratory birds can be issued only for specific activities, such as scientific collecting, rehabilitation, propagation, education, taxidermy, and protection of human health and safety and personal property.

2.1.3 Clean Water Act

The Clean Water Act (CWA) establishes the basic structure for regulating discharges of pollutants into the waters of the United States and regulating quality standards for surface waters. The basis of the CWA was enacted in 1948 and was called the Federal Water Pollution Control Act, but the Act was significantly reorganized and expanded in 1972. "Clean Water Act" became the Act's common name with amendments in 1972.

Effective March 20, 2023, the term “waters of the United States” was defined as follows (33 CFR 328.3(a)):

- (1) Waters which are:
 - (i) Currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide;
 - (ii) The territorial seas; or
 - (iii) Interstate waters, including interstate wetlands;
- (2) Impoundments of waters otherwise defined as waters of the United States under this definition, other than impoundments of waters identified under paragraph (a)(5) of this section;
- (3) Tributaries of waters identified in paragraph (a)(1) or (2) of this section:
 - (i) That are relatively permanent, standing or continuously flowing bodies of water; or
 - (ii) That either alone or in combination with similarly situated waters in the region, significantly affect the chemical, physical, or biological integrity of waters identified in paragraph (a)(1) of this section;
- (4) Wetlands adjacent to the following waters:
 - (i) Waters identified in paragraph (a)(1) of this section; or
 - (ii) Relatively permanent, standing or continuously flowing bodies of water identified in paragraph (a)(2) or (a)(3)(i) of this section and with a continuous surface connection to those waters; or
 - (iii) Waters identified in paragraph (a)(2) or (3) of this section when the wetlands either alone or in combination with similarly situated waters in the region, significantly

- affect the chemical, physical, or biological integrity of waters identified in paragraph (a)(1) of this section;
- (5) Intrastate lakes and ponds, streams, or wetlands not identified in paragraphs (a)(1) through (4) of this section:
- (i) That are relatively permanent, standing or continuously flowing bodies of water with a continuous surface connection to the waters identified in paragraph (a)(1) or (a)(3)(i) of this section; or
 - (ii) That either alone or in combination with similarly situated waters in the region, significantly affect the chemical, physical, or biological integrity of waters identified in paragraph (a)(1) of this section.

Wetlands are defined by USACE as “those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands include swamps, marshes, bogs, and similar areas.” (33 CFR 328.3(c)(1)). Indicators of three wetland parameters (i.e., hydric soils, hydrophytic vegetation, and wetlands hydrology), as determined by field investigation, must be present for an area to be classified as a wetland by USACE (Environmental Laboratory 1987).

Section 401 of the CWA gives the state authority to grant, deny, or waive certification of proposed federally licensed or permitted activities resulting in discharge to waters of the U.S. The State Water Resources Control Board (State Water Board) directly regulates multi-regional projects and supports the Section 401 certification and wetlands program statewide. The Regional Water Quality Control Board (RWQCB) regulates activities pursuant to Section 401(a)(1) of the federal CWA, which specifies that certification from the State is required for any applicant requesting a federal license or permit to conduct any activity including but not limited to the construction or operation of facilities that may result in any discharge into navigable waters. The certification shall originate from the State or appropriate interstate water pollution control agency in/where the discharge originates or will originate. Any such discharge will comply with the applicable provisions of Sections 301, 302, 303, 306, and 307 of the CWA.

2.2 State of California Resource Protections

2.2.1 California Endangered Species Act

California’s Endangered Species Act (CESA) and implementing regulations in the Fish and Game Code, Section 2050 through Section 2089, include provisions for the protection and management of plant and animal species listed as endangered or threatened, or designated as candidates for such listing. Incidental take of an endangered species is permitted by CDFW only under certain conditions and provided that the proper federal permits have been obtained and notifications made to the CDFW. Pursuant to Section 2081 of the Code, the CDFW may authorize individuals or public agencies to import, export, take, or possess, any state-listed endangered, threatened, or candidate species. These otherwise prohibited acts may be authorized through permits or Memoranda of Understanding if: (1) the take is incidental to an otherwise lawful activity; (2) impacts of the authorized take are minimized and fully mitigated; (3) the permit is consistent with any regulations adopted pursuant to any recovery plan for the species; and (4) the applicant

ensures adequate funding to implement the measures required by CDFW. The CDFW makes this determination based on available scientific information and considers the ability of the species to survive and reproduce.

2.2.2 Protection of Birds, Nests, and Eggs

Section 3503 of the California Fish and Game Code states that it is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird. Section 3503.5 specifically states that it is unlawful to take, possess, or destroy any raptors (i.e., species in the orders *Falconiformes* and *Strigiformes*), including their nests or eggs. Typical violations of these codes include destruction of active nests resulting from removal of vegetation in which the nests are located. Violation of Section 3503.5 also includes failure of active raptor nests resulting from disturbance of nesting pairs by nearby project construction. This statute does not provide for the issuance of any type of incidental take permit.

Section 3800 of the California Fish and Game Code affords protection to all nongame birds, which are all birds occurring naturally in California that are not resident game birds, migratory game birds, or fully protected birds. Section 3513 of the California Fish and Game Code upholds the MBTA by prohibiting any take or possession of birds that are designated by the MBTA as migratory nongame birds except as allowed by federal rules and regulations promulgated pursuant to the MBTA.

2.2.3 California Fully Protected Species

California fully protected species are described in Sections 3511, 4700, 5050, and 5515 of the California Fish and Game Code. These statutes prohibit take or possession of fully protected species. CDFW is unable to authorize incidental take of fully protected species when activities are proposed in areas inhabited by those species.

2.2.4 Lake and Streambed Alteration Agreement Program

CDFW regulates activities that would interfere with the natural flow of, or alter, the channel, bed, or bank of a lake, river, or stream. These activities are regulated under the California Fish and Game Code Sections 1600-1616. Requirements to protect the integrity of biological resources and water quality are often conditions of streambed alteration agreements. Requirements may include avoidance or minimization of the use of heavy equipment, limitations on work periods to avoid impacts on wildlife and fisheries resources, and measures to restore degraded areas or compensate for permanent habitat losses.

All diversions, obstructions, or changes to the natural flow or bed, channel, or bank of any river, stream, or lake in California that supports wildlife resources are subject to regulation by CDFW under Section 1602 of the California Fish and Game Code. A stream is defined as a body of water that flows at least periodically or intermittently through a bed or channel that has banks and supports fish or other aquatic life. This definition includes watercourses with a surface or subsurface flow that supports or has supported riparian vegetation. CDFW's jurisdiction within altered or artificial waterways is based on the value of those waterways to fish and wildlife. A CDFW streambed alteration agreement must be obtained for any project that would result in an impact on a river, stream, or lake, or associated riparian or wetland habitat.

2.2.5 Protection of Wildlife Species and Populations

Sections 1801-1802 of the California Fish and Game Code state that CDFW has jurisdiction over the conservation, protection, and management of fish, wildlife, native plants, and habitat necessary for biologically sustainable populations of those species, and it is state policy to maintain sufficient populations of all species of wildlife and the habitat necessary to achieve the objectives stated in the subdivisions identified in this code.

Sections 2000-2021.5 of the California Fish and Game Code state that it is unlawful to take or possess any bird, mammal, fish, reptile, amphibian, or parts thereof, except as provided in this code or regulations made under it.

2.2.6 Native Plant Protection Act (California Fish and Game Code Sections 1900 through 1913)

The Native Plant Protection Act (NPPA) was enacted in 1977 and allows the Fish and Game Commission to designate plants as rare or endangered pursuant to California Fish and Game Code Sections 1900-1913). There are 64 species, subspecies, and varieties of plants that are protected as rare under the NPPA, including those listed as endangered, threatened or candidate species under the CESA. The NPPA prohibits take of endangered or rare native plants but includes some exceptions for agricultural and nursery operations; emergencies; and after properly notifying CDFW for vegetation removal from canals, roads, and other areas, changes in land use, and in certain other situations. The NPPA gave the California Fish and Game Commission the authority to require permits and full mitigation for collecting, transporting, or selling such plants if it does not jeopardize the continued survival of the native plant.

2.3 Local Resource Protections

2.3.1 Kings County General Plan

The Open Space Element and Resource Conservation Element of the County's General Plan include objectives, policies, and programs on the conservation, protection, and improvement of the County's natural resources.

Relevant goals of the Open Space Element are:

1. Open Space Inventory – Take inventory of agricultural resources, scenic resources, community character, outdoor recreation, military compatibility, and access to light and air in developed areas.
2. Open Space Policies – Creation of policies to preserve agricultural resources, scenic resources, community character, outdoor recreation, military compatibility, and access to light and air in developed areas.
3. Implementation – Implementation of open space policies for County projects.

Relevant goals of the Resource Conservation Element are:

4. Resource Conservation Inventory – Take inventory of water resources, agricultural resources, scenic resources, soil, natural plant, and animal habitats, threatened and endangered species,

freshwater recreational fishing, energy, mineral resources, archaeological-cultural historic resources, solid waste management, source reduction, and recycling.

5. Resource Conservation Policies – Creation of policies to preserve water, agriculture, soils, natural plant, and animal habitats, threatened and endangered species, freshwater recreational fishing, energy, minerals, and archaeological-cultural-historic resources.
6. Implementation – Implementation of programs for conservation.

3. Methods of Study

3.1 Literature Review

Assessment of the Biological Study Area began with a review of relevant literature on the biological resources of the Biological Study Area and surrounding vicinity. The California Natural Diversity Database (CNDDDB), a California Department of Fish and Wildlife (CDFW) species account database, was reviewed for all pertinent information regarding the localities of known observations of special-status species and habitats in the vicinity of the Biological Study Area (CDFW 2023a). The vicinity of the Biological Study Area included the following USGS topographic quadrangles: Vanguard, Lemoore, Riverdale, Burrel, Five Points, Calflax, Huron, Westhaven, and Strafford. In addition, the Kings County General Plan Resource Conservation Element, Open Space Element, and Biological Resource Study were reviewed (Kings County, 2009). Federal Register listings and species data provided by the United States Fish and Wildlife Service (USFWS) (USFWS 2023a), CNDDDB, and the California Native Plant Society (CNPS 2023) were reviewed in conjunction with anticipated federal and State listed species potentially occurring within the vicinity. Other data sources reviewed include USFWS critical habitat maps (USFWS 2023b), United States Department of Agriculture Natural Resources Conservation Service (NRCS) soils mapping (NRCS 2023), eBird (2012), and Western Working Bat Group (2017). In addition, numerous regional flora and fauna field guides were utilized to assist in the identification of species and suitable habitats, in addition to relevant local policies.

A list of all relevant references reviewed is included in Section 9, References.

3.2 Field Investigations

A general reconnaissance-level biological survey and vegetation mapping was conducted by ESA biologist Christian Nordal on January 31, 2023. The biological survey was conducted to document current existing conditions in the Biological Study Area. The observed vegetation communities and other biological features and species observations were mapped during the January 31, 2023, area visit, with special attention to sensitive habitats or those areas potentially supporting special-status flora or fauna. A formal jurisdictional delineation was not conducted during the area assessment.

The methodology used during the field investigations is described in detail below.

3.2.1 Plant Community Mapping

Plant communities were mapped via aerial imagery (Google Earth 2023) and then ground truthed in the field.

3.2.2 General Plant Inventory

All plant species observed during the general surveys were either identified in the field or collected and later identified using taxonomic keys; however, a focused rare plant survey was not conducted. Plant taxonomy nomenclature was based on Baldwin (2012). Common plant names, when not available from Baldwin, were taken from Calflora (2020), Munz (1974), or Clarke (2007). Given that common names vary significantly between references, scientific names are included upon initial mention of each species; common names consistent throughout the report are employed thereafter. All plant species observed were recorded in field notes. Special-status plant species are discussed below in Section 3.3.7, *Special-Status Plant Species*.

3.3.3 General Wildlife Inventory

All wildlife species observed within the Biological Study Area, as well as any diagnostic sign (call, tracks, nests, scat, remains, or other sign), were recorded in field notes. Binoculars and regional field guides were utilized for the identification of wildlife, as necessary. This table is provided in **Appendix A**. Wildlife taxonomy nomenclature was based on Stebbins (2003) and California Herps (2015) for amphibians and reptiles, Chesser et al. (2019) for birds, and Jameson and Peeters (2004) for mammals. Given that common names vary significantly between references, scientific names are included upon initial mention of each species; common names consistent throughout the report are employed thereafter. All wildlife species detected were recorded in field notes. Special-status wildlife species are discussed below in Section 3.3.9, *Special-Status Wildlife Species*.

3.2.4 Wildlife Movement Corridor

An analysis of wildlife movement was conducted based on information compiled from the literature, analysis of aerial photographs and topographic maps, direct observations made in the field during survey work, and an analysis of existing wildlife movement functions. Relative to corridor issues, the focus of this assessment was to determine if the change of the existing land use within the Biological Study Area would have significant impacts on the regional wildlife movement associated with the Biological Study Area and the immediate vicinity. The *South Coast Missing Linkages: A Wildland Network* for the South Coast Ecoregion document was reviewed to identify any linkage or core areas proposed for preservation within the Biological Study Area (South Coast Wildlands 2008).

3.2.5 Sensitive Natural Communities

Sensitive natural communities are listed by CDFW on their *California Natural Community List* (CDFW 2023b). Communities on this list are given State and Global rarity ranks on a scale of 1 to 5 where communities with a ranking of one are the rarest and of the highest priority to preserve, and communities with a ranking of five are the most common. CDFW considers sensitive natural communities to be those with State ranks of S1-S3. Any sensitive habitats observed in the Biological Study Area were identified based on the mapped plant communities.

3.2.6 Special-Status Plant Species

The potential for special-status plant species was assessed based upon the known occurrence of species in the area as identified from CDFW, USFWS, and CNPS databases, and the presence or absence of suitable habitat within the Biological Study Area based on plant community mapping. Suitable habitat was defined as areas with appropriate vegetation communities, soils and/or topography (elevation at mean sea level [MSL]) to support the species based on known occurrences in those habitats and/or CDFW, USFWS, and CNPS documented habitat descriptions for the species. The definitions of suitable habitat were then compared against the vegetation mapping conducted for the Biological Study Area. A table of plant species for which potentially suitable habitat occurs within the Biological Study Area was prepared, and the potential for occurrence for each species was determined following completion of the vegetation mapping conducted during the field survey. This table is provided in **Appendix B**.

3.2.7 Special-Status Wildlife Species

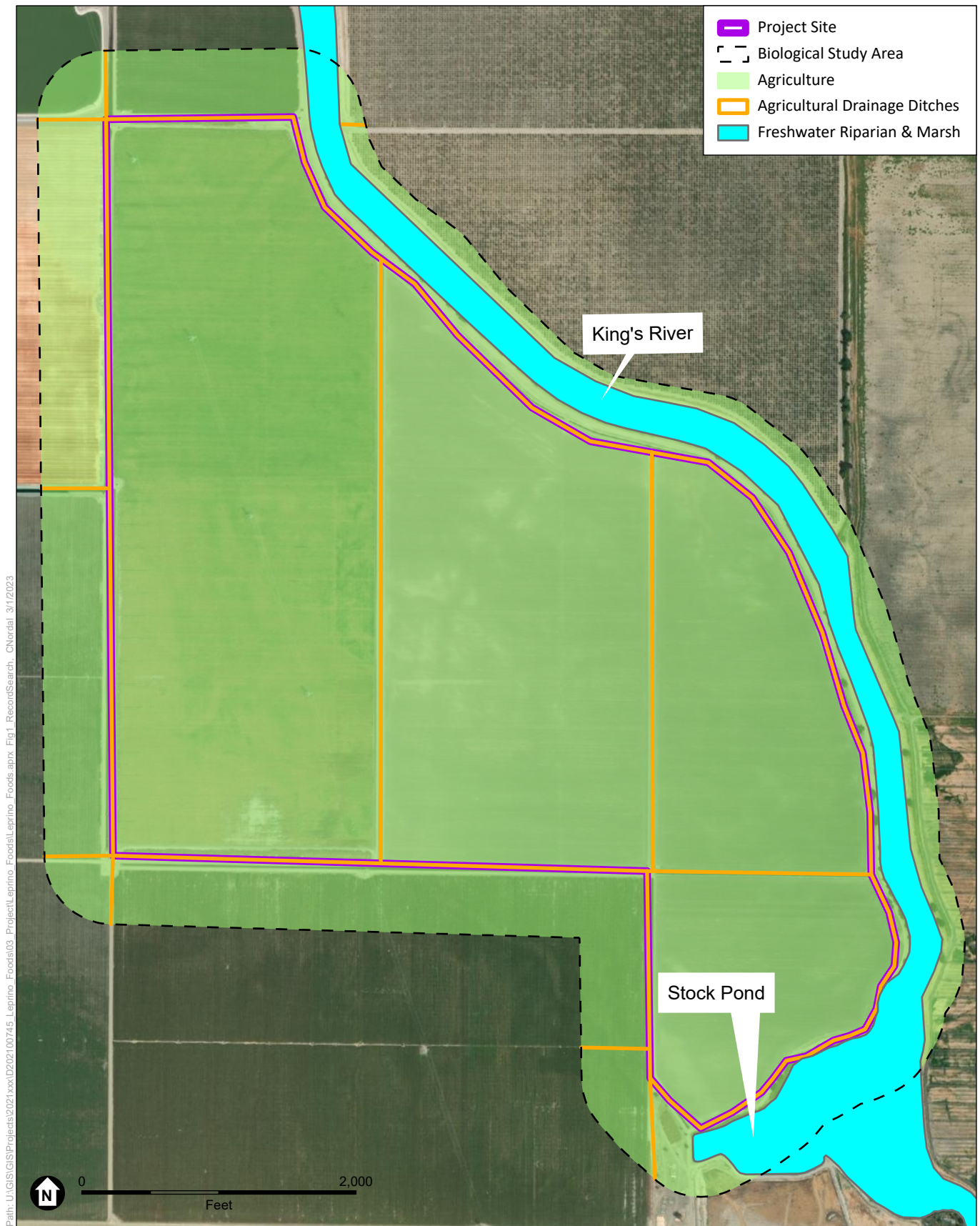
The potential for special-status wildlife species was assessed based upon the known occurrence of species in the area as identified from CDFW and USFWS databases, and the presence or absence of suitable habitat within the Biological Study Area based on plant community mapping. This table is provided in **Appendix C**.

Suitable habitat was defined as areas with appropriate vegetation communities and/or topography (elevation at MSL) to support the species based on known occurrences in those habitats and/or CDFW and USFWS documented habitat descriptions for the species. The definitions of suitable habitat were then compared against the vegetation mapping conducted for the Biological Study Area. A table of special-status wildlife species for which potentially suitable habitat occurs within the Biological Study Area was prepared, and the potential for occurrence for each species was determined following completion of the vegetation mapping conducted during the field survey.

4. Existing Conditions

4.1 Characteristics of the Biological Study Area and Surrounding Area

The Biological Study Area is in an agricultural setting that is typically found in Lemoore. The entirety of the Project area consists of tilled fields that are regularly irrigated as evidenced by algae growing on the soil that only support triticale (hybrid of *Triticum* ssp. and *Secale* ssp.) and alfalfa (*Medicago* ssp.) (**Figure 3**). The Biological Study Area is primarily agriculture of the same composition and contains a section of the Kings River with stock ponds fed directly by the Kings River east of the Project Area. The Kings River and stock ponds contain freshwater marsh habitat consisting of *Typha* species and *Arundo* species. There are several access roads throughout the Biological Study Area that are typical of agricultural settings, and one access road that runs adjacent west of the Kings River. The access road along the western edge of the Kings River has several valley oak (*Quercus lobata*) trees in poor health (dead and without foliage or sparse foliage). These trees are not on the Project Area directly but provide habitat for birds that forage within the general area.



SOURCE: USGS Topoquads Vanguard and Lemoore

Leprino Wastewater Discharge Project

Figure 3
Landcover & Natural Communities

The roads that are used to navigate the agricultural fields have agricultural drainage ditches that run parallel to the fields. These drainage ditches are earthen-bottomed and are barren of vegetation, with several having active water pumps that create constant ambient noise.

As shown in Figure 3, the Biological Study Area is surrounded by tilled fields. The Kings River is located within the 500-foot buffer of the Project Area and supports sparse amounts of freshwater marsh habitat consisting of *Tule*, *Typha*, and *Arundo* species. There are stock ponds south of the Project Area that also support the same type of freshwater marsh habitat.

The Project Area is flat, slightly sloping towards the south. Elevations range from a low of 195-210 feet above mean sea level throughout the entire area.

4.3 General Plant Inventory

The plant communities discussed above are composed of a few plant species, including triticale and alfalfa in the agriculture setting and *Typha* and *Arundo* in the Kings River and stock ponds. Special-status plant species occurring or potentially occurring within the Biological Study Area are discussed below in Section 4.7.5, *Special-Status Plant Species*.

4.4 General Wildlife Inventory

The plant communities discussed above provide habitat for common wildlife species, including savannah sparrow (*Passerculus sandwichensis*), short-billed dowitcher (*Limnodromus griseus*), and killdeer (*Charadrius vociferus*). The Project Area is currently used to feed a herd of over 200 domestic sheep (*Ovis aries*). A list of all wildlife species observed is provided in Appendix A. Special-status wildlife species occurring or potentially occurring are discussed below in Section 4.7.7, *Special-Status Wildlife Species*.

4.5 Wildlife Movement within the Biological Study Area

Wildlife movement activities occur at a variety of scales from a “local” level to a “regional” level. Regional movement through the Biological Study Area to the surrounding vicinity is facilitated through the Kings River. The Project Area is entirely agricultural and the buffer area to the north, west, and south also consists of agricultural lands. The buffer area to the east consists of the Kings River. The project contains a network of agricultural drainage ditches that can facilitate movement for aquatic species, although the Kings River is more likely to be utilized by wildlife for movement due to the river being continuous with riparian vegetation that provides more resources.

In summary, due to existing active agricultural activities and frequent human disturbance, the Project Area is less suitable for wildlife movement than the adjacent Kings River. The Project Area could serve as habitat along the river and provide some habitat value to urban-adapted wildlife species and may support marginal live-in and movement habitat for species on a local scale for common invertebrates, reptiles, birds, and small mammal species.

4.6 Jurisdictional Waters and Wetlands

The agricultural drainage ditches in the area are potentially jurisdictional features (i.e., federal and/or State protected waters), subject to the regulatory authority of the US Army Corps of Engineers (USACE), Regional Water Quality Control Board (RWQCB) and/or CDFW. The adjacent Kings River is considered jurisdictional for all three regulatory agencies. The existing stock ponds are isolated farm ponds but contain marsh habitat and are jurisdictional aquatic features.

4.7 Special-Status Biological Resources

The following discussion describes the plant and wildlife species present, or potentially present, within the Biological Study Area that have been afforded special recognition by federal, State, or local resource conservation agencies and organizations. These species have declining or limited population sizes, usually resulting from habitat loss. Also discussed are habitats that are unique, of limited distribution, or of value to wildlife. Protected special-status species are classified by either federal or state resource management agencies, or both, as threatened or endangered, candidate under provisions of the Federal and California Endangered Species Acts (FESA and CESA, respectively), animals on the CDFW Special Animals List, and plants listed by the CNPS as ranks 1, 2, and 4.

4.7.1 Sensitive Natural Communities

Sensitive natural communities include those habitat types considered rare by resource agencies, namely the CDFW, due to their scarcity and/or their ability to support special-status species. Sensitive natural communities are listed by CDFW on their *California Natural Community List* (CDFW 2023b). CDFW's Vegetation Classification and Mapping Program (VegCAMP), as a component of the State's Natural Heritage program, classifies vegetation types using the state standards embodied in the Survey of California Vegetation, which complies with the National Vegetation Classification Standard (NVCS). VegCAMP has been ranking California Natural Communities by their rarity and threat, using the best and most recent scientific information available. For rarity, the ranking involves the knowledge of range and distribution of a given type of natural community, and the proportion of occurrences that possess good ecological integrity. Evaluation is done at both the global (full natural range within and outside of California) and State (within California) levels resulting in a single G (global) and S (state) rank ranging from 1 (very rare and threatened) to 5 (demonstrably secure).

The off-area portion of the Biological Study Area along the Kings River and within stock ponds in the southeast portion of the Biological Study Area consists of freshwater marsh consisting primarily of *Typha*, which is not considered to be a sensitive natural community by CDFW. No sensitive natural communities were observed within the Biological Study Area.

4.7.2 Special-Status Plant Species

Special-status plants include those listed or candidates for listing by the USFWS and CDFW, and species considered special-status by CNPS (Ranks 1A, 1B, 2A, and 2B). Several plant species were reported in the project vicinity based on CNDDDB and CNPS, totaling seven species within

the 9-quadrangle search. No special-status plant species or suitable habitat was observed within the Project Area or off-area portions of the Biological Study Area during the general biological survey. Furthermore, the Biological Study Area is not within USFWS designated critical habitat¹ for any listed plant species.

4.7.3 Special-Status Wildlife Species

A total of 22 special-status wildlife species were reported in the project vicinity based on the CNDDDB. The Project Area is an active grazing area for sheep (*Ovis aries*). One species, Swainson's hawk (*Buteo swainsonii*) was observed perching in the oak trees along the Kings River, and six other special-status wildlife species identified as having a potential to occur within the Biological Study Area or are considered present within the Biological Study Area based on the literature review and/or habitat in the Biological Study Area,

4.7.4 Special-Status Wildlife Species with Potential to Occur within the Biological Study Area

Swainson's hawk (*Buteo swainsonii*): This hawk species is a threatened species under the California Endangered Species Act. This species was found perching in the oak trees along the Kings River and foraging in open habitats. Although not observed to be nesting during the biological survey, this species could potentially nest in the scattered oak trees that grow along the Kings River outside the Project Area. There is no nesting potential for this species in the Project Area.

Western pond turtle (*Emys marmorata*): This turtle species is considered a CDFW species of special concern. This species is entirely aquatic and is found in marshes, rivers, streams, and irrigation ditches.

Western pond turtle has high potential to utilize the agricultural drainage ditches and the Kings River in the Biological Study Area. There are four CNDDDB occurrences of this species within the vicinity of the Biological Study Area, which were recorded from 1998 to 2017 approximately 8.5 miles to the southeast.

Giant garter snake (*Thamnophis gigas*): This snake species is listed as threatened under both the federal and state endangered species acts. This species is found in freshwater marshes and has adapted to utilize drainage canals and irrigation ditches.

Giant garter snake has high potential to utilize the Kings River and agricultural drainage ditches in Biological Study Area. There is only one CNDDDB occurrence of this species within the vicinity of the Biological Study Area, which was recorded in 1992 approximately twelve miles to the north (upstream) near the Kings River.

¹ Under the FESA, the USFWS and National Marine Fisheries Service (NMFS) are required to designate critical habitat for endangered and threatened species. Critical habitat is defined as areas of land, water, and air space containing the physical and biological features essential for the survival and recovery of endangered and threatened species.

Black-crowned night heron (*Nycticorax nycticorax*): This heron species is a colonial nester found in trees along freshwater habitats, sometimes in tule patches. This species has high potential to roost along the Kings River but outside the Project Area. This species was documented along Highway 41 approximately ten miles southwest of the Project Area.

Merlin (*Falco columbarius*): This falcon species is considered a CDFW Watch List species. This species is found on the seacoast, in tidal estuaries, open woodlands, savannahs, edges of grasslands, deserts, and farms/ranches utilizing trees for nesting.

Merlin has high potential to roost and forage in the Biological Study Area. The Biological Study Area supports a few trees that would be suitable nesting habitat for this species. The Project Area does not support tree species that would be suitable for nesting for this species. There is only one CNDDDB occurrence of this species within the region of the Biological Study Area, which was recorded in 2005 approximately twelve miles to the southwest along the California aqueduct.

Tricolored blackbird (*Agelaius tricolor*): This species is listed as threatened under the CESA. Tricolored blackbirds are a highly colonial species that are found in freshwater marsh habitats.

Tricolored blackbird has high potential to utilize the freshwater marsh in the Kings River and stock ponds within the Biological Study Area adjacent to the Project Area. There are two CNDDDB occurrences of this species within the region of the Biological Study Area, which were recorded in 2000 and 2014 approximately 8.5 miles upstream (north) along the Kings River and two miles west just north of Highway 198.

Yellow-headed blackbird (*Xanthocephalus xanthocephalus*): This species is considered a Species of Special Concern by the CDFW. Yellow-headed blackbirds nest in freshwater emergent wetlands with dense vegetation and deep water, often along borders of lakes or ponds.

Yellow-headed blackbird has high potential to utilize the freshwater marsh in the Kings River and stock ponds adjacent to the Project Area. There is one CNDDDB occurrence of this species within the region of the Biological Study Area, which was recorded in 2016 approximately four miles south of the Project Area.

4.7.5 Migratory Birds and Raptors

The Biological Study Area provides nesting and foraging habitat for migratory birds and raptors. A complete list of bird species observed within the Biological Study Area is listed in **Appendix A**.

5. Thresholds of Significance

5.1 Thresholds of Significance

The environmental impacts relative to biological resources are assessed using impact significance threshold criteria which mirror the policy statement contained in the CEQA, Section 21001(c) of

the California Public Resources Code. Accordingly, the State Legislature has established it to be the policy of the State to:

“Prevent the elimination of fish or wildlife species due to man’s activities, ensure that fish and wildlife populations do not drop below self-perpetuating levels, and preserve for future generations representations of all plant and animal communities ...”

Determining whether a project may have a significant effect, or impact, plays a critical role in the CEQA process. According to State CEQA Guidelines, Section 15064.7, Thresholds of Significance, each public agency is encouraged to develop and adopt (by ordinance, resolution, rule, or regulation) thresholds of significance that the agency uses in the determination of the significance of environmental effects. A threshold of significance is an identifiable quantitative, qualitative or performance level of a particular environmental effect, non-compliance with which means the effect will normally be determined to be significant by the agency and compliance with which means the effect normally will be determined to be less than significant. In the development of thresholds of significance for impacts to biological resources State CEQA Guidelines provides guidance primarily in Section 15065, Mandatory Findings of Significance, and the State CEQA Guidelines, Appendix G, *Environmental Checklist Form*. Section 15065(a) states that a project may have a significant effect where:

“The project has the potential to substantially 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 wildlife community, reduce the number or restrict the range of an endangered, rare, or threatened species ...”

Appendix G of the State CEQA Guidelines is more specific in addressing biological resources and encompasses a broader range of resources to be considered, including candidate, sensitive, or special status species; riparian habitat or other sensitive natural communities; federally protected wetlands; fish and wildlife movement corridors; local policies or ordinances protecting biological resources; and, adopted HCPs. This is done in the form of a checklist of questions to be answered during the Initial Study leading to the preparation of the appropriate environmental documentation for a project [i.e., Negative Declaration, Mitigated Negative Declaration, or Environmental Impacts Report (EIR)]. Because these questions are derived from standards in other laws, regulations, and other commonly used thresholds, it is reasonable to use these standards as a basis for defining significance thresholds in an EIR. Therefore, for the purpose of this analysis, impacts to biological resources are considered potentially significant (before considering offsetting mitigation measures) if one or more of the following conditions would result from implementation of the proposed project.

- Threshold BIO-A** Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Wildlife Service?
- Threshold BIO-B** Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?
- Threshold BIO-C** Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?
- Threshold BIO-D** Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery areas?
- Threshold BIO-E** Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?
- Threshold BIO-F** Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?
-

For the purposes of this impact analysis the following definitions apply:

- “Substantial adverse effect” means loss or harm of a magnitude which, based on current scientific data and knowledge would: (1) substantially reduce population numbers of a listed, candidate, sensitive, rare, or otherwise special status species; (2) substantially reduce the distribution of a sensitive plant community/habitat type; or (3) eliminate or substantially impair the functions and values of a biological resource (e.g., streams, wetlands, or woodlands) in a geographical area defined by interrelated biological components and systems. In the case of this analysis, the prescribed geographical area is the region that includes the USGS topographic quadrangle for the Biological Study Area. For some species, the geographic area may extend to the vicinity of the Biological Study Area based on known distributions of the species.
- “Conflict” means contradiction of a magnitude, which based on foreseeable circumstances, would preclude or prevent substantial compliance.
- “Rare” means: (1) that the species exists in such small numbers throughout all, or a significant portion of, its range that it may become endangered if its environment worsens; or (2) the species is likely to become endangered within the foreseeable future throughout all or a significant portion of its range and may be considered “threatened” as that term is used in the FESA.

For this analysis, the Appendix G Thresholds were relied upon. The analysis utilized factors and considerations identified in the L.A. CEQA Thresholds Guide (Thresholds Guide), as appropriate, to assist in answering the Appendix G threshold questions.

The Thresholds Guide identifies the following factors to evaluate impacts to biological resources:

- The loss of individuals, or the reduction of existing habitat, of a state or federal listed endangered, threatened, rare, protected, or candidate species, or a Species of Special Concern or federally listed critical habitat; or
- The loss of individuals or the reduction of existing habitat of a locally designated species or a reduction in a locally designated natural habitat or plant community; or
- Interference with wildlife movement/migration corridors that may diminish the chances for long-term survival of a sensitive species; or
- The alteration of an existing wetland habitat; or
- Interference with habitat such that normal species behaviors are disturbed (e.g., from the introduction of noise, light) to a degree that may diminish the chances for long-term survival of a sensitive species.

6. Project Related Impacts

6.1 Regulatory Setting

There are several performance criteria and standard conditions that must be met as part of any review and approval of the Proposed Project. These include compliance with all the terms, provisions, and requirements with applicable laws that relate to federal, state, and local regulating agencies related to potential impacts to special-status plant and wildlife species, sensitive natural communities, riparian habitats, wetlands, blue lined stream courses, wildlife movement and nursery areas, and local policies, ordinances, and plans. Federal, state, and local regulations are summarized in Section 2.

6.2 Project Related Impacts

The analysis in Section 6.3, *Impact Analysis*, examines the potential impacts to biological resources that may occur as a result of implementation of the Project. For this assessment, Project-related impacts take two forms, direct and indirect. Direct impacts are those that involve the loss, modification, or disturbance of natural habitats (i.e., vegetation or plant communities), which in turn, directly affect plant and wildlife species dependent on that habitat. Direct impacts also include the destruction of individual plants or wildlife, which is typically the case in species of low mobility (i.e., plants, amphibians, reptiles, and small mammals). The collective loss of individuals in these manners may also directly affect regional population numbers of a species or result in the physical isolation of populations thereby reducing genetic diversity and, hence, population stability.

Indirect impacts are those that involve the effects of increases in ambient levels of sensory stimuli (e.g., noise, light), unnatural predators (e.g., domestic cats and other non-native animals), and competitors (e.g., exotic plants, non-native animals). Indirect impacts may be associated with the

construction and/or eventual habitation/operation of a project; therefore, these impacts may be both short-term and long-term in their duration. These impacts are commonly referred to as “edge effects” and may result in changes in the behavioral patterns of wildlife and reduced wildlife diversity and abundance in habitats adjacent to Biological Study Area.

The determination of impacts in this analysis is based on both Project development and the biological values of the habitat and/or sensitivity of plant and wildlife species to be affected. Any recommended mitigation measures to address impacts are discussed in Section 7 below, and compliance with existing regulations are also outlined in Section 7 as Conditions of Approval.

The biological values of resources within, adjacent to, and outside the area to be affected by the Project were determined by consideration of several factors, as applicable. These included the overall size of habitats to be affected, the previous land uses and disturbance history, the surrounding environment and regional context, the on-area biological diversity and abundance, the presence of special-status plant and wildlife species, the importance to regional populations of these species, and the degree to which on-area habitats are limited or restricted in distribution on a regional basis and, therefore, are considered sensitive in themselves. Therefore, the focus of this impacts analysis is on sensitive plant communities/habitats, resources that play an important role in the regional biological systems, and special-status species.

6.3 Impact Analysis

6.3.1 Impacts to Special-Status Species

Threshold BIO-A: Would the project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Wildlife Service?

No Impact (Special-Status Plants)

Less than Significant (Special-Status Wildlife Species)

6.3.1.1 *Special-Status Plant Species*

Direct Impacts

Project impacts are limited to increasing the amount of water currently being discharged onto the Project Area through existing irrigation infrastructure. Only two common species of agricultural plants currently occur in the area. Several special-status native plant species were reported in the vicinity of the Biological Study Area based on CNDDDB and CNPS. However, suitable habitat for special-status plant species do not occur in the Project area. As such, no direct impacts to special-status plant species would be anticipated.

Indirect Impacts

Indirect impacts to plants could include the increase in the amount of water being applied to the Project Area and any associated conversion of habitat associated with the water increase.

However, existing agricultural use is anticipated to remain the same with project implementation. Since the Project Area does not provide suitable habitat for special-status plants, no indirect impacts to special-status plants would be anticipated.

6.3.1.2 Special-Status Wildlife Species

Direct Impacts

The Project would result in more water inundating the area. As such, project activities are not expected to result in impacts to wildlife that may currently occupy the Biological Study Area. Due to the high level of existing disturbance from human activity both in the Biological Study Area and within the vicinity (e.g., surrounding development), common wildlife species are adapted to human presence and are expected to persist in the area following Project completion.

Swainson's hawk was observed in the oak trees adjacent to the area. This species, as well as merlin, black-crowned night heron, tri-colored blackbird, and yellow-headed blackbird, have the potential to nest in areas adjacent to the Project Area; however, the Project Area does not support nesting habitat for these species. While these species may forage on the Project Area, the increase in the amount of water irrigating the Project Area would not be expected to change the existing conditions of foraging habitat. Impacts would be less than significant, and no mitigation would be required.

Western pond turtle and giant garter snake have a high potential to occupy the Kings River, agricultural drainage ditches, and freshwater marsh habitat that are adjacent to the Project Area. Water is currently actively pumped into the Project Area drainage ditches; therefore, no impacts to these species are anticipated from additional water, and no mitigation would be required.

Indirect Impacts

Indirect impacts to wildlife could include the increase in the amount of water being applied to the Project Area and any associated conversion of habitat associated with the water increase. However, the existing land use is anticipated to remain the same with project implementation, and the Project is not expected to introduce any unnatural predators or competitors that could decrease foraging potential/use of the area. Since the Project Area does not provide suitable nesting/breeding habitat for special-status wildlife and any foraging use would be expected to remain unchanged, no indirect impacts to special-status wildlife would be anticipated, and no mitigation would be required.

6.3.2 Impacts to Riparian or Sensitive Natural Plant Communities

Threshold BIO-B: Would the project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Wildlife or U. S. Fish and Wildlife Service?

No Impact (Riparian or Sensitive Natural Plant Communities)

6.3.2.1 *Riparian or Sensitive Natural Communities*

The Project Area does not support riparian or sensitive natural communities. The freshwater marsh habitat within the Kings River and stock ponds within the buffer of the Biological Study Area is considered riparian habitat but are not sensitive natural communities. Therefore, project activities will not directly impact these habitats. As such, no impacts to riparian or sensitive natural communities are anticipated.

6.3.3 Impacts to Wetlands

Threshold BIO-C: Would the project have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

No Impacts (Wetlands)

The agricultural drainage ditches within the Biological Study Area are barren of vegetation and do not support wetland habitats. The flows in the ditches are currently maintained by active pumping activities, and additional water is not expected to change habitat conditions. The freshwater marsh habitat within the Biological Study Area is a state and/or federally protected wetland; however, there would be no impacts to this habitat as a result of the project. Therefore, no impacts to protected wetlands would occur and no mitigation is required.

6.3.4 Impacts to Wildlife Movement and Migratory Species

Threshold BIO-D: Would the project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery areas?

Less than Significant (Wildlife Movement)

6.3.4.1 *Wildlife Movement*

As described in Section 4.5.2 above, although the Biological Study Area supports a series of agricultural drainage ditches and the Kings River that may be utilized for wildlife movement. However, project activities are limited to increasing water flows onto the Project Area and will not create any obstacles or barriers to wildlife movement.

No indirect impacts are anticipated from project activities, and no impacts to wildlife movement are anticipated.

6.3.5 Consistency with Local Policies and Ordinances

Threshold BIO-E: Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

No Impact (Local Plans and Ordinances)

6.3.5.1 *Kings County General Plans and Ordinances*

Kings County General Plan Resource Conservation Element and Open Space Element lay out the framework for resource management within the County. As the land use and management of the agricultural fields and drainage ditches will remain unchanged, no conflicts with the County General Plan polies for the protection of resources are anticipated.

6.3.6 Consistency with Adopted Habitat Conservation Plan or Natural Community Conservation Plan

Threshold BIO-F: Would the project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

No Impact (Habitat Conservation Plan or Natural Community Conservation Plan)

The Biological Study Area is not located within an adopted habitat conservation plan, natural community conservation plan, or other approved local, regional, or State habitat conservation

plan. Therefore, the Project would not conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or State habitat conservation plan.

7. Mitigation Measures

7.1 Mitigation Measures for Significant Impacts

As project activities are limited to increasing existing water flows onto area and no significant impacts are anticipated, no mitigation measures are required.

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Appendix A

Species Observed

APPENDIX A SPECIES OBSERVED

Scientific Name	Common Name
COLUMBIFORMES	
Columbidae	Pigeons and Doves
<i>Zenaida macroura</i>	Mourning Dove
APODIFORMES	
Apodidae	Swifts
<i>Aeronautes saxatalis</i>	White-throated Swift
Trochilidae	Hummingbirds
<i>Calypte anna</i>	Anna's Hummingbird
Charadriidae	Plovers, Dotterels, and Lapwings
<i>Charadrius semipalmatus</i>	Semipalmated Plover
<i>Charadrius vociferus</i>	Killdeer
Scolopacidae	Sandpipers and Allies
<i>Calidris minutilla</i>	Least Sandpiper
<i>Limnodromus scolopaceus</i>	Long-billed Dowitcher
Ardeidae	Hérons, Bitterns, and Allies
<i>Ardea herodias</i>	Great Blue Heron
<i>Ardea alba</i>	Great Egret
ACCIPITRIFORMES	
Accipitridae	Hawks
<i>Buteo swainsoni</i>	Swainson's Hawk
<i>Buteo jamaicensis</i>	Red-tailed Hawk
FALCONIFORMES	
Falconidae	Falcons and Caracaras
<i>Falco sparverius</i>	American Kestrel
PASSERIFORMES	
Tyrannidae	Tyrant Flycatchers
<i>Sayornis nigricans</i>	Black Phoebe
<i>Sayornis saya</i>	Say's Phoebe

Scientific Name	Common Name
Corvidae	Jays and Crows
<i>Aphelocoma californica</i>	California Scrub-Jay
<i>Corvus brachyrhynchos</i>	American Crow
<i>Corvus corax</i>	Common Raven
Hirundinidae	Swallows and Martins
<i>Hirundo rustica</i>	Barn Swallow
Troglodytidae	Wrens
<i>Cistothorus palustris</i>	Marsh Wren
Mimidae	Thrashers
<i>Mimus polyglottos</i>	Northern Mockingbird
Sturnidae	Starlings and Mynas
* <i>Sturnus vulgaris</i>	European Starling
Passeridae	Old World Sparrows
* <i>Passer domesticus</i>	House Sparrow
Fringillidae	Finches
<i>Haemorhous mexicanus</i>	House Finch
Passerellidae	New World Sparrows
<i>Junco hyemalis</i>	Dark-eyed Junco
<i>Zonotrichia leucophrys</i>	White-crowned Sparrow
<i>Passerculus sandwichensis</i>	Savannah Sparrow
Icteridae	Orioles, Grackles, and Cowbirds
<i>Sturnella neglecta</i>	Western Meadowlark
<i>Agelaius phoeniceus</i>	Red-winged Blackbird
Parulidae	Wood Warblers
<i>Setophaga coronata</i>	Yellow-rumped Warbler

Appendix B

Special-Status Plant Species

APPENDIX B SPECIAL-STATUS PLANT SPECIES

Common Name <i>Scientific Name</i>	Sensitivity Status ¹	Flowering Period	Preferred Habitat/Known Elevation and Distribution ²	Presence/Potential to Occur Within Biological Study Area
Brassicaceae (Mustard Family)				
California jewelflower <i>Caulanthus californicus</i>	Federal: Endangered State: Endangered Local: 1B.1 G1S1	Feb.-May	Chenopod scrub, valley and foothill grassland, pinyon and juniper woodland. Elevation range extends from 61-1,000 meters.	Not Expected due to lack of suitable habitat.
Panoche pepper-grass <i>Lepidium jaredii ssp. album</i>	Federal: None State: None Local: 1B.2 BLM Sensitive	Feb.-Jun.	Valley and foothill grassland (clay, steep slopes, sometimes alkaline). Elevation range extends from 185-745 meters	Not Expected due to lack of suitable habitat.
Asteraceae (Sunflower Family)				
Ferris' goldfields <i>Lasthenia ferrisiae</i>	Federal: None State: None Local: 4.2 G3S3	Feb.-May	Vernal pools (alkaline, clay). Elevation range extends from 20-700 meters.	Not Expected due to lack of suitable habitat.
Munz's tidy-tips <i>Layia munzii</i>	Federal: None State: None Local: 1B.2 BLM Sensitive G2S2	Mar. -Apr.	Chenopod scrub, Valley and foothill grassland (alkaline clay) Elevation range extends from 150-700 meters.	Not Expected due to lack of suitable habitat.
San Joaquin woollythreads <i>Monolopia congdonii</i>	Federal: Endangered State: None Local: 1B.2 G2S2	Feb.-May	Chenopod scrub, Valley and foothill grassland (sandy). Elevation range extends from 60-800 meters.	Not Expected due to lack of suitable habitat.
Ranunculaceae				

Common Name Scientific Name	Sensitivity Status ¹	Flowering Period	Preferred Habitat/Known Elevation and Distribution ²	Presence/Potential to Occur Within Biological Study Area
(Buttercup Family)				
recurved larkspur <i>Delphinium recurvatum</i>	Federal: None State: None Local: 1B.2 BLM Sensitive	Mar-Jun.	Chenopod scrub, Cismontane woodland, Valley and foothill grassland Elevation range extends from 3-790 meters.	Not Expected due to lack of suitable habitat.
Poaceae (Grass Family)				
California alkali grass <i>Puccinellia simplex</i>	Federal: None State: None Local: 1B.2 BLM Sensitive	Mar.-May	Chenopod scrub, Meadows and seeps, Valley and foothill grassland, Vernal pools. Elevation range extends from 0-465 meters.	Not Expected due to lack of suitable habitat.

¹ Sensitivity Status

Federal

- FE *Federally Endangered*
- FT *Federally Threatened*
- FC *Federal Candidate*
- FPE *Federally Proposed as Endangered*
- FPT *Federally Proposed as Threatened*
- FPD *Federally Proposed for Delisting*

State

- SE *State Listed as Endangered*
- ST *State Listed as Threatened*
- SCE *State Candidate for Endangered*
- SCT *State Candidate for Threatened*
- SR *State Rare*

Local

CRPR *California Rare Plant Ranks:*

- California Rare Plant Rank 1A Plants presumed extirpated in California and either rare or extinct elsewhere
- California Rare Plant Rank 1B Plants rare, threatened, or endangered in California and elsewhere
- California Rare Plant Rank 2A Plants presumed extirpated in California but common elsewhere
- California Rare Plant Rank 2B Plants rare, threatened, or endangered in California, but common elsewhere
- California Rare Plant Rank 3 Plants about which more information is needed, a review list
- California Rare Plant Rank 4 Plants of limited distribution, a watch list

Threat Code extensions and their meanings:

- 0.1-Seriously threatened in California (over 80% of occurrences threatened / high degree and immediacy of threat)
- 0.2-Moderately threatened in California (20-80% occurrences threatened / moderate degree and immediacy of threat)
- 0.3-Not very threatened in California (less than 20% of occurrences threatened / low degree and immediacy of threat or no current threats known)

² Sources for Preferred Habitat:

Calflora. 2023. Information on Wild California Plants. Available online at: <https://www.calflora.org/>. Accessed on January 18, 2023.
CDFW. 2023. California Natural Diversity Database (CNDDDB). RareFind, Version 5.0 (Commercial Subscription). Sacramento, California: CDFW, Biogeographic Data Branch. Available online at: <https://www.wildlife.ca.gov/Data/CNDDDB/Maps-and-Data>. Accessed on January 18, 2023.
Source: *ESA, 2023.*

Appendix C

Special-Status Animal Species

APPENDIX C SPECIAL-STATUS WILDLIFE SPECIES

Common Name <i>Scientific Name</i>	Sensitivity Status ¹	Preferred Habitat/Known Distribution ²	Presence/Potential to Occur within Biological Study Area
Invertebrates			
Order Hymenoptera (ants, bees, wasps, and sawflies) Insecta			
Crotch bumble bee <i>Bombus crotchii</i>	Federal: None State: Candidate CNDDDB Rank: None	Coastal California east to the Sierra-Cascade crest and south into Mexico. Food plant genera include <i>Antirrhinum</i> , <i>Phacelia</i> , <i>Clarkia</i> , <i>Dendromecon</i> , <i>Eschscholzia</i> , and <i>Eriogonum</i> .	Not expected due to lack of suitable habitat and food plants.
Order Coleoptera (beetles) Insecta			
valley elderberry longhorn beetle <i>Desmocerus californicus dimorphus</i>	Federal: Threatened State: None CNDDDB Rank: G3T2T3, S3	Occurs only in the Central Valley of California, in association with blue elderberry (<i>Sambucus mexicana</i>).	Not expected due to lack of <i>Sambucus</i> on site.
Order Unionida (freshwater mussels) Mollusca			
western ridged mussel <i>Gonidea angulata</i>	Federal: None State: Candidate CNDDDB Rank: G3, S1S2	Primarily creeks and rivers and less often lakes. Originally in most of state, now extirpated from Central and Southern California.	Not expected due to regular maintenance of agricultural drainage ditches.

Common Name Scientific Name	Sensitivity Status ¹	Preferred Habitat/Known Distribution ²	Presence/Potential to Occur within Biological Study Area
AMPHIBIANS			
Spadefoot Toads Scaphiopodidae			
western spadefoot <i>Spea hammondi</i>	Federal: None State: SSC CNDDB Rank: G2G3 S3S4 Local: BLM Sensitive	Occurs primarily in grassland habitats, but can be found in valley-foothill hardwood woodlands. Vernal pools are essential for breeding and egg-laying.	Low Potential. Habitat is regularly tilled agriculture.
REPTILES			
Pond turtles Emyidae			
western pond turtle <i>Emys marmorata</i>	Federal: None State: SSC Local: BLM Sensitive	A thoroughly aquatic turtle of ponds, marshes, rivers, streams and irrigation ditches, usually with aquatic vegetation, below 6000 ft elevation.	Species has high potential to occur in the Kings River adjacent to the project site and in the agricultural drainage ditches.
Colubrid snakes Colubridae			
California glossy snake <i>Arizona elegans occidentalis</i>	Federal: None State: SSC CNDDB Rank: G5T2T3	Generalist reported from a range of scrub and grassland habitats, often with loose or sandy soils.	Not expected due to regular tilling and disturbance on site.
San Joaquin coachwhip <i>Masticophis flagellum ruddocki</i>	Federal: None State: SSC CNDDB Rank: G5T2T3 S3	Open, dry habitats with little or no tree cover. Found in valley grassland and saltbush scrub in the San Joaquin Valley.	Not expected due to lack of suitable habitat.
giant gartersnake <i>Thamnophis gigas</i>	Federal: Threatened State: Threatened CNDDB Rank: G2 S2	Prefers freshwater marsh and low gradient streams. Has adapted to drainage canals and irrigation ditches.	High potential to occur within agricultural drainage ditches found throughout the study area and within the Kings River

Common Name <i>Scientific Name</i>	Sensitivity Status ¹	Preferred Habitat/Known Distribution ²	Presence/Potential to Occur within Biological Study Area
BIRDS			
<i>Herons, Egrets, & Bitterns</i> <i>Ardeidae</i>			
black-crowned night heron <i>Nycticorax nycticorax</i>	Federal: None State: None CNDDDB Rank: G5, S4	Colonial nester, usually in trees, occasionally in tule patches.	High potential to occur within the Kings River found adjacent to the project site.
<i>Hawks, Kites, Harriers, & Eagles</i> <i>Accipitridae</i>			
Swainson's hawk <i>Buteo swainsoni</i>	Federal: None State: Threatened Local: BLM Sensitive	Breeds in grasslands with scattered trees, juniper-sage flats, riparian areas, savannahs, and agricultural or ranch lands with groves or lines of trees.	Present. Species was observed in trees along the western embankment of the Kings River adjacent to the project site.
<i>Falcons</i> <i>Falconidae</i>			
merlin <i>Falco columbarius</i>	Federal: None State: WL CNDDDB Rank: G5, S3S4	Seacoast, tidal estuaries, open woodlands, savannahs, edges of grasslands and deserts, farms and ranches.	High potential to occur within the biological study area
<i>True Owls</i> <i>Strigidae</i>			
burrowing owl <i>Athene cunicularia</i>	Federal: BCC State: SSC Local: BLM Sensitive	Inhabits coastal prairie, coastal scrub, Great Basin scrub, Mojavean desert scrub, Sonoran desert scrub, annual and perennial grasslands, bare ground, and disturbed habitats characterized by low-growing vegetation. A subterranean nester dependent upon burrowing mammals, particularly the California ground squirrel.	Low potential. While biological study area has scarce vegetation, the soils are regularly tilled and are consistently inundated, preventing burrowing mammals from establishing burrows on site.

Common Name Scientific Name	Sensitivity Status¹	Preferred Habitat/Known Distribution²	Presence/Potential to Occur within Biological Study Area
Plovers & relatives Charadriiformes			
western snowy plover <i>Charadrius nivosus nivosus</i>	Federal: Threatened State: SSC CNDDDB Rank: G3T3 S3	Sandy beaches, salt pond levees and shores of large alkali lakes.	Not expected due to lack of suitable habitat.
New World Blackbirds Icteriidae			
tricolored blackbird <i>Agelaius tricolor</i>	Federal: None State: Threatened, SSC Local: BLM Sensitive	Highly colonial species, most numerous in Central Valley and vicinity. Largely endemic to California. Found in freshwater marsh habitats.	High potential to occur within the Kings River adjacent to the site.
yellow-headed blackbird <i>Xanthocephalus xanthocephalus</i>	Federal: None State: SSC CNDDDB Rank: G5, S3	Nests in freshwater emergent wetlands with dense vegetation and deep water. Often along borders of lakes or ponds.	High potential to occur within the Kings River adjacent to the site.
MAMMALS			
Squirrels & relatives Sciuridae			
Nelson's (=San Joaquin) antelope squirrel <i>Ammospermophilus nelsoni</i>	Federal: None State: Threatened CNDDDB Rank: G2G3, S2S3 Local: BLM Sensitive	Western San Joaquin Valley from 200-1200 ft elev. On dry, sparsely vegetated loam soils.	Not expected due to high disturbance on site.

Common Name Scientific Name	Sensitivity Status ¹	Preferred Habitat/Known Distribution ²	Presence/Potential to Occur within Biological Study Area
Kangaroo rats, Pocket mice, & Kangaroo mice <i>Heteromyidae</i>			
Fresno kangaroo rat <i>Dipodomys nitratoides exilis</i>	Federal: Endangered State: Endangered CNDDDB Rank: G3TH, SH	Alkali sink-open grassland habitats in western Fresno County.	Not expected due to high disturbance on site.
Tipton kangaroo rat <i>Dipodomys nitratoides nitratoides</i>	Federal: Endangered State: Endangered CNDDDB Rank: G3T1T2, S1S2	Saltbrush scrub and sink scrub communities in the Tulare Lake Basin of the southern San Joaquin Valley.	Not expected due to high disturbance on site.
Weasels & relatives <i>Mustelidae</i>			
American badger <i>Taxidea taxus</i>	Federal: None State: SSC	Found in a variety of habitats, including alkali marsh, desert wash, Great Basin scrub, marsh and swamp, meadow and seep, Mojavean desert scrub, riparian scrub, riparian woodland, valley and foothill grassland. Most abundant in drier open stages of most shrub, forest, and herbaceous habitats, with friable soils. Needs sufficient food, friable soils, and open, uncultivated ground to dig burrows. Preys on burrowing rodents.	Low potential. While biological study area has scarce vegetation, the soils are regularly tilled and are consistently inundated, preventing burrowing mammals from establishing burrows on site.
Dogs & relatives <i>Canidae</i>			
San Joaquin kit fox <i>Vulpes macrotis mutica</i>	Federal: Endangered State: Threatened CNDDDB Rank: G4T2, S2	Annual grasslands or grassy open stages with scattered shrubby vegetation. Need loose-textured sandy soils for burrowing, and suitable prey base.	Not expected due to lack of suitable habitat on site.

¹ **Sensitivity Status**

Federal (USFWS)

FE *Federally Endangered*
FT *Federally Threatened*

State

FP *Fully Protected*
SE *State Endangered*
ST *State Threatened*
SCE *State Candidate as Endangered*
SCT *State Candidate as Threatened*
SSC *State Species of Special Concern*
WL *Watch List*

CNDDB Rank

G (Global), S (State)
1 *Critically Imperiled*
2 *Imperiled*
3 *Vulnerable*
4 *Apparently Secure*
5 *Secure*

Local

BLM Sensitive *Bureau of Land Management Sensitive*

² **Sources for Preferred Habitat:**

CDFW. 2023a. California Natural Diversity Database (CNDDDB). RareFind, Version 5.0 (Commercial Subscription). Sacramento, California: CDFW, Biogeographic Data Branch. Available online at: <https://www.wildlife.ca.gov/Data/CNDDDB/Maps-and-Data>. Accessed on January 18, 2023.

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Source: *ESA, 2023.*
