BIOLOGICAL ANALYSIS REPORT

BOMAR PARTNERS LLC

THE CROSSINGS PROJECT

KERN COUNTY, CALIFORNIA

AUGUST 2021

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BOMAR PARTNERS LLC, THE CROSSINGS PROJECT, KERN COUNTY, CALIFORNIA

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ACRONYMS AND ABBREVIATIONS

AMSL	Above Mean Sea Level
APN	Assessor Parcel Number
BAR	Biological Analysis Report
BIOS	Biogeography Information and Observation System
BSA	Biological Study Area
CAGS	California Ground Squirrel
CCR	California Code of Regulations
COB	City of Bakersfield
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CFGC	California Fish and Game Code
CNDDB	California Natural Diversity Database
CNPS	California Native Plant Society
CRPR	California Rare Plant Rank
CWA	Clean Water Act
CWHR	California Wildlife Habitat Relationships
FEMA	Federal Emergency Management Agency
FESA	Federal Endangered Species Act
MBGP	Metropolitan Bakersfield General Plan
MBHCP	Metropolitan Bakersfield Habitat Conservation Plan
MBTA	Migratory Bird Treaty Act
NHD	National Hydrography Dataset
NRCS	Natural Resources Conservation Service
NWI	National Wetlands Inventory
RWQCB	Regional Water Quality Control Board
SJKF	San Joaquin Kit Fox
SR	State Route
SWHA	Swainson's Hawk
USACE	U.S. Army Corps of Engineers

USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey

EXECUTIVE SUMMARY

This Biological Analysis Report (BAR) evaluates the potential for sensitive biological resources to be impacted by "The Crossings Project" (Project). The Project consists of the construction of a multi-use development southeast of the city of Bakersfield, California, Kern County on the southwest corner of Hosking Avenue and South H Street.

This BAR is designed to support evaluation of the Project pursuant to the California Environmental Quality Act (CEQA), project permitting through regulatory agencies, and other related uses.

Database reviews were conducted to determine the potential for special-status species and other sensitive biological resources to occur on-site that may be impacted by the Project. These reviews result in five sensitive natural communities, 21 special-status plant species, and 39 special-status animal species having potential to be on or near the Project. Based on these database reviews, a reconnaissance survey conducted by QK in July 2021, and environmental conditions such as soil type, elevation, historical range, and other factors, it was determined that seven special-status animal species may potentially be impact by the Project: San Joaquin kit fox (*Vulpes macrotis mutica*), Swainson's hawk (*Buteo swainsoni*), Western burrowing owl (*Athene cunicularia*), American badger (*Taxidea taxus*), San Joaquin coachwhip (*Masticophis flagellum ruddocki)*, as well as other nesting migratory birds and raptors that are protected by the Migratory Bird Treaty Act and California Fish and Game Code.

Reviews of the databases and field survey indicated that there are no defined waters or wetlands within the Project site. However, one potential jurisdictional waterway, the Kern Island Canal is present within the Biological Survey Area on the east side of South H Street opposite of the Project site. This potential jurisdictional waterway will not be impacted by the Project. There are no designated migratory corridors or linkages, significant nursery sites, or federally designated Critical Habitat on the Project site.

Potential direct impacts to biological resources without implementation of avoidance and minimization measures could include direct injury to or mortality of individual special-status species and interference with normal wildlife behaviors. Potential indirect impacts without implementation of avoidance and minimization measures could include loss of foraging habitat. Nesting migratory birds may be impacted if Project activities occur during the nesting season.

The Project is not expected to substantially impact and would not conflict with local policies or ordinances. The Project is within the Metropolitan Bakersfield Habitat Conservation Plan and associated State Incidental Take Permit area, thus specific surveys for selected federal and State listed species covered by that plan and ITP must be conducted and associated protection measures must be implemented prior to construction. Because of the presence of a potential special-status animal species, avoidance and minimization measures are recommended which, when implemented, would reduce Project impacts to biological resources.

SECTION 1 - INTRODUCTION

QK was retained by BOMAR Partners, LLC. (BOMAR, Project proponent) to provide biological services in support of The Crossings multi-use commercial development (Project). QK reviewed readily available technical documents and agency-maintained databases for sensitive biological resources and assessed biological conditions throughout the Project area during an on-site reconnaissance survey. The results of the desktop research and field survey are summarized in this Biological Analysis Report (BAR), which provides the technical basis for the analysis of potential impacts to biological resources that may result from the construction, operation, and maintenance of the Project.

1.1 - Project Location

The Project is located within the southern San Joaquin Valley on a 28.8-acre parcel (Assessor Parcel Number (APN): 514-030-25 in southeast Bakersfield, Kern County, California. The Project site is located on the southwest corner of Hosking Avenue and South H Street (Figure 1-1). The Project is within Section 36, Township 30S, Range 27E, Mount Diablo Base and Meridian. State Route (SR) 99, which serves as a major arterial roadway between northern and southern California, is located immediately to the west of the Project site (Figure 1-2).

1.2 - Project Description

The proposed Project is the construction of multi-use commercial development. As proposed, the Project would consist of four (4) components: 1) A General Plan Amendment; 2) a Zone Change (GPA/ZC No. 21-0179); 3) a site plan consisting of general commercial uses; and 4) a Parcel Map dividing the Project site into various parcels. The proposed layout, density, size, and estimated number of commercial uses of the proposed Project area are illustrated in Appendix A.

1.3 - Purpose, Goals, and Objectives

The purpose of this BAR is to provide site-specific information and an evaluation of Project impacts on sensitive biological resources. The BAR will be used to provide Project environmental documentation and evaluation pursuant to the California Environmental Quality Act (CEQA). The Project is subject to discretionary approvals by the City of Bakersfield (COB) Council. Acting in its capacity as a lead agency under CEQA, the COB would need to determine the potential for the Project to result in significant impacts, consider mitigation measures and alternatives to avoid significant impacts, and consider the environmental effects of the Project in its decision-making process. This BAR provides the substantial evidence upon which the required evaluation of feasibility, environmental analysis, and findings of fact in relation to biological resources can be made.

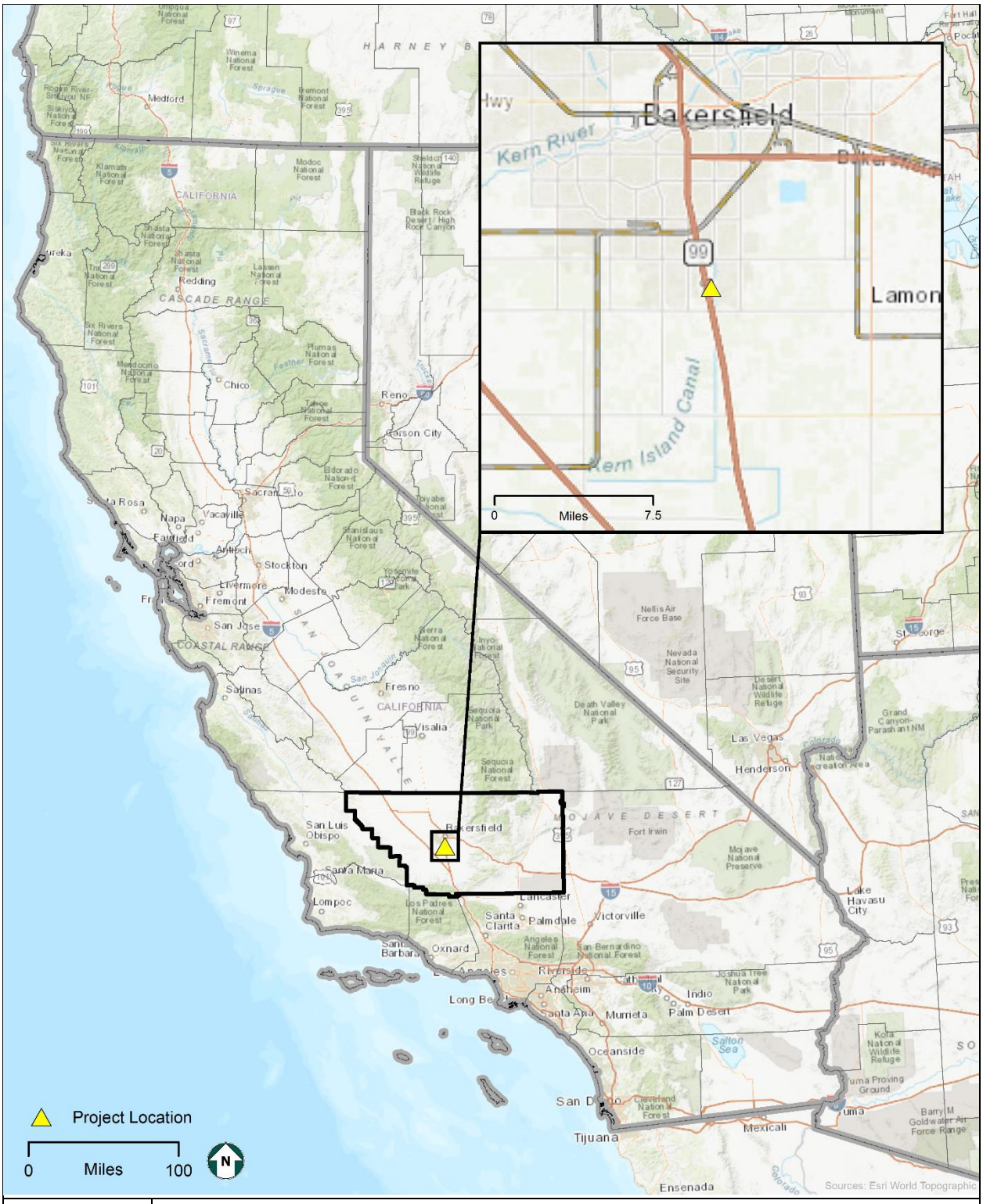

Figure 1-1
Regional Map
The Crossings Project
Kern County, California

Figure 1-2
Project Location Map
The Crossings Project
Kern County, California

SECTION 2 - METHODS

2.1 - Definition of Biological Study Area

The Biological Study Area (BSA) used for this BAR includes everything within the limits of the Project boundary and within a 250-foot buffer (see Figure 2-1).

2.2 - Definition of Special-Status Species

For the purposes of this report, special-status species include:

- Species listed as threatened or endangered under the Federal Endangered Species Act (FESA); species that are under review may be included if there is a reasonable expectation of listing within the life of the project,
- Species listed as candidate, threatened, or endangered under the California Endangered Species Act (CESA),
- Species designated as Fully Protected, Species of Special Concern, or Watch List by the California Department of Fish and Wildlife (CDFW),
- Other species included on the CDFW's Special Animals List,
- Plant species with a California Rare Plant Rank (CRPR) in categories 1 or 2, *or*
- Species designated as locally important by the Local Agency and/or otherwise protected through ordinance or local policy.

The potential for each special-status species to occur in the study area was evaluated according to the following criteria:

- None. Habitat on and adjacent to the site is clearly unsuitable to meet the needs of the species (foraging, breeding, cover, substrate, elevation, hydrology, plant community, site history, disturbance regime), and species would have been identifiable on-site if present (e.g., oak trees). Protocol surveys (if conducted) did not detect species.

- Potential. Conditions on the site may, in some way, support a portion of the species ecology (foraging, reproduction, movement/migration). Protocol surveys were conducted, but negative results do not exclude the potential for a species to occur.

- Present. Species was observed on the site or has been recorded (e.g., CNDDB, other reports) on the site recently (within the last 5 years).

2.3 - Literature Review and Database Analysis

The following sources were reviewed for information on special-status biological resources in the project vicinity:

- CDFW's California Natural Diversity Database (CNDDB; CDFW 2021a)
- CDFW's Biogeographic Information and Observation System (BIOS; CDFW 2021)
- CDFW's California Wildlife Habitat Relationships (CWHR) System (Mayer and Laudenslayer 1988)

- California Native Plant Society (CNPS) Inventory of Rare and Endangered Plants of California (CNPS 2021)
- U.S. Fish and Wildlife Service's (USFWS) Information for Planning and Consultation system (USFWS 2021)
- USFWS Critical Habitat Mapper (USFWS 2021)
- USFWS National Wetlands Inventory (NWI; USFWS 2021b)
- USGS National Hydrography Dataset (NHD; USGS 2021)
- Federal Emergency Management Agency (FEMA) flood zone maps (FEMA 2021)
- U.S. Department of Agriculture, Natural Resources Conservation Service (NRCS) Web Soil Survey (NRCS 2021)
- California Protected Areas Data Portal (GreenInfo Network 2021)
- Current and historical aerial imagery (Google LLC 2021)
- Topographic maps (USGS 2021)

For each of these data sources, the search was focused on the *Gosford, California* USGS 7.5-minute quadrangle in which the project is located, plus the surrounding eight (8) quadrangles*: Conner, Rosedale, Oildale, Oil Center, Stevens, Lamont, Millux, and Weed Patch*. For the CNDDB, a 10-mile search radius was used.

The CNDDB provides element-specific spatial information on individually documented occurrences of special-status species and sensitive natural communities. Some of the information available for review in the CNDDB is still undergoing review by the CDFW; these records are identified as unprocessed data. The CNPS database provides similar information as the CNDDB, but at a much lower spatial resolution. Much of this information in these databases is obtained opportunistically and is often focused on protected lands or on lands where development has been proposed. Neither database represents a comprehensive survey for special-status resources in the region. As such, the absence of recorded occurrences in these databases at any specific location does not preclude the possibility that a special-status resource could be present.

Reviews of the National Wetlands Inventory (NWI; USFWS 2021b) and National Hydrography Dataset (USGS 2021) were completed to identify whether wetlands had previously been documented on or adjacent to the Project site. The NWI, which is operated by the USFWS, is a collection of wetland and riparian maps that depicts graphic representations of the type, size, and location of wetland, deep water, and riparian habitats in the United States. In addition to the NWI, regional hydrologic information was obtained from the USGS to evaluate the potential occurrence of blueline streams within the Project Site.

Soils data were obtained from the Natural Resource Conservation District, United States Department of Agriculture (USDA 2021), weather and precipitation data were obtained from the Western Regional Climate Center (WRCC 2021), and land use information was obtained from available aerial imagery. Information about flood-prone areas were obtained from the

Federal Emergency Management Agency, Department of Homeland Security (FEMA 2021) and information on protected lands were obtained from the Greeninfo Network (Greeninfo Network 2021).

The results of the database inquiries were reviewed to develop a list of special-status resources that may be present within vicinity of the Project. This list was then evaluated against the existing conditions observed during the reconnaissance site visit of the BSA to determine which special-status resources have the potential to occur, and then the potential for impacts to those resources as a result of implementation of the Project.

2.4 - Reconnaissance-Level Field Surveys

A reconnaissance-level biological survey was conducted on July 8, 2021, by QK Environmental Scientists Lucas Knox and Karissa Denney. Weather conditions during the site survey was at the optimal survey conditions and generally conducive to the detection of diurnally active animal species. The survey consisted of walking meandering pedestrian transects and using binoculars to spot occurrences throughout the Project site and BSA such that 100% of the site was observed. Current land uses within the Project were documented along with the presence of all plants, wildlife, and wildlife sign (scat, burrows, feather, tracks, etc.). All suitable habitats that could potentially support wildlife within the Project were documented and photographs were taken. The survey focused on determining the locations and extent of vegetation communities and the potential for occurrences of sensitive plant and wildlife species within the Project.

Figure 2-1
Biological Study Area
The Crossings Project
Kern County, California

SECTION 3 - REGULATORY SETTING

Regulated or sensitive resources that were studied and analyzed include special-status plant and animal species, nesting birds and raptors, sensitive plant communities, jurisdictional waters and wetlands, wildlife movement areas, and locally protected resources, such as protected trees. Regulatory authority over biological resources is shared by federal, state, and local authorities. Primary authority for regulation of general biological resources lies within the land use control and planning authority of local jurisdictions (in this instance, the City of Bakersfield).

Potential impacts to biological resources were analyzed based on the following list of statutes. Summaries of these statues are provided below.

- FESA
- CEQA
- CESA
- Federal Clean Water Act
- California Fish and Game Code
- Migratory Bird Treaty Act
- The Bald and Golden Eagle Protection Act
- Porter-Cologne Water Quality Control Act
- San Joaquin Valley Upland Species Recovery Plan
- Metropolitan Bakersfield General Plan (MBGP)
- Metropolitan Bakersfield Habitat Conservation Plan (MBHCP)

3.1 - Applicable Federal Regulations

3.1.1 - FEDERAL ENDANGERED SPECIES ACT OF 1973 (USC, TITLE 16, SECTIONS 1531-1543)

The Federal Endangered Species Act (FESA) and subsequent amendments provide guidance for the conservation of endangered and threatened species and the ecosystems upon which they depend. The U.S. Fish and Wildlife Service (USFWS) and National Marine Fisheries Service (NMFS) share responsibilities for administering the FESA. The FESA defines species as threatened or endangered and provides regulatory protection for listed species. The FESA provides a program for the conservation and recovery of threatened and endangered species as well as the protection of designated critical habitat that USFWS and NMFS determines is required for the survival and recovery of listed species.

Section 9 lists actions that are prohibited under the FESA. Although "take" of a listed species is generally prohibited, "take" can be permitted when it is incidental to an otherwise legal activity. The FESA defines "take" as "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect or attempt to engage in any such conduct." The definition of "harm" is defined as an act which actually kills or injures wildlife and includes certain types of significant habitat modification or degradation that results in death or injury to listed species

by significantly impairing behavioral patterns related to breeding, feeding, or shelter. "Harass" is defined as actions that create the likelihood of injury to listed species by disrupting normal behavioral patterns related to breeding, feeding, and shelter significantly.

Section 7 of the FESA requires federal agencies, in consultation with and assistance from the Secretary of the Interior or the Secretary of Commerce, as appropriate, to ensure that actions they authorize, fund, or carry out are not likely to jeopardize the continued existence of threatened or endangered species or result in the destruction or adverse modification of critical habitat for these species. Regulations governing interagency cooperation under Section 7 are found in California Code of Regulations (CCR) Title 50, Part 402. If an activity could result in "take" of a listed species as an incident of an otherwise lawful activity, then a biological opinion can be issued by the USFW and/or NMFS with an incidental take statement that exempts the activity from FESA's take prohibitions. The San Lauren Project lacks federal funding or any other nexus to federal jurisdiction, and Section 7 does not apply.

Section 10 provides a means whereby a nonfederal action with the potential to result in take of a listed species can be allowed under an incidental take permit. Application procedures are found at CFR Title 50, Sections 13 and 17 for species under the jurisdiction of USFWS and CFR, Title 50, Sections 217, 220, and 222 for species under the jurisdiction of NMFS. Section 10 would apply to the Project if take of a species (as defined in Section 9) were determined to occur. The incidental take permit would be part of an approved Habitat Conservation Plan.

Section 4(a)(3) and (b)(2) of the FESA requires the designation of critical habitat to the maximum extent possible and prudent based on the best available scientific data and after considering the economic impacts of any designations. Critical habitat is defined in section (areas within the geographic range of a species that are occupied by individuals of that species and contain the primary constituent elements (physical and biological features) essential to the conservation of the species, thus warranting special management consideration or protection; and 2) areas outside of the geographic range of a species at the time of listing but that are considered essential to the conservation of the species.

3.1.2 - MIGRATORY BIRD TREATY ACT (USC, TITLE 16, SECTIONS 703-711)

The MBTA, first enacted in 1918, is a series of treaties that the United State has with Great Britain (on behalf of Canada), Mexico, Japan, and the former Soviet Union that provide for international migratory bird protection. The MBTA authorizes the Secretary of the Interior to regulate the taking of migratory birds. The act provides that it shall be unlawful, except as permitted by regulations, "to pursue, take, or kill any migratory bird, or any part, nest or egg of any such bird" (U.S. Code Title 16, Section 703). The MBTA currently includes several hundred species and includes all native birds.

3.1.3 - BALD AND GOLDEN EAGLE PROTECTION ACT OF 1940 (USC, TITLE 16, SECTION 668)

The Bald and Golden Eagle Protection Act (BGEPA) of 1940 protects bald eagles (*Haliaeetus leucoephalus*) and golden eagle (*Aquila chrysaetos*) by prohibiting the taking, possession, and commerce of these species and established civil penalties for violation of this act. Take

of bald and golden eagles includes to "pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, molest or disturb." To disturb means to agitate or bother a bald or golden eagle to a degree that causes, or is likely to cause, based on the best scientific information available, 1) injury to an eagle, 2) a decrease in its productivity, by substantially interfering with normal breeding, feeding, or sheltering behavior, or 3) nest abandonment, by substantially inferring with normal breeding, feeding, or sheltering behavior. (Federal Register [FR], volume 72, page 31132; 50 CFR 22.3).

3.1.4 - FEDERAL CLEAN WATER ACT (USC, TITTLE 33, SECTIONS 1521-1376)

The federal Clean Water Act (CWA) provides guidance for the restoration and maintenance of the chemical, physical, and biological integrity of the nation's waters. Section 402 establishes a permitting system for the discharge of any pollutant (except dredged or fill material) into waters of the U.S. Section 404 establishes a permit program administered by the United States Army Corps of Engineers (USACE) that regulates the discharge of the dredged or fill material into waters of the U.S., including wetlands. The USACE implementing regulations are found in CFR, Title 33, Sections 320 and 330. Guidelines for implementation are referred to as the Section 404(b)(1) Guidelines, which were developed by the United States Environmental Protection Agency (EPA) in conjunction with USACE (40 CFR 230). The guidelines allow the discharge of dredged or fill material into the aquatic system only if there is no practicable alternative that would have less adverse impacts. Section 401 requires that a Project applicant that is pursuing a Section 404 permit obtain a State Certification of Water Quality, thereby ensuring that the discharge will comply local state water quality requirements. The Regional Water Quality Control Board (RWQCB) administers the certification program in California.

3.1.5 - SAN JOAQUIN VALLEY UPLAND SPECIES RECOVERY PLAN

San Joaquin Valley Upland Species Recovery Plan (Plan) was implemented in 1998 by U.S. Fish and Wildlife Service. The Plan covers a total of 34 species including 19 plant and 5 mammal species. The Plan also includes ten species that are State-listed or federal candidates, or species of concern. These ten species include three invertebrates, six mammal, and one bird species. The ultimate goal of the recovery plan is to delist the endangered and threatened species and ensure the long-term conservation of the 34 State- or federally- listed species, candidates or species of concern. An interim goal is to reclassify the endangered species to threatened status. USFWS is responsible for implementation of the recovery plan and the plan does not have the legal force of laws or regulations.

3.1.6 - APPLICABLE STATE REGULATIONS

3.1.7 - CALIFORNIA ENVIRONMENTAL QUALITY ACT (CALIFORNIA PUBLIC RESOURCES CODE, SECTION 21000-21178, AND TITLE 14 CCR, SECTION 753, AND CHAPTER 3, SECTIONS 15000-15387)

CEQA is California's broadest environmental law. CEQA helps guide the issuance of discretionary permits and approval for projects. Courts have interpreted CEQA to afford the fullest protection of the environment within the reasonable scope of the statutes. CEQA applies to all discretionary projects proposed to be conducted or approved by a State, County, or City agency, including private projects requiring discretionary government approval.

The purpose of CEQA is to disclose to the public the significant environmental effects of a proposed discretionary project; prevent or minimize damage to the environment through development of project alternatives, mitigation measures, and mitigation monitoring; disclose to the public the agency decision making process to approve discretionary projects; enhance public participation in the environmental review process; and improve interagency coordination.

State CEQA Guidelines Section 15380(b) provides that a species not listed on the federal or State Endangered Species lists may be considered rare or endangered for purposes of CEQA if the species can be shown to meet certain specified criteria. These criteria have been modeled after the definition in FESA and the section of the California Fish and Game Code dealing with rare or endangered plants or animals.

3.1.8 - CALIFORNIA ENDANGERED SPECIES ACT (CALIFORNIA FISH AND GAME CODE SECTION 2050 ET SEQ)

The California Endangered Species Act (CESA) establishes the policy of the State to conserve, protect, restore, and enhance threatened or endangered species and their habitats. The CESA mandates that State agencies should not approve projects that would jeopardize the continued existence of threatened or endangered species if reasonable and prudent alternatives are available that would avoid jeopardy. For projects that would result in take of a species listed under the CESA, a project proponent would need to obtain a take permit under Section 2081(b). Alternatively, the CDFW has the option of issuing a Consistency Determination (Section 2080.1) for projects that would affect a species listed under both the CESA and the FESA, as long as compliance with the FESA would satisfy the "fully mitigate" standard of CESA, and other applicable conditions.

3.1.9 - PORTER-COLOGNE WATER QUALITY CONTROL ACT

The Regional Water Quality Control Board (RWQCB) regulates waters of the State under the authority of the Porter-Cologne Water Quality Control Act (Porter Cologne Act), including all ground and surface water within State boundaries. The RWQCB requires that projects avoid

impacts to wetlands whenever feasible and requires that projects do not result in a net loss of wetland acreage or a net loss of wetland function and values. The RWQCB typically requires compensatory mitigation for impacts to wetlands and/or waters of the State. Dredging, filling, or excavation of isolated waters constitutes a discharge of waste into waters of the State, and such discharges are authorized through an Order of Waste Discharge (or waiver of discharge) from the RWQCB.

3.1.10 - Various Section of the California State and Fish and Game Code

Sections 1600 through 1616

Under these sections of the FGC, a project operator is required to notify the CDFW prior to implementing any project that would divert, obstruct, or change the natural flow, bed, channel, or bank of any river, stream, or lake. Pursuant to the California Code of Regulations, a "stream" is defined as a body of water that flows at least periodically, or intermittently, through a bed or channel having banks and supporting fish or other aquatic life. Altered or artificial watercourses valuable to fish and wildlife may be subject to CDFW jurisdiction. CDFW also has jurisdiction over dry washes that carry water during storm events. Preliminary notification and Project review generally occur during the environmental process. When an existing fish or wildlife resource may be substantially adversely affected, CDFW is required to propose reasonable project changes to protect the resource. These modifications are formalized in a Streambed Alteration Agreement.

Sections 3511, 4700, 5050, and 5515

Protection of fully protected species is described in Sections 3511, 4700, 5050, and 5515 of the FGC. These statues prohibit take or possession of fully protected species. CDFW is unable to authorize incidental take of fully protected species, except as allowed for in an approved Natural Communities Conservation Plan (NCCP), or through direct legislative action.

Sections 1900 through 1913 – Native Plant Protection Act

California's Native Plant Protection Act (NPPA) requires all State agencies to use their authority to carry out programs to conserve endangered and rare native plants. Provision of the NPPA prohibit that taking of listed plants from the wild and require notification of CDFW at least ten days in advance of any change in land use. This allows CDFW to salvage listed plant species that otherwise would be destroyed. A project proponent is required to conduct botanical inventories and consult with CDFW during project planning to comply with the provisions of this act and sections of CEQA that apply to rare or endangered plants.

3.2 - Applicable Regional and Local Regulations

3.2.1 - Metropolitan Bakersfield General Plan

Last revised and approved on December 11, 2007, the Metropolitan Bakersfield General Plan (MBGP) has been prepared as a joint planning effort between the City of Bakersfield and

Kern County to govern land use decisions within the city limits and unincorporated Kern County land within the Bakersfield Metropolitan Area. Its purpose is to give long-range guidance to those making decisions affecting the future character of the Metropolitan Bakersfield planning area. It represents the official statement of the community's physical development as well as its economic, social, and environmental goals. The general plan also acts to clarify and articulate the relationship and intentions of local government to the rights and expectations of the general public, property owners, and prospective investors. Through the plan, the local jurisdiction can inform these groups of its goals, policies, and development standards, thereby communicating what must be done to meet the objectives of the plan (City of Bakersfield 2007).

Chapter V. Conservation Element

Biological Resources

Goal 1. Conserve and enhance Bakersfield's biological resources in a manner which facilitates orderly development and reflects the sensitivities and constraints of these resources.

Goal 2. To conserve and enhance habitat areas for designated "sensitive" animal and plant species.

Policy 1. Direct development away from "sensitive biological resource" areas, unless effective mitigation measures can be implemented.

Policy 2. Preserve areas of riparian vegetation and wildlife habitat within floodways along rivers and streams, in accordance with the Kern River Plan Element and channel maintenance programs designed to maintain flood flow discharge capacity.

Policy 3. Discourage, where appropriate, the use of off-road vehicles to protect designated sensitive biological and natural resources.

3.2.2 - METROPOLITAN BAKERSFIELD HABITAT CONSERVATION PLAN

The City of Bakersfield and Kern County developed the Metropolitan Bakersfield Habitat Conservation Plan (MBHCP) that allows take of federally listed species included in the MBHCP area. The current MBHCP was issued by the USFWS under Section 10(a)(1)(B) of the FESA in 1994 and is currently undergoing renewal. A separate permit was issued by the CDFW under Section 2081 of the CESA (CESA 9322) in 2014 to align with the MBHCP for those species covered under both FESA and CESA. The MBHCP is designed to offset impacts resulting from the incidental take of listed species and the loss of habitat incurred through the authorization of otherwise lawful activities. The goal of the MBHCP is to acquire, preserve, and enhance native habitats that support special-status species while allowing development to proceed as set forth in the MBGP. The study area covered by the MBHCP contains both the City of Bakersfield and Kern County jurisdictions.

The MBHCP program is funded through the collection of one-time mitigation fees, prior to ground disturbance, paid on all new construction taking place within the program boundaries. Upon payment of the mitigation fee and receipt of County project approval, a development permit applicant would be allowed the "incidental take" of special-status species in accordance with State and Federal Endangered species laws. The mitigation funds collected will be deposited into a trust fund and are administered by the Implementation Trust, which is composed of representatives from the City of Bakersfield and Kern County trustees, USFWS, CDFG, and members of the public as advisors. The mitigation fees will provide for the acquisition and/or enhancement of natural lands and restorable lands for the purpose of creating preserves supporting the covered species. The MBHCP would also provide for reduction of take within the developed areas through relocation or displacement of individuals in areas affected by development. In addition, the MBHCP provides for monitoring of the quality of habitat within the preserves, the status of special-status species, and habitat restoration and enhancement programs, which will be used to indicate the success or failure of the plan.

The Crossings Project site is located within the boundaries of the Metropolitan Bakersfield Habitat Conservation Plan. The MBHCP provides incidental take authorization for four special-status species that are known to occur within the plan area. The MBHCP requires payment of a mitigation fee for all new development that necessitates a grading permit or conditional use permit on previously undeveloped land, which includes agricultural land.

SECTION 4 - ENVIRONMENTAL SETTING

This section identifies the regional and local environmental setting of the Project and describes existing baseline conditions. The environmental setting of the BSA was documented during site surveys conducted by QK biologists (Table 4-1).

Table 4-1
Field Survey Personnel and Timing.

Date	Personnel	Time	Weather Conditions	Survey Type
07/08/2021	L. Knox K. Denney	08:30-10:05	Sunny / Clear	Reconnaissance

4.1 - Physical Characteristics

The Project site is flat with no wetland or water features on or near the immediate area. The Project site has been historically disturbed and appears to have been disked within the last two years and the vegetation had recently been mowed down for fire hazard. Remnant vegetation within the BSA includes non-native grasses, prickly lettuce *(Lactuca seriolla)*, Johnson grass (*Sorghum halepense*), and Russian thistle (*Salsola tragus*). The Project site is bordered on the south and west by a chain link fence and power lines border the eastern boundary of the Project site. Representative photographs of the site are located in Appendix B.

The BSA adjacent to the Project site include Hosking Avenue and a vacant parcel to the north, and South H Street, the Kern Island Canal, and a vacant parcel to the east, The southern boundary of the BSA includes the Guru Nanak Sikh Center buildings and undeveloped parcels. A storm retention basin exists in the southwestern portion of the BSA adjacent to the Guru Nanak Sikh Center and south of the Project site. The western boundary of the BSA is adjacent to SR 99 and Hosking Avenue northbound offramp and gore area which has recently been landscaped with mulch. Drainage culverts and riprap have been installed beneath the off-ramp within the gore areas.

4.1.1 - TOPOGRAPHY

The Project site is relatively flat with an approximate elevation at 350 to 355-feet above mean sea level (AMSL). The surrounding land is relatively flat and exhibits little topographic variation.

4.1.2 - CLIMATE

The San Joaquin Valley has a Mediterranean-type climate, characterized by hot, dry summers and cool, relatively moist winters. Average high temperatures range from approximately 97 degrees Fahrenheit (°F) in the summer to approximately 60°F in the winter (WRCC 2021). Summer daytime high temperatures frequently exceed 100°F. Average overnight lows range from 59°F in the summer to 36°F in the winter. The mean annual temperature is 65°F.

Average annual rainfall for the area is approximately 6.45 inches, most of which falls from November and April. A dense, persistent ground fog, known as "tule fog," can develop in winter, resulting in overcast, damp, cool weather.

4.1.3 - LAND USE

The Project site is located on highly disturbed land and consists of ruderal non-native vegetation, situated at a high-volume vehicle intersection of paved roads (Figure 1-2). Surrounding land use consists of residential, ruderal, and current and historically disturbed non-native grassland habitat. The northern and eastern portions of the Project site are bordered by vacant lots with ruderal non-native grasses. The southern edge of the Project site is bordered by the Guru Nanak Sikh Center containing two buildings and vacant parcels.

4.1.4 - SOILS

The Project site exists entirely within the Kimberlina Fine Sandy Loam soil type (Figure 4-1). The Kimberlina series consists of very deep, well-drained soils on flood plains and recent alluvial fans (NRCS 2021). These soils are formed in mixed alluvium derived primarily from igneous and/or sedimentary rock sources. Slopes range from 0 to 9 percent at elevations from 125 to 2,250 feet. The climate is arid with hot, dry summers and cool winters. Mean precipitation is 4 to 8 inches annually and the mean annual air temperature ranges from 59 to 62 °F. Kimberlina soils are used for irrigated field, forage, and row crops, and for livestock grazing. When undisturbed these soils support annual grasses, forbs, and saltbush (*Atriplex* sp.).

4.2 - Hydrology

The NWI lists Riverine habitat (R4SBCx) within the Kern Island Canal that runs north to south, parallel to south H Street along its' east side opposite from the Project (NWI 2021, Figure 4-2). The Project is situated entirely within an Area of Minimal Flood Hazard as designated by FEMA (FEMA 2021, Figure 4-3).

4.3 - Vegetation and Other Land Cover

Two habitat types were observed within the BSA: Annual Grassland and Urban (Figure 4-4). The habitats observed on-site have been described in the context of *A Guide to Wildlife Habitats of California* (Mayer and Laudenslayer, 1988) and cross-referenced to the CWHR, where appropriate. The urban habitat type is considered a subcategory of Developed Habitats in the CWHR. A complete list of plant species observed is included in Appendix C, Table B-1.

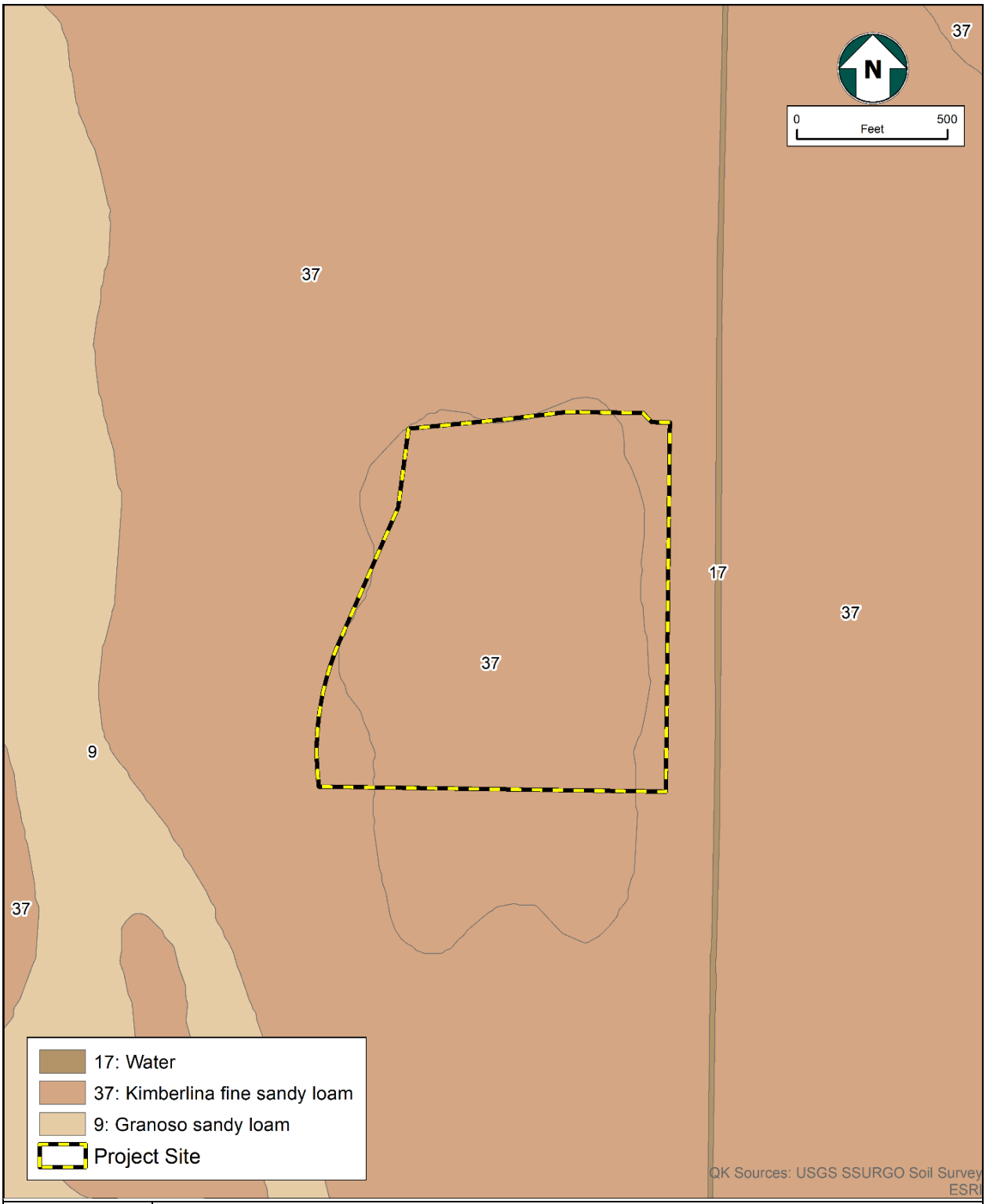

Figure 4-1
Soils Mapped within the BSA
The Crossings Project
Kern County, California

Figure 4-2
NWI and NHD Records of Aquatic Resources
The Crossings Project
Kern County, California

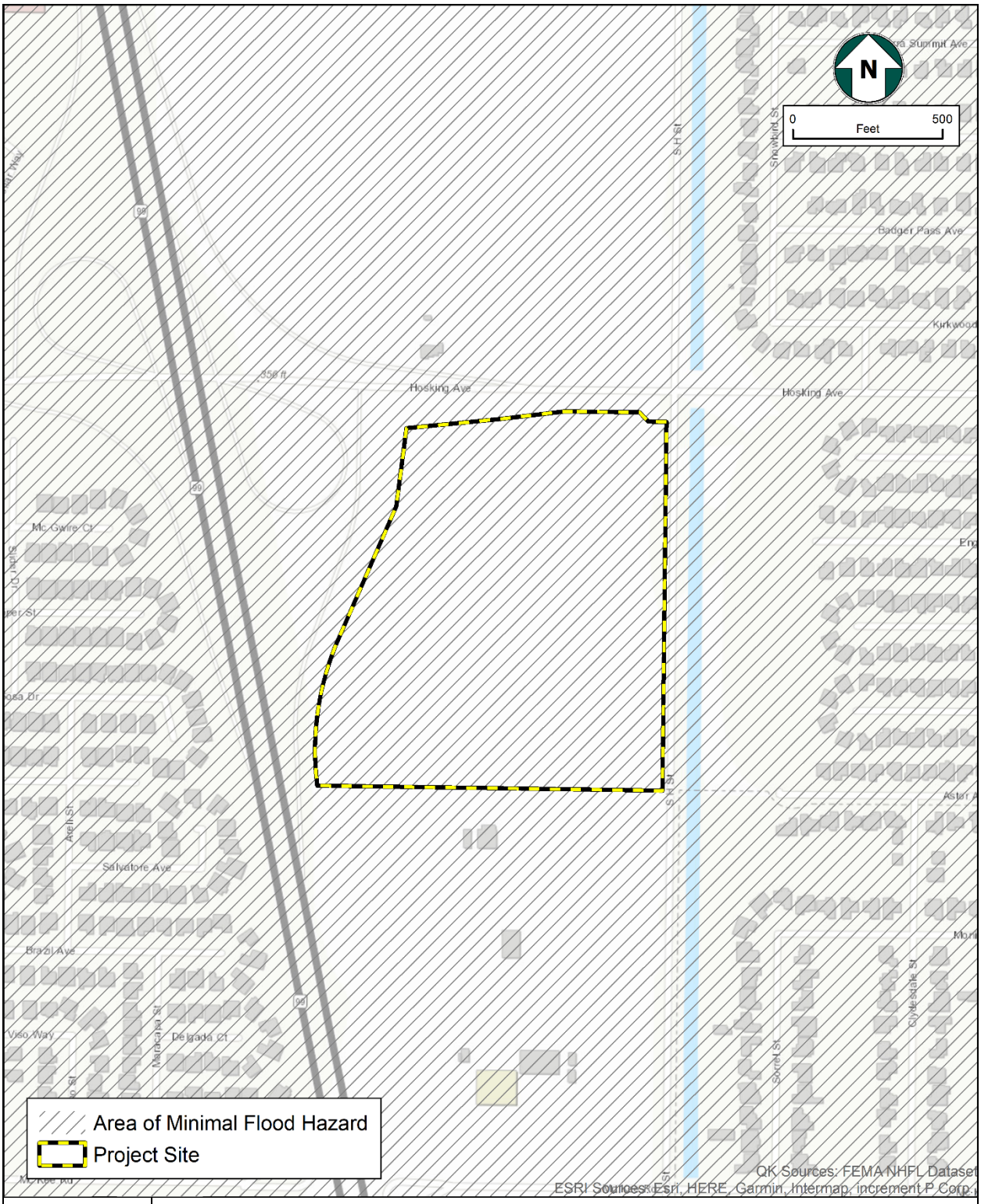

Figure 4-3
FEMA Flood Zone Map
The Crossings Project
Kern County, California

Figure 4-4
Vegetation Communities within the BSA
The Crossings Project
Kern County, California

Annual Grassland

Annual Grassland is described by Mayer & Laudenslayer (1988) as open grasslands composed primarily of annual plant species, which also will occur as understory plants in woodland habitats. Structure is dependent largely on weather patterns and livestock grazing, and large quantities of dead material can be found in summer months. Plant species found include introduced annual grasses such as brome (*Bromus* sp.) and wild oats (*Avena* sp.), and forbs such as red-stemmed filaree (*Erodium cicutarium*) and turkey mullein (*Croton setigerus*). Many wildlife species use annual grassland habitat for foraging, but some require special habitat features such as cliffs, ponds, and woodlands for breeding and refuge. Characteristic species for annual grasslands include western fence lizard (*Sceloporus occidentalis*), western rattlesnake (*Crotalus oreganus*), California ground squirrel (*Spermophilus beecheyi*), coyote (*Canis latrans*), turkey vulture (*Cathartes aura*), burrowing owl (*Athene cunicularia*), and horned lark (*Eremophila alpestris*).

The entirety of the Project is dominated by annual grassland habitat and has been recently disked. Red brome (*Bromus madritensis* ssp*. rubens*), foxtail barley (*Hordeum murinum*) and downy brome (*Bromus tectorum*) cover most of the project and areas to the south and east, interspersed with larger annual herbs like Russian thistle (*Salsola tragus*), prickly lettuce (*Lactuca serriola*) and Johnson grass (*Sorghum halepense*). There are areas of bare ground where access roads cross the Project. The eastern boundary and southeastern corner of the Project, which are adjacent to the Kern Island Canal described in Section 4.2, support plants that are slightly more water-dependent, including Johnson grass (*Sorghum halepense*) and curly dock (*Rumex crispus*).

Urban

Mayer and Laudenslayer (1988) describe urban habitat as variable with five vegetative structures defined: tree grove, street strip, shade tree/lawn, lawn, and shrub cover. These structures vary based on the associated urban development.

Areas in the BSA that surround the Project site in all directions are comprised of urban habitat, which includes paved roads, commercial development, and highly disturbed vacant land. Vegetation commonly associated with this habitat includes ornamental herbs (grass lawns, weeds, and flowers), shrubs, hedges, and trees, as well as ruderal species. Species composition within this urban habitat varies with the type of ornamental plantings. Common plants in the Project site included Russian thistle, red brome, foxtail barley, and downy brome.

4.4 - General Wildlife Observations

The Project site is predominantly void of wildlife except for several foraging cliff swallows (*Petrochelidon pyrrhonota*) and American crows (*Corvus brachyrhynchos*). Cliff swallows were observed nesting beneath the Hosking Avenue Bridge over the Kern Island Canal northeast of the Project site (Figure 4-5). Common pigeons (*Columba livia*) were also observed perching on the powerlines along Hosking Avenue. Wildlife species observed in the

nearby aquatic habitat within the Kern Island Canal included a female mallard (*Anas platyrynchos*) and a brood of ducklings, double crested cormorant (*Phalacrocorax auratus*), and great egret (*Ardea alba*) (Figure 4-5). One California ground squirrel (CAGS, *Otospermophilus beecheyi*) was observed along SR 99 just west of the Project site and a few small mammal burrows indicative of CAGS were present within the gore area of the Hosking Avenue offramp on SR 99 in the west of the Project site. Western side blotched lizards (*Uta stansburiana*) and a domestic dog were observed utilizing the patches of Russian thistle located on the Project site. No special-status wildlife or their sign was observed during the survey. A list of wildlife observations during the site visit is included in Appendix C, Table B-2.

Figure 4-5
Biological Resources within the BSA
The Crossings Project
Kern County, California

SECTION 5 - SPECIAL-STATUS RESOURCES

Federal, State and local agencies regulate special-status species and other sensitive biological resources and require an assessment of their presence or potential for presence to be on-site prior to the approval of proposed development on a property. This section discusses sensitive biological resources observed on the Project site and evaluates the potential for the Project site to support additional sensitive biological resources. Assessments for the potential occurrence of special-status species are based upon known ranges, habitat preferences for the species, species occurrence records from the CNDDB and CNPS, species occurrence records from other sites in the vicinity of the survey area, previous reports for the Project site, and the results of surveys of the Project site.

5.1 - Special-Status Species

Table 5-1 presents the list of special-status plant and animal species determined to have potential to occur on-site and identifies if the Project may affect the species and threaten the viability of the species population. The complete list of species evaluated for this Project is included in Appendix D. Each species is further discussed in the subsections below.

Table 5-1
Special-Status Species with Potential to Occur On-Site

Scientific Name Common Name	Status Fed/State ESA CRPR/CDFW	Potentially Affected by Project? Yes/No	Viability Threat? Yes/No
Masticophis flagellum ruddocki San Joaquin coachwhip	-/- -/SSC	Yes	No
Athene cunicularia Burrowing owl	-/- -/SSC	Yes	No
Buteo swainsoni *Swainson's hawk*	-/ST -/-	Yes	No
Eremophila aspestris actia California horned lark	-/- -/WL	Yes	No
Taxidea taxus American badger	-/- -/SSC	Yes	No
Vulpes macrotis mutica San Joaquin kit fox	FT/ST -/-	Yes	No

CRPR (California Rare Plant Rank):
- 1A Presumed Extinct in California
- 1B Rare, Threatened, or Endangered in California and elsewhere
- 2A Plants presumed extirpated in California, but more common elsewhere
- 2B Plants Rare, Threatened, or Endangered in California, but more common elsewhere

CRPR Threat Code Extension:
- .1 Seriously endangered in California (over 80% of occurrences threatened / high degree and immediacy of threat)
- .2 Fairly endangered in California (20-80% occurrences threatened)

- FE Federally Endangered
- FT Federally Threatened
- FC Federal Candidate Species
- FS Federally Sensitive
- SE State Endangered
- ST State Threatened
- SC State Candidate
- SS State Sensitive
- SSC State Species of Special Concern
- SFP State Fully Protected
- SR State Rare

5.1.1 - SPECIAL-STATUS PLANT SPECIES

The literature and database review identified twenty-one (21) special-status plant species known to occur or with potential to occur within the vicinity of the Project (See evaluation table in Appendix D). None of those species were determined to have a potential to occur within the BSA because there was no habitat present that would support those species.

5.1.2 - SPECIAL-STATUS ANIMAL SPECIES

The literature review identified 39 special-status wildlife species known or with potential to occur in the vicinity of the project (see evaluation table in Appendix D). Of those, six (6) were determined to have the potential to occur on-site:

- **San Joaquin kit fox** (*Vulpes macrotis mutica*) – Federally Endangered, State Threatened
- **Swainson's hawk** (*Buteo swainsoni*) – State Threatened
- **American badger** (*Taxidea taxus*) – State Species of Special Concern
- **Western burrowing owl** (*Athene cunicularia*) – State Species of Special Concern
- **San Joaquin coachwhip** (*Masticophis flagellum ruddocki)* – State Species of Special Concern
- **California horned lark** (*Eremophila aspestris actia)* – State Watch List

San Joaquin kit fox

VULPES MACROTIS MUTICAI

Status: Federally Endangered, State Threatened

The San Joaquin kit fox (SJKF) is a subspecies of kit fox that is endemic to the San Joaquin Valley, Carrizo Plain, and Cuyama Valley, as well as other small valleys in the western foothills of the Central Valley of California (USFWS 1998). They are only found west of the Sierra Nevada crest. They occupy arid to semi-arid grasslands, open shrublands, savannahs, and grazed lands with loose-textured soils. SJKF are well-established in some urban areas and are highly adaptable to human-altered landscapes. They generally avoid intensively maintained agricultural land but forage well into croplands from surrounding habitat. SJKF uses subterranean dens year-round for shelter and pup-rearing. They are nocturnally active but may be above ground near their dens during the day, particularly in the spring. They feed primarily on small mammals, but will consume a variety of prey, and will scavenge for human food.

The nearest CNDDB occurrence (EONDX 53951) is from 2006 and approximately 0.3 miles west of the Project and is presumed extant (CDFW 2021a). No San Joaquin kit fox or diagnostic sign (e.g., tracks, scat, prey remains, or dens) of the kit fox were observed during the reconnaissance survey. This species is a highly mobile transient forager which preys on small burrowing mammals and is well adapted in the urbanized setting. Suitable forging and denning habitat are present within the BSA.

Swainson's Hawk

BUTEO SWAINSONI

Status: State Threatened

Although present through a broad range in the western United States, Swainson's hawks (SWHA) occur in grassland, desert, and agricultural landscapes in the Central Valley and Antelope Valley (Bechard et al. 2010, Zeiner et al. 1990). This species typically migrates into Mexico and South America during the winter months, but some hawks in the southern portion of their range, including the Central Valley, may be residents. They prefer larger isolated trees or small woodlots for nesting, usually with grassland or dry-land grain fields nearby for foraging and have been known to nest in large eucalyptus trees along heavily traveled freeway corridors. Swainson's hawks forage in grassland, open scrub, pasture, and dryland grain agricultural habitats, primarily for rodents. Swainson's hawks exhibit a moderate to high nest site fidelity for successful nest sites.

The nearest CNDDB occurrence (EONDX 118756) is from 2019 and approximately 1.0 miles south of the Project and is presumed extant (CDFW 2021a). No Swainson's hawks were observed during the reconnaissance survey. No nesting habitat for Swainson's hawk are located on the Project site due to lack of trees or utility structures that could support a SWHA nest; however, suitable nesting sites are located within 0.5-miles of the Project site. SWHA are known to occur and nest in the region and the grassland habitat nearby could support foraging for nesting Swainson's hawks. Suitable foraging habitat is present within the BSA due to a low-quality prey base (i.e., insects, lizards, and CAGS).

American Badger

TAXIDEA TAXUS

Status: CDFW Species of Special Concern

The American badger is an uncommon permanent resident at lower elevations throughout California except for the northern North Coast (CDFG 1995) and alpine habitat. They can typically be found in grasslands, deserts, and drier habitats. Badgers are typically nocturnal and hunt or forage at night while spending daylight hours below ground. Normally, they have a single den entrance that is approximately 8 to 12 inches in width, in an elliptical or half-moon shape, mimicking their body shape. Dens are usually found in friable soils, which facilitates digging. American badgers spend most of their time near a den, but they may have multiple dens in an area that are frequently used. American badgers are known to be able to dig a new den each night. During cooler nights the entrance to the den may be partially plugged with soil to help regulate temperatures.

American badgers primarily feed on small mammals that they capture by excavating the prey's burrows. Prey may include pocket gophers, mice, chipmunks, and ground squirrels (CDFG 1995). Other prey may include birds, bird eggs, reptiles, invertebrates, and carrion.

The nearest CNDDB occurrence (EONDX 74778) is from 2008 and approximately 1.0 miles north of the Project and is presumed extant (CDFW 2021a). No American badger or diagnostic sign (e.g., tracks, scat, digging signs, or dens) of the badger were observed during

the reconnaissance survey. Low quality forging and denning habitat are present within the BSA due to the ongoing disking and lack of abundant prey base. This species is a highly mobile transient forager which preys on small burrowing mammals and may be present at any time as a transient forager.

Western Burrowing Owl

ATHENE CUNICULARIA

Status: CDFW Species of Special Concern

The western burrowing owl is a small ground-dwelling owl that can be found throughout western North America (Klute et al. 2003). This species can be found in a variety of habitat types including grasslands, deserts, or other open habitats where food resources are available and contain treeless areas with low vegetation cover and gently sloping terrain (Rodewald 2015). Burrowing owls use earthen burrows, typically relying on other fossorial mammals to construct their burrows such as California ground squirrels or American badger (USFWS 1998). In California, they are most often associated with California ground squirrels Winchell 1994. They use a burrow throughout the year for temperature regulation, offspring rearing, shelter, and escape from predators. While burrows are most often earthen, they also use atypical burrows such as pipes, culverts, and other man-made structures, most often as shelter (Shuford and Gardali 2008). Burrowing owls can have several burrows close to one other that they may frequently move among to avoid predators.

The nearest CNDDB occurrence is from 2007 and approximately 2.0 miles east of the Project and is presumed extant (EONDX 82909). No western burrowing owl or diagnostic sign (e.g., burrows, whitewash, pellets, prey remains) of burrowing owls were observed during the reconnaissance survey. Burrowing owls are present year-round in the Central Valley and typically use multiple burrows within their ranges. Burrowing owls have also been known to occur in urban and agriculturally developed areas, including near metropolitan areas of Bakersfield. Marginal foraging or prey abundance (i.e., insects and lizards) and nesting habitat exist within the BSA.

San Joaquin Coachwhip

MASTICOPHIS FLAGELLUM RUDDOCKI

Status: CDFW Species of Special Concern

San Joaquin coachwhip is a non-poisonous, slender, fast-moving snake with smooth scales and coloring ranging from a tan to pinkish brown (Brattstrom and Warren 2000-2018). This species is endemic to California, ranging from Colusa County in the Sacramento Valley southward to the Grapevine in the Kern County portion of the San Joaquin valley and westward into the inner South Coast Ranges (Brattstrom and Warren 2000-2018). The San Joaquin coachwhip occurs in open, dry, treeless areas with little or no cover, including valley grassland and saltbush scrub, desert scrub, chaparral, pasture, and open pine and oak woodlands, and avoids areas of dense vegetation where their mobility can be hindered. San Joaquin coachwhips are found below 7,700 feet in elevation (Zeiner et al 1988).

The nearest CNDDB occurrence (EONDX 66287) is from 2000 and approximately 6.0 miles northwest of the Project and is presumed extant (CDFW 2021a). No San Joaquin coachwhips were observed during the reconnaissance survey. Habitat within the BSA is poor quality with minimal vegetation and few burrows adjacent to the site. The potential for the species to occur is low due to surrounding residential development.

California Horned Lark

EREMOPHILA ALPESTRIS ACTIA

Status: CDFW Watch List

The horned lark (*Eremophila alpestris*) is found throughout most of North America, Europe, and central Asia (Beason 1995). In California, they are year-round residents throughout most of the State (Zeiner et al. 1988). This species can be found in a variety of locations including beaches, stubble fields, short-grass prairies, extensive lawns (i.e. golf courses or airports), plowed fields, and high mountains (Kaufman 2001). After the breeding season this species tend to leave the mountain elevations, but some may remain in areas that are free of snow. In the winter season, they can be found in desert lowlands where other wintering migratory birds may be located (Zeiner et al. 1988).

The horned lark occurs in areas that are barren or open habitats with short grass species present (Beason 1995). In agricultural areas the horned lark occurs in fields of row crops, waste grains or heavily grazed areas. The breeding season is from March to July, typically with peak activity observed in May (Zeiner et al. 1988). The nest site is built on the open ground typically in a slight depression and is lined with grasses, weeds, or rootlets (Kaufman 2001).

The nearest CNDDB occurrence (EONDX 66888) is from 2006 and approximately 10.0 miles northwest of the Project and is presumed extant (CDFW 2021a). No California horned larks were observed during the reconnaissance survey. Suitable nesting habitat is present within the BSA.

5.2 - Sensitive Natural Communities

Sensitive natural communities are designated by various resource agencies including the CDFW, USFWS, BLM, Forest Service, or are designated by local agencies through policies, ordinances, and regulations. Sensitive natural communities generally have important functions or values for plants and wildlife or are recognized as declining in extent or distribution and warrant some level of protection.

5.2.1 - SENSITIVE PLANT COMMUNITIES

The database listed the occurrence of five natural communities occurring in the region of the Project: Great Valley Mesquite Scrub, Great Valley Cottonwood Riparian Forest, Valley Sacaton Grassland, Valley Sink Scrub, and Valley Saltbush Scrub.

Great Valley Mesquite Scrub is composed of an open woodland or savanna dominated by mesquite (*Prosopis glandulosa torreyana*) and all scale saltbush (*Atriplex polycarpa*). Understories are grassy in good rainfall years, though usually dominated by introduced annuals. Mesquite requires a high-water table. Sierra snowmelt provided the necessary groundwater for the perennial phreatophytes (Holland 1987).

Great Valley Cottonwood Riparian Forest is dominated by Fremont cottonwood (*Populus fremontii ssp. fremontii*) and Goodding's black willow (*Salix gooddingii*). The understory is usually dense, with abundant vegetative reproduction of canopy dominants and California wild grape is the most conspicuous vine. This community requires fine-grained alluvial soils adjacent to perennial or semi-perennial streams with frequent flooding and with permanent ground water in the tree root zone (Holland 1987).

Valley Sacaton Grassland is dominated by alkali sacaton, a tuft formed grass. It is found in areas with fine textured, poorly drained, and usually alkaline soils with high water tables, or that are flooded during winter months (Holland 1987).

Valley Sink Scrub consists of low, open to dense succulent shrublands dominated by alkali tolerant *Chenopodiaceae* family species, especially iodine bush (*Allenrolfea occidentalis*) or several *Suaeda* species. Understories usually are lacking, though sparse herbaceous cover dominated by *Bromus rubens* develop occasionally. Also consists of saline or alkaline clays. Heavy, saline and/or alkaline clays of lakebeds or playas with iodine bush, salt grass, goldfields (*Lasthenia sp.*), etc. (Holland 1987).

Valley Saltbush Scrub consists of open, gray or blue-green chenopod scrubs, usually over a low herbaceous annual understory. Cover types dominated by all scale saltbush or spinescale are differentiable. This community type also consists of sandy to loamy soils without surface alkalinity usually found on rolling, dissected alluvial fans (Holland 1987).

According to the database, only one Sensitive Plant Community occurrence within 5-miles of the Project site. This Valley Saltbush Scrub recorded occurrence (EONDX 16319) is from 1987 approximately 3.0 miles southeast of the Project site.

5.2.2 - CRITICAL HABITATS

This section describes the occurrence of Critical Habitat, movement corridors, and linkages known to occur within the vicinity of the Project site. Habitat may be designated as Critical Habitat by the USFWS, which are blocks of habitat that may or may not be currently occupied by species, but which are of the highest priority for the survival, conservation, and recovery of threatened or endangered species. Wildlife movement corridors, also referred to as dispersal corridors or landscape linkages, are generally defined as linear features along which animals can travel from one habitat or resource area to another.

There are no mapped Critical Habitats on or near the Project. The nearest Critical Habitat is located approximately 11-miles south-southwest of the Project for the Buena Vista Lake

ornate shrew (*Sorex ornatus relictus*), which is not present on the Project site nor does the site provide suitable habitat (Figure 5-1).

5.3 - Jurisdictional Aquatic Resources

No water or wetland features are present on the Project Site. The literature review and Natural Hydrology Dataset (NWI) searches identified Riverine (R4SBCx) habitat within the eastern portion of the BSA associated with the Kern Island Canal on the opposite side of South H Street from the Project site (Figure 4-2). The Canal flows from the north to the south toward the Kern Island Drain. The canal is approximately 40-feet wide and appears regularly maintained and cleared of vegetation.

5.4 - Wildlife Movement

Wildlife movement corridors, also referred to as dispersal corridors or landscape linkages, are generally defined as linear features along which animals can travel from one habitat or resource area to another. Wildlife movement corridors can be large tracts of land that connect regionally important habitats that support wildlife in general, such as stop-over habitat that supports migrating birds or large contiguous natural habitats that support animals with very large home ranges (e.g., coyotes [*Canis latrans*], mule deer [*Odocoileus hemionus californicus]*). They can also be small scale movement corridors, such as riparian zones, that provide connectivity and cover to support movement at a local scale.

The literature review and database search did not identify any wildlife movement corridors on or near the Project site.

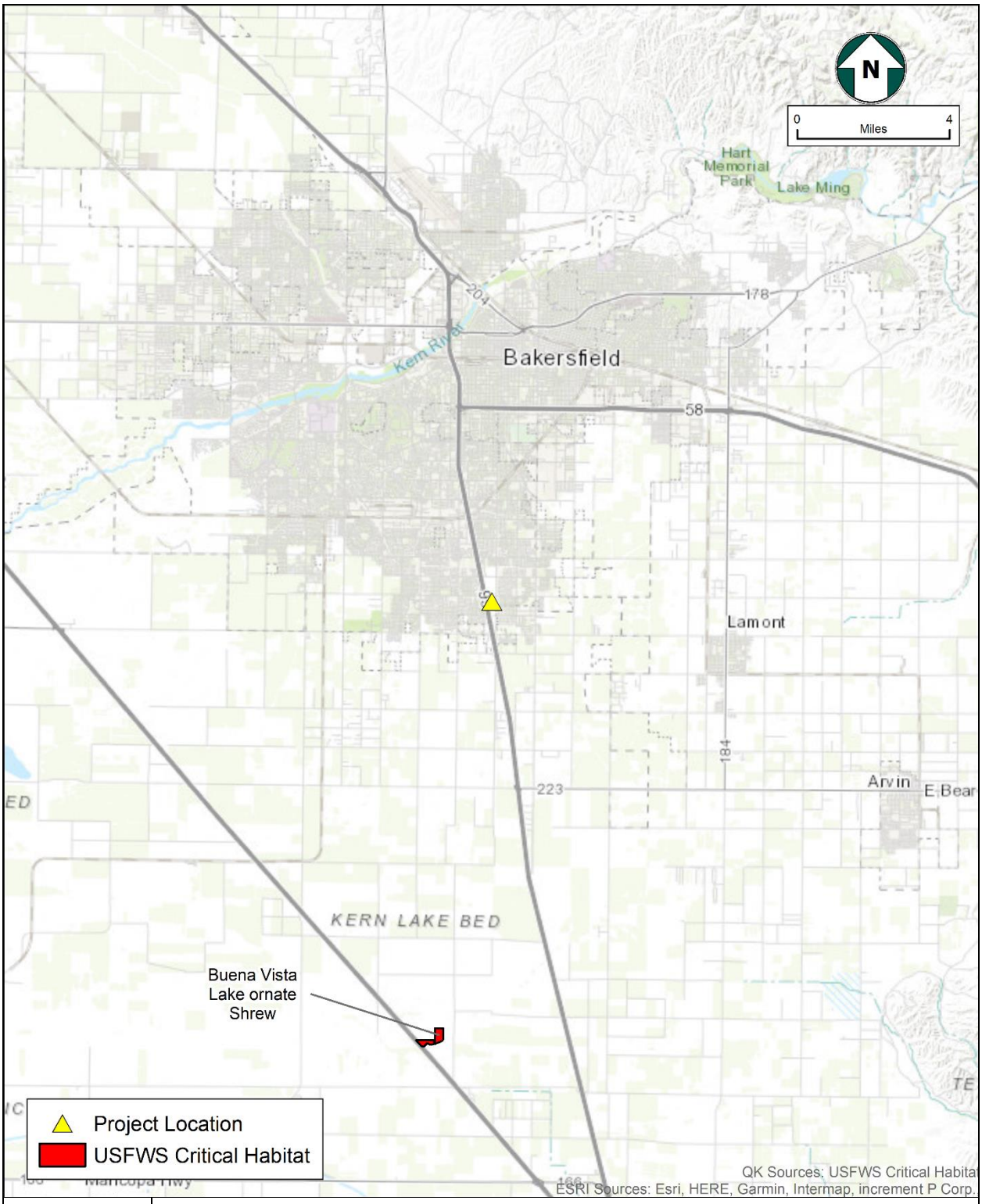

Figure 5-1
Mapped Critical Habitat in the Project Vicinity
The Crossings Project
Kern County, California

5.5 - Habitat Conservation Plans

The City of Bakersfield and Kern County developed the Metropolitan Bakersfield Habitat Conservation Plan (MBHCP) that allows take of federally listed species included in the MBHCP area. The current MBHCP was issued by the USFWS under Section 10(a)(1)(B) of the FESA in 1994 and is currently undergoing renewal. A separate permit was issued by the CDFW under Section 2081 of the CESA (CESA 9322) in 2014 to align with the MBHCP for those species covered under both FESA and CESA. The MBHCP is designed to offset impacts resulting from the incidental take of listed species and the loss of habitat incurred through the authorization of otherwise lawful activities. The goal of the MBHCP is to acquire, preserve, and enhance native habitats that support special-status species while allowing development to proceed as set forth in the MBGP. The study area covered by the MBHCP includes both the City of Bakersfield and Kern County jurisdictions.

The MBHCP program is funded through the collection of one-time mitigation fees, prior to ground disturbance, paid on all new construction taking place within the program boundaries. Upon payment of the mitigation fee and receipt of County project approval, a development permit applicant would be allowed the "incidental take" of special-status species in accordance with State and federal endangered species laws. The mitigation funds collected will be deposited into a trust fund and are administered by the Implementation Trust, which is composed of representatives from the City of Bakersfield and Kern County trustees, USFWS, CDFW, and members of the public as advisors. The mitigation fees will provide for the acquisition and/or enhancement of natural lands and restorable lands for the purpose of creating preserves supporting the covered species. The MBHCP would also provide for reduction of take within the developed areas through relocation or displacement of individuals in areas affected by development. In addition, the MBHCP provides for monitoring of the quality of habitat within the preserves, the status of special-status species, and habitat restoration and enhancement programs, which will be used to indicate the success or failure of the plan.

The Project site is located within the boundaries of the Metropolitan Bakersfield Habitat Conservation Plan. The MBHCP provides incidental take authorization for four special-status species that are known to occur within the plan area. The MBHCP requires payment of a mitigation fee for all new development that necessitates a grading permit or conditional use permit on previously undeveloped land, which includes agricultural land.

SECTION 6 - IMPACT ANALYSIS AND RECOMMENDED AVOIDANCE, MINIMIZATION, AND MITIGATION MEASURES

This section evaluates Project-related impacts to sensitive biological resources. Direct and indirect impacts are identified. Temporary impacts are defined as impacts with a maximum duration of one calendar year. When significant impacts are identified or when they would be anticipated to occur, recommended measures to avoid or reduce those impacts to less than significant levels are provided.

The analysis of impacts that is provided is based upon the requirements of CEQA, and the associated thresholds of significance. The fundamental definition of significant effect under CEQA is "a substantial adverse change in physical conditions." This criterion underlies the evaluation of environmental impacts for most of the impact issues identified in the CEQA Guidelines Appendix G Environmental Checklist Form. The significance threshold for evaluation of impacts under CEQA will not necessarily equate to a regulatory limit or standard. Instead, under CEQA, most thresholds are set at meaningful levels, independent of regulatory thresholds. Some thresholds are driven by regulatory standards (HCP compliance, Air Quality plan compliance, etc).

For each of the existing biological conditions described in this report, potential impacts are addressed in accordance with the biological issues listed in CEQA Guidelines Appendix G, which are:

(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 Game or U.S. Fish and Wildlife Service?

(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, any regulations or by the California Department of Fish and Game or US Fish and Wildlife Service?

(C) Would the project have a substantial adverse effect on federally protected wetlands as defined by section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

(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 sites?

(E) Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

(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 or Recovery Plan?

Each issue is assessed according to thresholds of significance established under CEQA Guidelines §15065(a), as modified. These are:

- Would the project result in substantial degradation of the environment?
- Would the project result in substantial habitat reduction for a fish or wildlife species?

- Would the project result in reduction of a fish or wildlife population below self-sustaining levels?
- Would the project result in elimination of a plant or animal community?
- Would the project result in substantial reduction of the number of, or restriction of the range of, a rare or threatened species, or result in direct or indirect "take" of an endangered species as defined in State or federal Endangered Species Acts?

6.1 - Project Impacts to Special-Status Species (CEQA Evaluation Factor A):

6.1.1 - PROJECT IMPACTS TO SPECIAL-STATUS PLANT SPECIES

It was determined that no special-status plant species have the potential to occur on the Project site due to the lack of suitable habitat. The Project site is subject to frequent human activities and disturbance and no habitats which could support special-status plant species are present. As such, no impacts to special-status plant species would occur from the implementation of the Project. No mitigation measures are warranted.

6.1.2 - PROJECT IMPACTS TO SPECIAL-STATUS WILDLIFE SPECIES

Six special-status species were determined to have the potential to occur on-site: San Joaquin kit fox, Swainson's hawk, American badger, Western burrowing owl, San Joaquin coachwhip, and California horned lark. In addition, implementation of the Project may result in impacts to nesting birds protected by the Migratory Bird Treaty Act and the California Fish and Game Code.

San Joaquin Kit Fox

San Joaquin kit fox use dens for breeding and shelter, but no dens that would support these species were found on-site. Very few small mammal burrows indicative of California ground squirrel or other small mammals, a major prey species for the San Joaquin kit fox, were observed on the Project site. Several small mammal burrows were observed outside of the Project site boundary within the SR 99 Hosking Avenue offramp. The high level of historical disturbance, poor habitat quality, the presence on site illegal trash dumping, and recent disking of the Project site precludes the establishment of dens suitable for the San Joaquin kit fox. Therefore, it is unlikely that these species would reside on-site in the present condition. However, if any portion of the site were to be cleared and remain fallow and for an extended period prior to construction of the Project, these species could establish dens on-site. In addition, San Joaquin kit fox have been documented using man-made structures such as culverts and pipes for shelter.

Direct impacts to San Joaquin kit fox could include mortality or injury caused by Project construction activities. Indirect impacts caused by noise, vibration, and increased human activity could alter the normal behaviors of San Joaquin kit fox, affecting overall foraging and reproductive success, displacement from active dens, making them more vulnerable to

predation, or injury or mortality from vehicle strikes. Implementation of Measures BIO-1 through BIO-4, BIO-9, and BIO-10 would reduce impacts to this species.

Swainson's hawk

No Swainson's hawks were observed during the reconnaissance survey. No suitable nesting habitat is present on the Project site due to lack of trees or utility structures that could support a SWHA nest; however, suitable nesting sites are located within 0.5-miles associated with ornamental trees on surrounding residential areas and highway landscaping. The current condition of the Project site provides marginal foraging habitat due to a low-volume prey base (i.e., insects, lizards, and CAGS).

Impacts to individual nesting Swainson's hawks outside of the Project site could occur if construction activities occur near an active nest. Noise and vibration from construction of the Project, and the presence of construction workers, could alter the normal behaviors of nesting adults and affect reproductive success within 0.5-mile.

Implementation of Measures BIO-5, BIO-6, and BIO-9 would reduce impacts to this species.

American Badger

There is no positive evidence that American badger is present within the BSA, but current conditions provide marginally suitable denning and foraging habitat within the BSA. Direct impacts to this species could include mortality or injury caused by entrapment or crushing individuals within dens and vehicle strikes. Indirect impacts to the species could be caused by noise, vibration, and the presence of construction workers that could alter normal behaviors, which could affect reproductive success, foraging success, or displacement from active dens. Implementation of Measures BIO-1 through BIO-4 and BIO-9 would reduce impacts to this species.

Western Burrowing Owl

No burrowing owl burrows, or their sign was observed during the reconnaissance survey, but the species is present year-round and travel from burrow to burrow periodically. It is possible for a transient burrowing owl to move on site at any time. Suitable nesting and foraging habitat would be lost as a result of the Project. Direct and/or indirect impacts to burrowing owl could occur if there is an active burrow within the BSA during the period of construction activities. Construction activities could result in crushing or destroying a burrow, with or without a burrowing owl inside. Noise, vibration, and increased human activity resulting from Project construction activities could alter the daily behaviors of individual owls and affect foraging success, displace owls from their burrows, or lead to nest failure. Implementation of Measures BIO-1 through BIO-4 and BIO-9 listed below, would reduce impacts to the species.

San Joaquin coachwhip

There is no positive evidence that the San Joaquin coachwhip is present within the Project site. The habitat within the project site is poor and due to the surrounding residential and urban habitats and roadways and is unlikely that the species would be present.

Direct impacts to this species could include mortality or injury caused by entrapment or crushing individuals within burrows and vehicle strikes. Indirect impacts to the species could be caused by noise, vibration, and the presence of construction workers that could alter normal behaviors. Implementation of Measures BIO-1, BIO-8, and BIO-9 listed would reduce any impacts to the species.

California Horned Lark and other Nesting Birds

The Project site contains low quality suitable habitat for a wide variety of nesting bird species. The annual grassland habitat is routinely mowed for fire control. Few patches of Russian thistle and Johnson grass exist on the project that could potentially support ground nesting species such as the California horned lark. The Kern Island Canal provides foraging habitat for waterfowl and wading birds such as the great egret. Cliff swallows were also observed nesting beneath the Hosking Avenue Bridge over the Kern Island Canal. Project activities adjacent to nesting birds could result in direct impacts to nests from noise and vibration caused by construction activities. Normal behaviors in nesting adults could result from construction activities and human presence that could lead to nest failure. Direct impacts include noise and dust from construction and loss of ground nesting and forage habitat would occur as a result of the Project. Implementation of Measures BIO-7 and BIO-9 would reduce impacts to this species.

RECOMMENDED MEASURES TO PROTECT SPECIAL-STATUS ANIMAL SPECIES

The following measures are design to avoid and minimize impacts to special-status animal species:

BIO-1: Pre-activity Clearance Survey for San Joaquin Kit Fox, American Badger, Burrowing Owl, and San Joaquin coachwhip. Within 14 days of the start of any Project activity (including staging and construction activities), a qualified biologist with specific species knowledge and experience should conduct a pedestrian survey of the entire Project site to look for evidence of special-status mammal species, the western burrowing owl, and the San Joaquin coachwhip. The survey will ensure 100% coverage of the disturbance footprint plus a 250-foot buffer where access is feasible. If the survey buffer is not accessible, the area should be scanned visually. This survey effort should be timed to occur prior to each phase of construction. Upon completion of each phased survey effort, a report of the survey findings should be submitted to the City to confirm compliance with this measure.

BIO-2: Standard Avoidance and Minimization Measures for the Protection of SJKF.
The following avoidance and minimization measures should be implemented during all phases of the Project to reduce the potential for impact from the Project. They are modified

from the *U.S. Fish and Wildlife Service Standardized Recommendations for Protection of the Endangered SJKF Prior to or During Ground Disturbance* (USFWS 2011, Appendix E).

a. All food-related trash items such as wrappers, cans, bottles, and food scraps shall be disposed of in securely closed containers and removed at least once a week from the construction or Project Site.
b. Construction-related vehicle traffic shall be restricted to established roads and predetermined ingress and egress corridors, staging, and parking areas. Vehicle speeds shall not exceed 20 miles per hour (mph) within the Project Site.
c. To prevent inadvertent entrapment of kit fox or other animals during construction, the contractor shall cover all excavated, steep-walled holes or trenches more than two feet deep at the close of each workday with plywood or similar materials. If holes or trenches cannot be covered, one or more escape ramps constructed of earthen fill or wooden planks shall be installed in the trench. Before such holes or trenches are filled, the contractor shall thoroughly inspect them for entrapped animals. All construction-related pipes, culverts, or similar structures with a diameter of four-inches or greater that are stored on the Project Site shall be thoroughly inspected for wildlife before the pipe is subsequently buried, capped, or otherwise used or moved in anyway. If at any time an entrapped or injured kit fox is discovered, work in the immediate area shall be temporarily halted and USFWS and CDFW shall be consulted.
d. Kit foxes are attracted to den-like structures such as pipes and may enter stored pipes and become trapped or injured. All construction pipes, culverts, or similar structures with a diameter of four inches or greater that are stored at a construction site for one or more overnight periods shall be thoroughly inspected for kit foxes before the pipe is subsequently buried, capped, or otherwise used or moved in any way. If a kit fox is discovered inside a pipe, that section of pipe shall not be moved until the USFWS and CDFW have been consulted. If necessary, and under the direct supervision of the biologist, the pipe may be moved only once to remove it from the path of construction activity, until the fox has escaped.
e. No pets, such as dogs or cats, shall be permitted on the Project Sites to prevent harassment, mortality of kit foxes, or destruction of dens.
f. Use of anti-coagulant rodenticides and herbicides in Project Sites shall be restricted. This is necessary to prevent primary or secondary poisoning of kit foxes and the depletion of prey populations on which they depend. All uses of such compounds shall observe label and other restrictions mandated by the U.S. Environmental Protection Agency, California Department of Food and Agriculture, and other State and Federal legislation, as well as additional Project-related restrictions deemed necessary by the USFWS and CDFW. If rodent control must be conducted, zinc phosphide shall be used because of the proven lower risk to kit foxes.

g. A representative shall be appointed by the Project proponent who will be the contact source for any employee or contractor who might inadvertently kill or injure a kit fox or who finds a dead, injured or entrapped kit fox. The representative shall be identified during the employee education program and their name and telephone number shall be provided to the USFWS.
h. The Sacramento Fish and Wildlife Office of USFWS and CDFW shall be notified in writing within three working days of the accidental death or injury to a SJKF during Project-related activities. Notification must include the date, time, and location of the incident or of the finding of a dead or injured animal and any other pertinent information. The USFWS contact is the Chief of the Division of Endangered Species, at the addresses and telephone numbers below. The CDFW contact can be reached at (559) 243-4014 and R4CESA@wildlifeca.gov.
i. All sightings of the SJKF shall be reported to the California Natural Diversity Database (CNDDB). A copy of the reporting form and a topographic map clearly marked with the location of where the kit fox was observed shall also be provided to the Service at the address below.
j. Any Project-related information required by the USFWS or questions concerning the above conditions, or their implementation may be directed in writing to the U.S. Fish and Wildlife Service at: Endangered Species Division, 2800 Cottage Way, Suite W 2605, Sacramento, California 95825-1846, phone: (916) 414-6620 or (916) 414-6600.

BIO-3: Avoidance of Burrows for Burrowing Owl, American Badger, and SJKF. Within 14 days prior to the start of Project ground-disturbing activities, a pre-activity survey with a 500-foot buffer where land access is permitted should be conducted by a qualified biologist knowledgeable in the identification of these species and approved by the CDFW. Surveys need not be conducted for all areas at one time; they may be phased so that surveys occur within 14 days of the portion of the Project Site that will be disturbed. If dens/burrows that could support any of these species are discovered during the pre-activity surveys conducted under BIO-16, the avoidance buffers outlined below should be established. No work would occur within these buffers unless the biologist approves and monitors the activity.

Burrowing Owl (active burrows)

- Non-breeding season: September 1 – January 31 – 160 feet
- Breeding season: February 1 – August 31 – 250 feet

American Badger/SJKF

- Potential or Atypical den – 50 feet
- Known den – 100 feet
- Natal or pupping den – 500 feet, unless otherwise specified by CDFW.

BIO-4: Burrowing Owl, American Badger, and SJKF Avoidance. A qualified biologist should remain on-call throughout the construction phase in the event that a burrowing owl, American badger, or SJKF occurs on the site during construction. If one of these species

occurs on-site, the biologist should be contacted immediately to determine whether biological monitoring or the implementation of avoidance buffers may be warranted.

BIO-5: Pre-activity Surveys for Swainson's Hawk Nests. If Project construction activities must occur during the Swainson's hawk nesting season (February 15 to August 31), pre-construction activity surveys should be conducted for Swainson's hawk nests in accordance with the *Recommended Timing and Methodology for Swainson's Hawk Nesting Surveys in California's Central Valley*, Swainson's Hawk Technical Advisory Committee (CDFG 2000). Timing and the number of phases of surveys can be adjusted based on the timing of the construction schedule. The surveys maybe phased to coincide with active construction areas plus a 0.5-mile buffer of those areas.

BIO-6 : Swainson's Hawk Nest Avoidance. No mature trees that could be used by nesting Swainson's hawk will be removed during construction of the Project. If an active Swainson's hawk nest is discovered at any time within 0.5 mile of active construction, a qualified biologist should complete an assessment of the potential for current construction activities to impact the nest. The assessment would consider the type of construction activities, the location of construction relative to the nest, the visibility of construction activities from the nest location, and other existing disturbances in the area that are not related to construction activities of this Project. Based on this assessment, the biologist will determine if construction activities can proceed, and the level of nest monitoring required. Construction activities should not occur within 500 feet of an active nest but depending upon conditions at the site this distance may be reduced. Full-time monitoring to evaluate the effects of construction activities on nesting Swainson's hawks may be required. The qualified biologist should have the authority to stop work if it is determined that Project construction is disturbing the nest. These buffers may need to increase depending on the sensitivity of the nesting Swainson's hawk to disturbances and at the discretion of the qualified biologist. No avoidance would be needed if construction occurs near a known Swainson's hawk nest outside of the Swainson's hawk nesting season.

BIO-7: Nest Avoidance. If Project activities are planned to start during the migratory bird nesting season, February 1 to September 15, a pre-activity nesting bird survey should be conducted within fourteen (14) days of the start of these activities. These surveys should be phased with construction of the Project site. The surveys should encompass the Project Site and accessible or land visible from accessible areas within a 250-foot buffer for songbirds and a 500-foot buffer for raptors. The surveys may be phased with construction of the Project. If no active nests are found, no further action is required. However, existing nests may become active and new nests may be built at any time prior to and throughout the nesting season, including when construction activities are in progress. Surveys for burrowing owl will follow CDFW protocol.

If active nests are found during the survey or at any time during construction of the Project, an avoidance buffer ranging from 50 feet to 500 feet may be required, with the avoidance buffer from any specific nest being determined by a qualified biologist. The avoidance buffer will remain in place until the biologist has determined that the young are no longer reliant

on the adults or the nest, or if breeding attempts have otherwise been unsuccessful. Work may occur within the avoidance buffer under the approval and guidance of the biologist, but full-time monitoring may be required. The biologist shall have the ability to stop construction if nesting adults show any sign of distress.

A report of survey findings should be provided to the City to confirm compliance with this measure. If active nests are detected during the survey, or at any time during construction of the Project, an avoidance buffer will be established by a qualified biologist based on the species and the activities that are underway. Construction personnel should be educated about this possibility as part of the employee education program included under measure BIO-9.

BIO-8: San Joaquin Coachwhip Avoidance and Minimization. If the species is present within the work area they will be allowed to leave on their own. If they do not leave, the qualified biologist may capture and relocate them to nearby suitable habitat at an appropriate distance to ensure the animal will be safe.

BIO-9. Worker Environmental Awareness Training. Prior to the initiation of construction activities, all personnel should attend a Worker Environmental Awareness Training program developed by a qualified biologist. The program should include information on the life histories of special-status species with potential to occur on the Project, their legal status, course of action should these species be encountered on-site, and avoidance and minimization measures to protect these species. All attendees at WEAT's shall be signify that they have received and understand the training material by signing an attendance sheet, which will be maintained on site and provided to the City.

6.2 - Project Impacts to Riparian Habitat and Other Sensitive Natural Communities (CEQA Evaluation Factor B)

There are no sensitive natural communities present on the Project and there would be ***no impacts*** to sensitive natural communities.

RECOMMENDED MEASURES TO PROTECT SENSITIVE NATURAL COMMUNITIES

No recommendations.

EFFECTIVENESS OF MEASURES

Not applicable.

6.3 - Project Impacts to Federal and State Wetlands and Waters (CEQA Evaluation Factor C)

6.3.1 - PROJECT IMPACTS TO FEDERAL WETLANDS AND OTHER WATERS

There are no federal waters or wetlands located on or near the Project. The Kern Island Canal is in the vicinity of the Project site. However, the Canal is located on the opposite side of South H Street outside the limits of construction. The Project will result in ***no impacts*** to any waters or wetlands.

RECOMMENDED MEASURES TO PROTECT FEDERAL WETLANDS AND OTHER WATERS

No recommendations.

EFFECTIVENESS OF MEASURES

Not applicable.

6.3.2 - PROJECT IMPACTS TO STATE REGULATED WATERS

There are no identified water features within the Project site. The Kern Island Canal is in the vicinity of the Project site. However, the Canal is located on the opposite side of the roadway of south H street outside the limits of construction. Therefore, the Project would result in ***no impacts*** to any State regulated waters.

RECOMMENDED MEASURES TO PROTECT STATE REGULATED WATERS

No recommendations.

EFFECTIVENESS OF MEASURES

Not applicable.

6.4 - Project Impacts to Fish or Wildlife Movement Corridors, Linkages, Nursery Sites, and Critical Habitat (CEQA Evaluation Factor D)

6.4.1 - PROJECT IMPACTS TO FISH AND WILDLIFE MOVEMENT CORRIDORS, LINKAGES, AND NURSERY SITES

There are no identified movement corridors on or near the Project site. The Project site may be used by transient foragers such as American badger and San Joaquin kit fox. The open landscape creates a foraging habitat, which may be used from time to time by these species. The Project will result in **no impacts** to fish or wildlife movement corridors, linkages or nursey sites.

RECOMMENDED MEASURES TO PROTECT DESIGNATED CRITICAL HABITAT

No recommendations.

EFFECTIVENESS OF MEASURES

Not applicable.

6.4.2 - PROJECT IMPACTS TO DESIGNATED CRITICAL HABITAT

There are no designated critical habitat(s) on the Project site or in the nearby vicinity. There will be no impacts to any critical habitat.

RECOMMENDED MEASURES TO PROTECT DESIGNATED CRITICAL HABITAT

No recommendations.

EFFECTIVENESS OF MEASURES

Not applicable.

6.5 - Project Conflicts with Local Policies and Ordinances (CEQA Evaluation Factor E)

6.5.1 - PROJECT CONFLICT WITH LOCAL POLICIES AND ORDINANCES

The Project does not conflict with any local policies or ordinance. The Project will have no conflict (impacts) with local policies and ordinances protecting biological resources.

RECOMMENDED MEASURES TO ENSURE CONFORMANCE WITH LOCAL POLICIES AND ORDINANCES

No recommendations.

EFFECTIVENESS OF MEASURES

Not applicable.

6.6 - Project Conflicts with Habitat Conservation Plans, Natural Community Conservation Plans, or Recover Plans (CEQA Evaluation Factor F)

6.6.1 - PROJECT CONFLICTS WITH HABITAT CONSERVATION PLANS, NATURAL COMMUNITY CONSERVATION PLANS, OR RECOVERY PLANS

The Project is within the boundary of the MBHCP and therefore subject to following Conditions of Approval for the four covered species listed, subject to take authorization provided the associated Metropolitan Urban Development ITP No. 2081-2013-058-04. Of the

four listed species only one species, the San Joaquin kit fox, has the potential to occur on the Project site. With the implementation of the MBHCP ITP minimization measures/Conditions of Approval (COA), there will be a **less than significant** impact to any listed species.

The Project will not conflict (impact) with any Natural Community Conservation Plans or Recovery Plans.

RECOMMENDED MEASURES TO ENSURE CONFORMANCE WITH LOCAL POLICIES AND ORDINANCES

BIO-10. The Project is subject to following minimization measures/Conditions of Approval (COA) for the four Covered Species listed subject to take authorization provided in Incidental Take Permit 2081-2013-058-04 (see Appendix F).

These include:

- The Developer shall have a CDFW-approved qualified biologist conduct a preconstruction clearance survey and submit a report no more than 30 calendar days prior to commencement of ground disturbance (COA 7.1).
- The Developer shall inform CDFW when the required mitigation measures are met (COA 7.3 – Developer notification).
- The Developer and CDFW shall be notified within 24 hours if a San Joaquin kit fox is observed within the work area (COA 7.7).
- The Developer shall implement daily entrapment inspections (COA 7.15).
- The Developer shall implement daily material inspections (COA 7.16).
- The Developer shall implement daily equipment inspections (COA 7.17).
- The Developer shall provide Worker Environmental Awareness Training (WEAT) to construction personnel working at the Project site.
- It is recommended that all work be restricted to the area within the Project site

The Project will not conflict (impact) with any Natural Community Conservation Plans or Recovery Plans.

EFFECTIVENESS OF MEASURES

Impacts would reduce impacts with mitigation incorporated.

SECTION 7 - LIMITATIONS, ASSUMPTIONS, AND USE RELIANCE

This Biological Analysis Report has been performed in accordance with professionally accepted biological investigation practices conducted at this time and in this geographic area. The findings and opinions conveyed in this report are based on findings derived from site reconnaissance, jurisdictional areas, and specified historical and literature sources. The biological investigation is limited by the scope of work performed. Reconnaissance biological surveys for certain taxa may have been conducted as part of this assessment but were not performed during a particular blooming period, nesting period, or particular portion of the season when positive identification would be expected if present, and therefore, cannot be considered definitive. The biological surveys are limited also by the environmental conditions present at the time of the surveys. In addition, general biological (or protocol) surveys do not guarantee that the organisms are not present and will not be discovered in the future within the site. In particular, mobile animal species could occupy the site on a transient basis or re-establish populations in the future. No other guarantees or warranties, expressed or implied, are provided.

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SECTION 9 - LIST OF PREPARERS

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- David Dayton, Principal Environmental Scientist

Graphics

- Karissa Denney, Associate Environmental Scientist

APPENDIX A

SITE PLAN FOR THE *THE CROSSINGS PROJECT*

APPENDIX B

REPRESENTATIVE PHOTOGRAPHS
THE CROSSINGS PROJECT

Photograph 1: Taken from the northwest corner of Project site looking east
GPS Coordinates: 35.280363, -119.024702
Photograph taken by L. Knox on July 8, 2021.

Photograph 2: Taken from the northwest corner of Project site looking southeast
GPS Coordinates: 35.280363, -119.024702
Photograph taken by L. Knox on July 8, 2021.

Photograph 3: Taken from the north central boundary of Project site looking south
GPS Coordinates: 35.281186, -119.023244
Photograph taken by L. Knox on July 8, 2021.

Photograph 4: Taken from the north central boundary of Project site looking west
GPS Coordinates: 35.281186, -119.023244
Photograph taken by L. Knox on July 8, 2021.

Photograph 5: Taken from the southwest corner of Project site looking northeast
GPS Coordinates: 35.277908, -119.025149
Photograph taken by L. Knox on July 8, 2021.

Photograph 6: Taken from the southwest corner of Project site looking northeast
GPS Coordinates: 35.277908, -119.025149
Photograph taken by L. Knox on July 8, 2021.

Photograph 7: Taken from the southeast corner of Project site looking north
GPS Coordinates: 35.277800, -119.021658
Photograph taken by L. Knox on July 8, 2021.

Photograph 8: Taken from the southeast corner of Project site looking west
GPS Coordinates: 35.277800, -119.021658
Photograph taken by L. Knox on July 8, 2021.

Photograph 9: Taken from the northeast corner of Project site looking southwest.
GPS Coordinates: 35.281062, -119.021467
Photograph taken by L. Knox on July 8, 2021.

Photograph 10: Taken from the northeast corner of Project site looking south.
GPS Coordinates: 35.281062, -119.021467
Photograph taken by L. Knox on July 8, 2021.

Photograph 9: Few ground squirrel burrows on Hosking offramp.
GPS Coordinates: 35.281062, -119.021467
Photograph taken by L. Knox on July 8, 2021.

Photograph 10: Kern Island Canal and bridge east of Project site looking north.
GPS Coordinates: 35.280855, -119.021096
Photograph taken by L. Knox on July 8, 2021.

APPENDIX C

PLANT AND ANIMAL SPECIES OBSERVED WITHIN THE BIOLOGICAL STUDY AREA
THE CROSSINGS PROJECT

Table C-1
Plant Species Observed within the Biological Study Area on July 8, 2021.
The Crossings Project, Kern County, California

Scientific Name	Common Name	Status	Native or Introduced
Trees			
Eucalyptus spp.	eucalyptus tree	None	Non-native
Phoenix dactylifera	date palm	None	Non-native
Pineus sp.	pine	none	Non-native
Shrubs			
Nerium oleander	oleander	none	Non-native
Herbs			
Conyza bonariensis	hairy fleabane	None	Native
Equistem spp.	horsetail	None	Native
Erigeron canadensis	horseweed	None	Native
Lactuca serriola	prickly lettuce	None	Non-native
Leptochloa fusca ssp. uninervia	Mexican sprangletop	None	Native
Salsola australis	Russian thistle	none	Non-native
Solanum spp	nightshade	None	
Typha latifolia	cattail	None	Native
Erodium cicutarium	common stork's bill	none	Non-native
Grasses			
Bromus tectorum	downy brome	None	Non-native
Bromus madritensis	red brome	None	Non-native
Sorghum halepense	Johnson grass	None	Non-native

Table C-2
Animal Species Observed within the Biological Study Area on July 8, 2019.
The Crossings Project, Kern County, California

Scientific Name	Common Name	Status	Native or Introduced
Birds			
Corvus brachyrynchos	American crow	none	native
Phalacrocorax auritus	double crested cormorant		native
Zenaida macura	mourning dove	none	native
Petrochelidon pyrrhonota	Cliff swallow		native
Tyrannus verticalis	Western kingbird	None	native
Anas platyrynchos	mallard	None	native
Ardea alba	great egret	SS	native
Columba livia	rock pigeon	None	native
Mammals			
Canis lupus familiaris	domestic dog	none	Non-native
Otospermophilus beecheyi	California ground squirrel	None	native

APPENDIX D

SPECIAL-STATUS SPECIES DATABASE SEARCH RESULTS FOR THE *THE CROSSINGS PROJECT*

Table D-1
Special-Status Plant and Animals Species in the Regional Vicinity of the Project Site
The Crossings Project, Kern County, California

Scientific Name Common Name	Status Fed/State ESA CRPR/CDFW	Habitat Requirements	Potential to Occur Yes/No	Rationale
Sensitive Plant Communities				
Great Valley Cottonwood Riparian Forest	-/- -/-	This community requires fine-grained alluvial soils adjacent to perennial or semi-perennial streams with frequent flooding and with permanent ground water in the tree root zone.	No	Habitat to support this species is absent from the Project site. Nearest CNDDB occurrence is from 1985 and approximately 5.8 miles southeast of the Project and is presumed extant (EONDX 28905).
Great Valley Mesquite Scrub	-/- -/-	This community is composed of an open woodland or savanna dominated by Prosopis glandulosa torreyana and Atriplex polycarpa. Understories are grassy in good rainfall years, though usually dominated by introduced annuals. This community is found in sandy loams of alluvial origin, often with wind-modified microtopography. Mesquite requires a high-water table. Sierran snowmelt provided the necessary groundwater for the perennial phreatophytes.	No	Habitat to support this species is absent from the Project site. Nearest CNDDB occurrence is from 1983 and approximately 8.0 miles southwest of the Project and is presumed extant (EONDX 28800).
Valley Sacaton Grassland	-/- -/-	This community is dominated by alkali sacaton, a tuft formed grass. It is found in areas with fine textured, poorly drained, and usually alkaline soils with high water tables, or that are flooded during winter months.	No	Habitat to support this species is absent from the Project site. There are no CNDDB occurrences within 10-miles of the Project site.
Valley Saltbush Scrub	-/- -/-	This community consists of open, gray or blue-green chenopod scrubs,	No	Habitat to support this species is absent from the

Scientific Name Common Name	Status Fed/State ESA CRPR/CDFW	Habitat Requirements	Potential to Occur Yes/No	Rationale
		usually over a low herbaceous annual understory. Cover types dominated by Atriplex polycarpa or Atriplex spinifera are differentiable. Also consists of sandy to loamy soils without surface alkalinity. Usually found on rolling, dissected alluvial fans.		Project site. Nearest CNDDB occurrence is from 1987 and approximately 3.0 miles southeast of the Project and is presumed extant (EONDX 16319).
Valley Sink Scrub	-/- -/-	This community consists of low, open to dense succulent shrublands dominated by alkali tolerant Chenopodiaceae, especially Allenrolfea occidentalis or several Suaeda species. Understories usually are lacking, though sparse herbaceous cover dominated by Bromus rubens develop occasionally. Also consists of saline or alkaline clays. Heavy, saline and/or alkaline clays of lakebeds or playas with Allenrolfia, salt grass, Lasthenia, etc.	No	Habitat to support this species is absent from the Project site. There are no CNDDB occurrences within 10-miles of the Project site.
Plants				
Astragalus hornii var. hornii Horn's milk-vetch	-/- 1B.1/-	This is a perennial herb that blooms from May to September. It occurs in meadows and seeps, alkali playas, wetlands, salty flats, and along lake margins. It occurs at elevations ranging from approximately 200 to 1,000 feet and is known to occur in Inyo, Kern, San Bernardino, and possibly Tulare counties.	No	Habitat to support this species is absent from the Project site. Nearest CNDDB occurrence is from 1962 and approximately 1.4 miles southeast of the Project and is presumed extant (EONDX 70407).
Atriplex cordulata var. cordulata heartscale	-/- 1B.2/-	This is an annual herb that is endemic to California and blooms from April to October. It occurs in saline and alkaline soils, chenopod scrub,	No	Habitat to support this species is absent from the Project site. There are no

Scientific Name Common Name	Status Fed/State ESA CRPR/CDFW	Habitat Requirements	Potential to Occur Yes/No	Rationale
		meadows and seeps, and sandy soils in valley foothill grassland habitats. It occurs at elevations ranging from approximately sea level to 1,837 feet and is known to occur in Alameda, Butte, Contra Costa, Colusa, Fresno, Glenn, Kern, Madera, Merced, San Joaquin, Solano, Stanislaus, Tulare, and Yolo counties. This species is threatened by competition from non-native plants and possibly threated by trampling.		CNDDB occurrences within 10-miles of the Project site.
Atriplex tularensis Bakersfield smallscale	-/SE 1A/-	This is an annual herb that blooms from June to October. It occurs in chenopod scrub and is endemic to California. It occurs at elevations ranging from approximately 295 to 656 feet and is known to occur in Kern County. Most known populations are likely extirpated. This species is threatened by habitat loss, lowering of water table, and hybridization with saltscale (Atriplex serenana).	No	Habitat to support this species is absent from the Project site. Nearest CNDDB occurrence is from 1981 and approximately 1.0 miles southeast of the Project and is extirpated (EONDX 2522).
Atriplex vallicola Lost Hills crownscale	-/- 1B.2/-	This is an annual herb that is endemic to California and blooms from April to September. It occurs in chenopod scrub, valley and foothill grassland, and/or vernal pools with alkaline soil. It occurs at elevations ranging from approximately 164 to 2,083 feet and is known to occur in Fresno, Kings, Kern, Merced, San Benito, San Luis Obispo, and Tulare counties. It is threatened by grazing, vehicles,	No	Habitat to support this species is absent from the Project site. Nearest CNDDB occurrence is from 1995 and approximately 10.0 miles southwest of the Project and is presumed extant (EONDX 76184).

Scientific Name Common Name	Status Fed/State ESA CRPR/CDFW	Habitat Requirements	Potential to Occur Yes/No	Rationale
		agricultural conversion, hydrological alterations, and energy development.		
Calochortus striatus Alkali mariposa-lily	-/- 1B.2/-	This is a perennial bulbiferous herb that blooms from April to June. It occurs in chaparral, chenopod scrub, Mojavean desert scrub, meadows and seeps, and in alkaline or mesic soil. It occurs at elevations ranging from approximately 229 to 5,232 feet. This species is threatened by urbanization, grazing, trampling, road construction, hydrological alterations, and water diversions that result in the lowering of the water table.	No	Habitat to support this species is absent from the Project site. There are no CNDDB occurrences within 10-miles of the Project site.
Caulanthus californicus California jewelflower	FE/SE 1B.1/-	This is an annual herb that blooms from February to May. It occurs in slightly alkaline sandy soils in chenopod scrub, valley and foothill grassland, and pinyon and juniper woodland typically at elevations from approximately 200 to 3,280 feet. It occurs in the San Joaquin Valley, Carrizo Plain, and Cuyama Valley from Fresno County south to Santa Barbara County and many occurrences are presumed extirpated. It is threatened by development, grazing, and competition from non-native plants.	No	Habitat to support this species is absent from the Project site. Nearest CNDDB occurrence is from 1986 and approximately 9.0 miles northwest of the Project and is extirpated (EONDX 20291).
Chloropyron molle ssp. hispidum hispid bird's-beak	-/- 1B.1/-	This is a hemi-parasitic annual herb that blooms from June to September. It grows in alkaline soils in meadows and seeps, playas, and valley and foothill grassland. It occurs at elevations ranging from	No	Habitat to support this species is absent from the Project site. Nearest CNDDB occurrence is from 1946 and approximately 4.5 miles southeast of the

Scientific Name Common Name	Status Fed/State ESA CRPR/CDFW	Habitat Requirements	Potential to Occur Yes/No	Rationale
		approximately sea level to 510 feet in scattered occurrences in foothills along the east and west side of Sacramento Valley. It is believed to be extirpated from much of the lower San Joaquin Valley and is threatened by agricultural conversion, development, and grazing.		Project and is presumed extant (EONDX 84431).
Delphinium recurvatum recurved larkspur	-/- 1B.2/-	This is a perennial herb that blooms from March to June. It occurs in alkaline conditions in chenopod scrub, cismontane woodland, and valley and foothill grassland. It occurs at elevations ranging from approximately 10 to 2,591 feet. This species is endemic to California. It occurs throughout the Central Valley and Coast Ranges from Butte County south. Few occurrences are in the Antelope Valley. This species is threatened by agriculture and competition from non-native plants.	No	Habitat to support this species is absent from the Project site. Nearest CNDDB occurrence is from 1935 and approximately 6.0 miles southeast of the Project and is possibly extirpated (EONDX 51922).
Diplacus pictus calico monkeyflower	-/- 1B.2/-	This is an annual herb that blooms from March to May. It occurs in broad leaf upland forest and cismontane woodlands in bare, sunny, shrubby areas around granite outcrops and disturbed areas. It occurs at elevations ranging from approximately 443 to 4,101 feet. This species is threatened by grazing and non-native plants.	No	Habitat to support this species is absent from the Project site. There are no CNDDB occurrences within 10-miles of the Project site.
Eremalchi parryi ssp. kernensis Kern mallow	FE/- 1B.2/-	This is an annual herb that blooms from January, sometimes February or March, to May. It occurs on dry, open	No	Habitat to support this species is absent from the Project site. Nearest

Scientific Name Common Name	Status Fed/State ESA CRPR/CDFW	Habitat Requirements	Potential to Occur Yes/No	Rationale
		sandy to clay soils, often at the edge of balds in chenopod scrub, pinyon and juniper woodland, and valley and foothill grassland. It occurs at elevations ranging from approximately 230 to 4,230 feet. It has been documented in the southern San Joaquin Valley and Carrizo Plain and surrounding foothills and mountains. This species is threatened by agriculture and development, and possibly non-native plants.		CNDDB occurrence is from 1998 and approximately 6.0 miles south of the Project and is presumed extant (EONDX 107405).
Eschscholzia lemmonii ssp. kernensis Tejon poppy	-/- 1B.1/-	This is an annual herb that blooms from March, sometimes as early as February, to May. It occurs in open valley and foothill grasslands and chenopod scrub. It occurs at elevations ranging from approximately 450 to 4,500 feet. This species is possibly threatened by grazing and non-native plants.	No	Habitat to support this species is absent from the Project site. Nearest CNDDB occurrence is from 1937 and approximately 9.2 miles northeast of the Project and is presumed extant (EONDX 101748).
Imperata brevifolia California satintail	-/- 2B.1/-	This is a perennial rhizomatous herb that blooms from September to May. It occurs in chaparral, coastal scrub, Mojavean desert scrub, meadows and seeps, and riparian scrub in mesic or alkali soils. It occurs at elevations ranging from approximately sea level to 3,986 feet. This species is threatened by development and agriculture.	No	Habitat to support this species is absent from the Project site. Nearest CNDDB occurrence is from 1896 and approximately 5.0 miles north of the Project and is presumed extant (EONDX 69838).
Lasthenia glabrata ssp. coulteri Coulter's goldfields	-/- 1B.1/-	This is an annual herb that blooms from February to June. It occurs in coastal salt marshes and swamps, playas, and vernal pools in the	No	Habitat to support this species is absent from the Project site. There are no

Scientific Name Common Name	Status Fed/State ESA CRPR/CDFW	Habitat Requirements	Potential to Occur Yes/No	Rationale
		interior of California. It occurs at elevations from sea level to 4,000 feet. It is seriously threatened by urbanization and agricultural development and road maintenance, and is potentially threatened by foot traffic and drought.		CNDDB occurrences within 10-miles of the Project site.
Layia leucopappa Comanche Point layia	-/- 1B.1/-	This is an annual herb endemic to California that can bloom as early as February but typically blooms from March to April. It occurs in chenopod scrub and valley and foothill grasslands in dry clay soils, often with weedy grasses. It occurs at elevations from approximately 328 to 1,148 feet. Populations have been reduced by agriculture and it is threatened by development and grazing.	No	Habitat to support this species is absent from the Project site. Nearest CNDDB occurrence is from 1935 and approximately 7.5 miles east of the Project and is presumed extant (EONDX 42610).
Monolopia [=Lembertia] congdonii San Joaquin woollythreads	FE/- 1B.2/-	This is an annual herb endemic to California that blooms from February to May. It occurs in chenopod scrub and on sandy soils in valley and foothill grassland. It occurs at elevations from approximately 196 to 2,624 feet. Approximately half of the historical occurrences are expected to be extirpated and the known populations occur in Carrizo Plain Natural Area, Lost Hills, Kettleman Hills, Jacalitos hills, Panoche Hills, and Cuyama Valley. It is seriously threatened by agricultural conversion, energy development, urbanization, grazing, trampling, and vehicles.	No	Habitat to support this species is absent from the Project site. Nearest CNDDB occurrence is from 1988 and approximately 8.7 miles northwest of the Project and is possibly extirpated (EONDX 16492).

Scientific Name Common Name	Status Fed/State ESA CRPR/CDFW	Habitat Requirements	Potential to Occur Yes/No	Rationale
Navarretia setiloba Piute Mountains navarretia	-/- 1B.1/-	This is an annual herb endemic to California that blooms from April to July. It occurs on clay or gravelly loam soil in cismontane woodland, pinyon and juniper woodland, and valley and foothill grassland. It occurs at elevations from approximately 1,640 to 6,890 feet. Many historical occurrences are likely extinct, and it is threatened by residential development and vehicles.	No	Habitat to support this species is absent from the Project site. Nearest CNDDB occurrence is from 1985 and approximately 9.3 miles northeast of the Project and is extirpated (EONDX 56125).
Opuntia basilaris var. treleasei Bakersfield cactus	FE/SE 1B.1/-	This is a perennial stem succulent endemic to California that blooms from April to May. It occurs on sandy or gravelly substrate in chenopod scrub, valley and foothill grasslands, and cismontane woodlands. It occurs at elevations from approximately 393 to 1,804 feet and is threatened by energy development, agricultural conversion, grazing, mining, vehicles, and especially urbanization in the Bakersfield area.	No	Habitat to support this species is absent from the Project site. Nearest CNDDB occurrence is from 2019 and approximately 3.5 miles southeast of the Project and is presumed extant (EONDX 116585).
Puccinellia simplex California alkali grass	-/- 1B.2/-	This is an annual herb that blooms from March to May. It usually occurs on sinks, flats, and lake margins in vernally moist, alkaline conditions of chenopod scrub, meadows and seeps, valley and foothill grassland, and vernal pools. It occurs at elevations from approximately 6 to 3,050 feet. It is threatened by hydrological alterations, urbanization, agricultural conversion, development, and habitat fragmentation, disturbance alteration	No	Habitat to support this species is absent from the Project site. Nearest CNDDB occurrence is from 1987 and approximately 8.0 miles southeast of the Project and is possibly extirpated (EONDX 100143).

Scientific Name Common Name	Status Fed/State ESA CRPR/CDFW	Habitat Requirements	Potential to Occur Yes/No	Rationale
		and loss. It is potentially threatened by solar energy development and is possibly threatened by grazing and proximity to roads.		
Stylocline citroleum Oil neststraw	-/- 1B.1/-	This is an annual herb endemic to California that blooms from March to April. It occurs on clay substrates in chenopod and coastal scrub, and valley and foothill grasslands. It occurs at elevations from approximately 164 to 1,312 feet and is possibly threatened by energy development and urbanization.	No	Habitat to support this species is absent from the Project site. Nearest CNDDB occurrence is from 1935 and approximately 10.0 miles northeast of the Project and is presumed extant (EONDX 7158).
Stylocline masonii Mason's neststraw	-/- 1B.1/-	This is an annual herb endemic to California that blooms from March to May. It occurs in loose sandy soils of washes and flats, in chenopod scrub, desert washes, and pinyon and juniper woodland. It occurs at elevations from approximately 330 to 3,940 feet and is threatened by development and habitat disturbance.	No	Habitat to support this species is absent from the Project site. There are no CNDDB occurrences within 10-miles of the Project site.
Tortula californica California screw moss	-/- 1B.2/-	This is a non-vascular moss endemic to California that does not flower. It occurs on sandy soils in chenopod scrub or valley and foothill grassland at elevations from approximately 32 to 4,790 feet.	No	Habitat to support this species is absent from the Project site. There are no CNDDB occurrences within 10-miles of the Project site.
Invertebrates				
Bombus crotchii Crotch bumble bee	-/SC -/-	This bee occurs in relatively warm and dry environments, including the inner Coast Range of California and the margins of the Mojave Desert. It inhabits grassland and scrub habitats, where it nests in abandoned rodent	No	Habitat to support this species is absent from the Project site. Nearest CNDDB occurrence is from 2020 and approximately 1.3 miles northwest of the

Scientific Name Common Name	Status Fed/State ESA CRPR/CDFW	Habitat Requirements	Potential to Occur Yes/No	Rationale
		burrows, occasionally nesting above ground in tufts of grass, rock piles, or cavities in dead trees. This species is classified as a short-tongued species, whose food plants include Asclepias, Chaenactis, Lupinus, Medicago, Phacelia, and Salvia. The species is threatened by habitat loss and degradation, including agricultural intensification and rapid urbanization.		Project and is presumed extant (EONDX 119326).
Danaus plexippus Monarch – California overwintering population	FC/- -/-	This butterfly species occurs in various open habitats including fields, meadows, weedy areas, marshes, and roadsides. Adults make massive migrations between August to October typically flying thousands of miles south to hibernate along the California coast and in central Mexico. Larvae feed on plants in the Milkweed family primarily Milkweeds (Asclepias), but also other genera including Calotropis, Cynanchum, Gonolobus, Sarcostemma, etc. Typically, each butterfly lives approximately two to six weeks.	No	Habitat to support this species is absent from the Project site. Nearest CNDDB occurrence is from 2015 and approximately 7.6 miles northeast of the Project and is possibly extirpated (EONDX 22801).
Desmocerus californicus dimorphus valley elderberry longhorn beetle	FT/- -/-	This beetle species is closely associated with elderberry shrubs (Sambucus sp.) for food and reproduction. This species usually occur along rivers and streams and eggs are laid on the bark of elderberry shrubs and larvae hatch and burrow into the stems. Adults eat elderberry leaves and flowers. Stem	No	Habitat to support this species is absent from the Project site. There are no CNDDB occurrences within 10-miles of the Project site.

Scientific Name Common Name	Status Fed/State ESA CRPR/CDFW	Habitat Requirements	Potential to Occur Yes/No	Rationale
		diameter must be a minimum of one inch and exit holes in stems are the most common methods for identification. This species ranges from southern Shasta County to Fresno County.		
Branchinecta lynchi vernal pool fairy shrimp	FT/- -/-	This species occurs in a variety of vernal pool habitats that range from small, clear sandstone rock pools to large, turbid, alkaline, grassland valley floor pools. It occurs more commonly in pools less than 0.05 acre, typically as part of larger vernal pool complexes. Adults are active from early December to early May. Pools must hold water for at least 18 days, the minimum to complete the life cycle if temperatures are optimal. Eggs are laid in spring and persist through dry season as cysts. The current California distribution includes the Central Valley and coast ranges. This species is threatened by habitat loss, degradation, fragmentation, and interference with vernal pool hydrology.	No	Habitat to support this species is absent from the Project site. There are no CNDDB occurrences within 10-miles of the Project site.
Fish				
Hypomesus transpacificus delta smelt	FT/- -/-	This is a small fish species endemic to the San Francisco Estuary and the larger Sacramento-San Joaquin Delta. It moves between freshwater and low salinity water throughout the year and most spawning happens in tidally influenced backwater sloughs and channel edgewaters. It occurs	No	Habitat to support this species is absent from the Project site. There are no CNDDB occurrences within 10-miles of the Project site.

Scientific Name Common Name	Status Fed/State ESA CRPR/CDFW	Habitat Requirements	Potential to Occur Yes/No	Rationale
		primarily in main water bodies and sloughs of the Delta and Suisun Bay and is not directly associated with small stream systems. This species historical distribution does not extend beyond Mossdale on the San Joaquin River and Sacramento on the Sacramento River.		
Amphibians				
Spea hammondii western spadefoot	-/- -/SSC	This species relies on vernal pools for breeding where predators cannot become established. It occurs in open areas with sand or gravelly soils in a variety of habitats: grasslands, coastal scrub, woodlands, chaparral, sandy washes, lowland river floodplains, alkali flats, foothills, and mountains. This species is endemic to California and northern Baja California with a distribution from Redding south throughout Central Valley and foothills, throughout the South Coast mountain range into coastal southern California to Transverse mountains and Peninsular mountains. This species occurs at elevations ranging from sea level to 4,500 feet.	No	Habitat to support this species is absent from the Project site. Nearest CNDDB occurrence is from 2008 and approximately 8.6 miles northwest of the Project and is presumed extant (EONDX 117481).
Rana draytonii California red-legged frog	FT/- -/-	This species occurs primarily in and near ponds in forests, woodlands, grasslands, coastal scrub, and stream sides with plant cover, preferably with dense shrubby vegetation such as cattails and willows near deep water pools. This species occurs primarily at elevations ranging from	No	Habitat to support this species is absent from the Project site. There are no CNDDB occurrences within 10-miles of the Project site.

Scientific Name Common Name	Status Fed/State ESA CRPR/CDFW	Habitat Requirements	Potential to Occur Yes/No	Rationale
		sea level to 5,000 feet. Breeding habitat may be permanent or ephemeral and it estivates in animal burrows or other moist refuges when ephemeral habitat is dry. This frog is endemic to California and northern Baja California, found throughout coastal California from Mendocino County south. Its inland distribution includes northern Sacramento Valley and foothills of Sierra Nevada south to Tulare County (possibly Kern County).		
Reptiles				
Anniella grinnelli Bakersfield legless lizard	-/- -/SSC	This species occurs in moist warm loose soil with sparsely vegetated areas of beach dunes, chaparral, pine-oak woodlands, desert scrub, sandy washes, and stream terraces with sycamores, cottonwoods, or oaks. It can be found under leaf litter from trees and bushes or under objects such as rocks, boards, driftwood, and logs. This species requires moisture in the soil. Breeding occurs between early spring and July with young born between September and November.	No	Habitat to support this species is absent from the Project site. Nearest CNDDB occurrence is from 1955 and approximately 5.0 miles northwest of the Project and is presumed extant (EONDX 106892).
Anniella spp. California legless lizard	-/- -/SSC	This species occurs in moist warm loose soils with sparsely vegetated areas of beach dunes, chaparral, pine-oak woodlands, desert scrub, sandy washes, and stream terraces with sycamores, cottonwoods, or oaks. Can be found under leaf litter from trees and bushes or under objects such as	No	Habitat to support this species is absent from the Project site. Nearest CNDDB occurrence is from 1939 and approximately 5.0 miles south of the Project and is presumed extant (EONDX 106920).

Scientific Name Common Name	Status Fed/State ESA CRPR/CDFW	Habitat Requirements	Potential to Occur Yes/No	Rationale
		rocks, boards, driftwood, and logs. This species requires moisture in the soil. Breeding occurs between early spring and July with young born between September and November.		
Arizona elegans occidentalis California glossy snake	-/- -/SSC	This subspecies of glossy snake occurs from the eastern part of the San Francisco Bay south to northwestern Baja, California. Appears to prefer microhabitats of open areas with soil loose enough for easy burrowing. Inhabits arid scrub, rocky washes, grasslands, and chaparral. This species is nocturnal and hides under rocks, in existing burrows, or creates its own burrow during daylight hours. Usually active from late February until November.	No	Habitat to support this species is absent from the Project site. Nearest CNDDB occurrence is from 1946 and approximately 0.5 miles southeast of the Project and is presumed extant (EONDX 105514).
Actinemys [=Emys] marmorata western pond turtle	-/- -/SSC	This species is highly aquatic and diurnally active. It is found in ponds, lakes, rivers, streams, creeks, marshes, and irrigation ditches with vegetation and rocky or muddy bottoms in a wide variety of habitats. It needs basking areas near water (logs, rocks, vegetation mats, banks). This species may enter brackish water and even seawater and it digs a nest on land near water. It ranges from north of the San Francisco Bay area south, including the Central Valley.	No	Habitat to support this species is absent from the Project site. Nearest CNDDB occurrence is approximately 9.6 miles northwest of the Project and is presumed extant (EONDX 28220).
Gambelia silus [=sila] blunt-nosed leopard lizard	FE/SE -/SFP	This large lizard occurs in semiarid habitats within the southern Central Valley, Cuyama Valley, and Panoche	No	Habitat to support this species is absent from the Project site. Nearest

Scientific Name Common Name	Status Fed/State ESA CRPR/CDFW	Habitat Requirements	Potential to Occur Yes/No	Rationale
		Valley, at elevations between 100 and 2,400 feet. Preferred habitats are typically flat, sparsely vegetated grasslands with large open areas with scattered shrubs for cover, and sandy washes. The species spends most of the year underground in abandoned small mammal burrows, with adults surfacing in the spring and early summer to breed and feed. Young hatch in July and August, and both adults and young recede to refugia between August and November. Individuals feed primarily on grasshoppers and smaller lizards. The species is threatened mainly by habitat loss and fragmentation.		CNDDB occurrence is from 1991 and approximately 9.5 miles west of the Project and is presumed extant (EONDX 65835).
Masticophis flagellum ruddocki San Joaquin coachwhip	-/- -/SSC	This species occurs in open, dry, treeless areas with little or no cover. Commonly found in valley grassland and saltbush scrub habitats; however, it avoids areas that are densely vegetated. Typically found from the Sacramento Valley in Colusa County southward to the Grapevine in Kern County and westward to the inner South Coast Ranges. This species is threatened by habitat loss and fragmentation, conversion of large suitable habitats to agricultural use in the San Joaquin Valley and urban development in the inner Coast Ranges.	Yes	Habitat within the BSA is poor quality with minimal vegetation and few burrows adjacent to the site. the potential for the species to occur is low due to surrounding residential development. Nearest CNDDB occurrence is from 2000 and approximately 6.0 miles northwest of the Project and is presumed extant (EONDX 66287).
Phrynosoma blainvillii	-/- -/SSC	This cryptic lizard prefers sandy, loose soils in grasslands, forests,	No	Habitat to support this species is absent from the

Scientific Name Common Name	Status Fed/State ESA CRPR/CDFW	Habitat Requirements	Potential to Occur Yes/No	Rationale
Blainville's [=coast] horned lizard		woodlands, and open chaparral. Individuals are often found along sandy washes and dirt roads with scattered shrubs for cover. This species feeds almost exclusively on ants. It is found in coastal California from Baja California north to the Bay Area, southeastern desert regions, southern Central Valley flats and foothills and the surrounding mountains on drier, warmer slopes, at elevations up to 8,000 feet. The species is threatened by habitat loss and fragmentation and the spread of invasive ant species displacing native prey.		Project site. Nearest CNDDB occurrence is from 2006 and approximately 10.0 miles west of the Project and is presumed extant (EONDX 69841).
Thamnophis gigas giant gartersnake	FT/- -/-	This is a highly aquatic snake found in marshes and sloughs, drainage canals, and irrigation ditches and prefers sloughs to be flooded in summer and dry in winter. It prefers vegetation close to water for basking and typically does not venture more than 200 feet from aquatic habitat. It ranges in elevation from sea level to 400 feet. It is endemic to California and currently ranges from Glenn County to southern edge of San Francisco Bay Delta, and from Merced County to northern Fresno County.	No	Habitat to support this species is absent from the Project site. There are no CNDDB occurrences within 10-miles of the Project site.
Birds				
Agelaius tricolor tricolored blackbird	-/ST -/-	This species is a year-round resident that is a colonial breeder. It occurs in freshwater, emergent wetlands with tall, dense cattails or tule, but also	No	Habitat to support this species is absent from the Project site. Nearest CNDDB occurrence is from

Scientific Name Common Name	Status Fed/State ESA CRPR/CDFW	Habitat Requirements	Potential to Occur Yes/No	Rationale
		thickets of willow, blackberry, wild rose, and tall herbs. Breeding colonies consist of a minimum of approximately 50 pairs. This species forages for mostly insects and spiders and less often seeds and cultivated grains in pastures, grain fields, cropland, and similar habitats near breeding areas.		2012 and approximately 5.0 miles southeast of the Project and is presumed extant (EONDX 99242).
Ardea alba great egret	-/- -/SS	This species occurs in freshwater, estuarine, and marine wetlands. It primarily preys on small fish, but will consume amphibians, reptiles, birds, small mammals, and invertebrates. This species usually nests in colonies, often over water and in or near the top of a shrub or tree.	No – Foraging No – Nesting	This species was observed during the reconnaissance survey in the canal adjacent to the eastern boundary of the BSA. However, habitat to support this species is absent from the Project site. Nearest CNDDB occurrence is from 1990 and approximately 3.7 miles northwest of the Project and is presumed extant (EONDX 11975).
Athene cunicularia burrowing owl	-/- -/SSC	This species occupies a variety of open, semi-arid to arid habitats throughout central and southern California, including desert regions. It prefers open habitats with few shrubs or trees and low-growing vegetation. It is most active around sunrise and sunset and utilizes burrows constructed by mammals year-round for shelter and nesting. This species is well documented in urban areas where patches of undeveloped areas are present (e.g., canals, airports,	Yes – Foraging Yes – Burrowing	Suitable foraging and burrowing habitat are present within the BSA. A large prey (i.e., insects and lizards) abundance is present. Nearest CNDDB occurrence is from 2007 and approximately 2.0 miles east of the Project and is presumed extant (EONDX 82909).

Scientific Name Common Name	Status Fed/State ESA CRPR/CDFW	Habitat Requirements	Potential to Occur Yes/No	Rationale
		drainage basins), and in areas of dense agricultural development, particularly where canals provide burrow habitat. It forages primarily for rodents and insects within several miles of its burrow, usually in open grassy habitats if available. It has been observed hunting bats and insects around parking lot lights. Threats to this species include development resulting in habitat loss/fragmentation.		
Buteo swainsoni Swainson's hawk	-/ST -/-	This species occurs in grassland, desert and agricultural landscapes in the Central Valley and Antelope Valley. These hawks may be resident or migrant, and nest and breed in stands with few trees in juniper-sage flats, riparian areas, and oak savannah habitats. This species has also been observed nesting and breeding in large eucalyptus trees along freeways and in trees over rural residences surrounded by agriculture. It may nest on the ground if no suitable trees are available. Nests are a platform of sticks, bark, and fresh leaves at or near the top of trees. This species breeds from late March to late August. It forages in grassland, open scrub, and grain fields, primarily for rodents.	Yes – Foraging No - Nesting	Suitable foraging habitat is present within the BSA due to a low-quality prey base (i.e., insects, lizards, and CAGS). No suitable nesting habitat is present due to lack of trees or utility structures that could support a SWHA nest. Nearest CNDDB occurrence is from 2019 and approximately 1.0 miles south of the Project and is presumed extant (EONDX 118756).
Charadrius alexandrinus nivosus western snowy plover	FT/- -/SSC	This species is a ground nesting bird that occurs along sandy beaches, salt pond levees and shores of large alkali	No	Habitat to support this species is absent from the Project site. There are no

Scientific Name Common Name	Status Fed/State ESA CRPR/CDFW	Habitat Requirements	Potential to Occur Yes/No	Rationale
		lakes. It prefers to nest on open bare ground in loose colonies or in isolated pairs. Nests are built on a natural or shallow scrape in the ground and lined with bits of debris, pebbles, grass, and shell fragments. This species primarily feeds on terrestrial and aquatic invertebrates.		CNDDB occurrences within 10-miles of the Project site.
Coccyzus americanus occidentalis western yellow-billed cuckoo	FT/SE -/-	This migratory species nests in open riparian woodlands along broad lower flood bottoms of larger river systems. It prefers willows, often mixed with cottonwood, with understory of blackberry, nettles or wild grape. Its nest is most often placed in willows with cottonwoods used extensively for foraging and also occasionally nests in orchards adjacent to river bottoms.	No	Habitat to support this species is absent from the Project site. There are no CNDDB occurrences within 10-miles of the Project site.
Dendrocygna bicolor fulvous whistling duck	-/- -/SSC	This species occupies freshwater wetlands including marshes, marshy ponds, and flooded rice fields. Breeding occurs from March to September in dense floating or flooded emergent vegetation. Commonly threatened by irregular species movements, pesticide contamination, habitat loss and degradation, agricultural and hunting disturbances.	No	Habitat to support this species is absent from the Project site. There are no CNDDB occurrences within 10-miles of the Project site.
Elanus leucurus white-tailed kite	-/- -/SFP	This species occurs in woodlands, marshes and swamps, partially cleared lands, and cultivated fields., wetlands, riparian woodland, and valley & foothill grassland. It prefers	No	Habitat to support this species is absent from the Project site. Nearest CNDDB occurrence is from 1992 and approximately

Scientific Name Common Name	Status Fed/State ESA CRPR/CDFW	Habitat Requirements	Potential to Occur Yes/No	Rationale
		rolling foothills and valley margins with scattered oaks & river bottomlands, or marshes next to deciduous woodland. It forages in open grasslands, meadows, or marshes close to isolated, dense-topped trees for nesting and perching. They nest in the upper third of trees, which can be open-country trees growing in isolation, or at the edge of or within a forest. This species is a year-long resident in coastal and valley lowlands. It forages over open grassland, wetlands, and grazed lands and is rarely found away from agricultural areas.		9.7 miles northwest of the Project and is presumed extant (EONDX 66020).
Empidonax traillii extimus southwestern willow flycatcher	FE/- -/-	This species occurs in broad, open river valleys or large mountain meadows with lush growth of shrubby willows. It prefers to nest within shrubs and brushes, often near the outer edge. This species primarily feed on insects including bees, wasps, ants, beetles, and moths but will also consume blackberries, raspberries, currants, and dogwood berries. Common threats to the species include loss and modification of riparian habitat and nest parasitism by the brown-headed cowbird.	No	Habitat to support this species is absent from the Project site. There are no CNDDB occurrences within 10-miles of the Project site.
Eremophila aspestris actia California horned lark	-/- -/WL	This species is a year-round resident in California. It occurs in grasslands and deserts with open areas and low growing herbaceous vegetation or sometimes scattered low shrubs near	Yes	Suitable nesting habitat is present within the BSA. Nearest CNDDB occurrence is from 2006 and approximately 10.0 miles

Scientific Name Common Name	Status Fed/State ESA CRPR/CDFW	Habitat Requirements	Potential to Occur Yes/No	Rationale
		seal to open alpine dwarf-shrub habitat above tree line. This species is a ground nester. They build a grass-lined nest in cup-shaped depression on ground in the open. This species is threatened by pesticide poisoning and habitat loss.		northwest of the Project and is presumed extant (EONDX 66888).
Plegadis chihi white-faced ibis	-/- -/WL	This species occurs in freshwater wetlands, especially cattail and bulrush marshes. It rarely breeds in California and is an uncommon summer resident at some southern California localities. This species nests in several marshes in the western United States. It forages in flooded hay meadows, agricultural fields, and estuarine wetlands primarily on insects, crustaceans, and earthworms.	No	Habitat to support this species is absent from the Project site. There are no CNDDB occurrences within 10-miles of the Project site.
Xanthocephalus xanthocephalus yellow-headed blackbird	-/- -/SSC	This species is a migratory and summer resident in Central Valley from mid-April to late July. It occurs in marshes and pockets of habitat along rivers and tributaries, typically with tall emergent vegetation. Nearby water levels in nesting habitat are approximately 2.0 to 4.0 feet deep. This species forages on seeds and cultivated grain but during the breeding season they may eat insects. It is susceptible to pesticide and threatened by loss due to wetland drainage for irrigation, flood control, or water diversions.	No	Habitat to support this species is absent from the Project site. There are no CNDDB occurrences within 10-miles of the Project site.
Mammals				

Scientific Name Common Name	Status Fed/State ESA CRPR/CDFW	Habitat Requirements	Potential to Occur Yes/No	Rationale
Ammospermophilus nelsoni San Joaquin antelope squirrel	-/ST -/-	This species occurs in saltbush scrub and grassland habitats and prefers washes and open shrub areas with sandy soils. Known populations occur in Lokern Natural Area, Elk Hills Carrizo and Elkhorn Plains, Temblor Range and foothills and interior valleys of the Diablo Range and as far north as Merced and San Benito counties. It feeds primarily on insects, green vegetation, seeds, and occasionally on small vertebrates. This species can excavate burrows or use kangaroo rat burrows for temperature regulation, litter-rearing, shelter, and escape from predators. It is threatened by habitat loss and population fragmentation from agricultural development, urbanization, petroleum extraction, and excessive cattle grazing.	No	Habitat to support this species is absent from the Project site. There are no CNDDB occurrences within 10-miles of the Project site.
Dipodomys ingens giant kangaroo rat	FE/SE -/-	This species occurs in native annual grassland and shrubland habitats with vegetated annual grass and forbs and scattered desert shrubs. It is known only to six major geographic units: Panoche Region, Kettleman Hills, San Juan Creek Valley, western Kern County (Lokern, Elk Hills, McKittrick, Taft, and Maricopa), Carrizo Plain Natural Area, and Cuyama Valley and occurs at elevations between 280 to 2,800 feet. It excavates burrows on level or gentle slopes with friable, sandy,	No	Habitat to support this species is absent from the Project site. No diagnostic sign (i.e., burrows, haystacks) were observed during the reconnaissance survey. Nearest CNDDB occurrence is from 1979 and approximately 9.8 miles southwest of the Project and is presumed extant (EONDX 24039).

Scientific Name Common Name	Status Fed/State ESA CRPR/CDFW	Habitat Requirements	Potential to Occur Yes/No	Rationale
		well-drained soils and is a nocturnal foraging species. It is threatened by habitat loss, fragmentation, and degradation, and drought and also by land conversions to agricultural, industrial, and urban developments.		
Dipodomys nitratoides brevinasus Short-nosed kangaroo rat	-/- -/SSC	This is a subspecies of the San Joaquin kangaroo rat (*Dipodomys nitratoides*) that occurs on friable soils on flat or gentle slops within grassland or desert scrub habitat. The current range is unknown but there are fragmented populations in Pleasant Valley, Kettleman and Lost Hills, Lokern, Elk Hills, San Emigdio, Wheler Ridge, Carrizo Plain Natural Area, and Caliente Mountains. It excavates burrows on higher ground and is a nocturnal foraging species. It is threatened by random catastrophic events (i.e. drought, flooding, fire), overgrazing of rangeland, and extensive land conversion to agriculture from the 1960s through 1970s.	No	Habitat to support this species is absent from the Project site. There are no CNDDB occurrences within 10-miles of the Project site.
Dipodomys nitratoides nitratoides Tipton kangaroo rat	FE/SE -/-	This is a subspecies of the San Joaquin kangaroo rat (*Dipodomys nitratoides*) that occurs in valley saltbush scrub, valley sink scrub, and grasslands. It is historically known to occur in the southern San Joaquin Valley from southern margins on Tulare Lake bed near Lemoore and Hanford, and on the valley floor in Tulare and Kern counties but now is	No	Habitat to support this species is absent from the Project site. Nearest CNDDB occurrence is from 1990 and approximately 6.0 miles northwest of the Project and is presumed extant (EONDX 65371).

Scientific Name Common Name	Status Fed/State ESA CRPR/CDFW	Habitat Requirements	Potential to Occur Yes/No	Rationale
		found only east of the California Aqueduct. Population distribution is not continuous and occurs only in small isolated patches. It is a nocturnal foraging species that excavates burrows for temperature regulation, litter-rearing, shelter, and escape from predators. This species is threatened by habitat loss, fragmentation, degradation and by land conversions to agricultural, industrial, and urban developments, but it can quickly inhabit fallow agricultural fields if a source population is nearby.		
Eumops perotis californicus western mastiff bat	-/- -/SSC	This species occurs in open, semi-arid to arid habitats throughout southeastern San Joaquin Valley and Coast Ranges from Monterey County southward. It can also occur in urban areas. It feeds on insects captured in flight and roosts in cliff faces, high buildings, trees, and tunnels. The maternity season begins in March with young typically volant by September. Nursery roosts most often occur in tight rock crevices or crevices in buildings.	No	Habitat to support this species is absent from the Project site. Nearest CNDDB occurrence is approximately 5.0 miles north of the Project and is presumed extant (EONDX 66520).
Lasiurus cinereus hoary bat	-/- -/-	This species occurs throughout California from sea level to 13,200 feet. It winters on the coast and in southern California. It breeds inland and north of winter range and bears young in woodlands and forests. It roosts in dense foliage of medium-	No	Habitat to support this species is absent from the Project site. Nearest CNDDB occurrence is from 1894 and approximately 7.0 miles northwest of the

Scientific Name Common Name	Status Fed/State ESA CRPR/CDFW	Habitat Requirements	Potential to Occur Yes/No	Rationale
		large trees, requires water, and prefer open habits or habitat mosaics. It feeds primarily on moths and generally forages with other bat species. The maternity season occurs from mid-May through early July. This species has a high incidence of rabies.		Project and is presumed extant (EONDX 68796).
Onychomys torridus tularensis Tulare grasshopper mouse	-/- -/SSC	This subspecies occurs in shrubland communities in hot, arid grassland and shrubland associations. These include blue oak woodlands, upper Sonoran subshrub scrub, alkali sink and mesquite associations on the Valley Floor, and grasslands associations on the sloping margins of the San Joaquin Valley and Carrizo Plain region. This subspecies occupies burrows and feeds primarily on invertebrates but may supplement its diet with seeds and other small mammals.	No	Habitat to support this species is absent from the Project site. There are no CNDDB occurrences within 10-miles of the Project site.
Perognathus inornatus San Joaquin pocket mouse	-/- -/-	This nocturnal species is found in dry, open grasslands and scrublands on fine-textured soils in the Central (mostly west side) and Salinas Valleys at elevations from 1,100 to 2,000 feet. It digs its own burrows for cover, breeding, and seed caching.	No	Habitat to support this species is absent from the Project site. Nearest CNDDB occurrence is from 2016 and approximately 10.0 miles west of the Project and is presumed extant (EONDX 104040).
Sorex ornatus relictus Buena Vista Lake ornate shrew	FE/- -/SSC	This shrew species occurs in moist soil conditions in marsh habitat with dense emergent vegetation and/or leaf litter and is often associated with cottonwoods, willows, alkali heath,	No	Habitat to support this species is absent from the Project site. There are no CNDDB occurrences within 10-miles of the Project site.

Scientific Name Common Name	Status Fed/State ESA CRPR/CDFW	Habitat Requirements	Potential to Occur Yes/No	Rationale
		wild rye grass, and Baltic rush. Historically, this species occurred in and around the Buena Vista Lake and Tulare Lake Basins and was once thought to be extinct but was rediscovered at Kern Lake Preserve in 1986. It is primarily insectivorous. Reproduction typically occurs from late February to September or early October and the litter size varies.		
Taxidea taxus American badger	-/- -/SSC	This species occurs mostly in open, drier stages of shrub, forest, and herbaceous habitats, with friable soils. It feeds mostly on fossorial rodents. It digs burrows for cover and reproduction and can dig a new den each night. Litters are typically born in March and April. This species can be somewhat tolerant of human activities but generally avoids cultivated agricultural habitats.	Yes – Foraging Yes - Denning	Suitable forging and denning habitat is present within the BSA. No diagnostic sign (i.e., dens, scat) were observed during the reconnaissance survey; however, the species is known to be a transient forager in the vicinity. Nearest CNDDB occurrence is from 2008 and approximately 1.0 miles north of the Project and is presumed extant (EONDX 74778).
Vulpes macrotis mutica San Joaquin kit fox	FE/ST -/-	This fox species is endemic to the Central Valley and primarily occurs in arid to semi-arid grasslands, open shrublands, savannahs, and grazed lands with loose-textured soils within the San Joaquin Valley, Carrizo Plain, Salinas Valley, Cuyama Valley, and other small valleys in western foothills. Intensively maintained agricultural areas are typically	Yes – Foraging Yes - Denning	Suitable forging and denning habitat is present within the BSA. No diagnostic sign (i.e., dens, scat, tracks) were observed during the reconnaissance survey; however, the species is known to be a transient forager in the vicinity. Nearest CNDDB

Scientific Name Common Name	Status Fed/State ESA CRPR/CDFW	Habitat Requirements	Potential to Occur Yes/No	Rationale
		avoided. It is highly adaptable and documented in urban developed areas. It uses burrows year-round for shelter, escape from predators, and rearing young and it will use man-made structures, such as pipes, for denning. Kit fox feed primarily on small mammals, but will also consume birds, reptiles, insects, and scavenge for human food. It is threatened by habitat loss and fragmentation, vehicle strikes, and disease such as the current mange outbreak in urban population in Bakersfield and in nearby natural areas.		occurrence is from 2006 and approximately 0.3 miles west of the Project and is presumed extant (EONDX 53951).

APPENDIX E

SAN JOAQUIN KIT FOX STANDARD RECOMMENDATIONS
THE CROSSINGS PROJECT

U.S. FISH AND WILDLIFE SERVICE STANDARDIZED RECOMMENDATIONS FOR PROTECTION OF THE ENDANGERED SAN JOAQUIN KIT FOX PRIOR TO OR DURING GROUND DISTURBANCE

Prepared by the Sacramento Fish and Wildlife Office
January 2011

INTRODUCTION

The following document includes many of the San Joaquin kit fox (*Vulpes macrotis mutica*) protection measures typically recommended by the U. S. Fish and Wildlife Service (Service), prior to and during ground disturbance activities. **However, incorporating relevant sections of these guidelines into the proposed project is not the only action required under the Endangered Species Act of 1973, as amended (Act) and does not preclude the need for section 7 consultation or a section 10 incidental take permit for the proposed project.** Project applicants should contact the Service in Sacramento to determine the full range of requirements that apply to your project; the address and telephone number are given at the end of this document. Implementation of the measures presented in this document may be necessary to avoid violating the provisions of the Act, including the prohibition against "take" (defined as killing, harming, or harassing a listed species, including actions that damage or destroy its habitat). These protection measures may also be required under the terms of a biological opinion pursuant to section 7 of the Act resulting in incidental take authorization (authorization), or an incidental take permit (permit) pursuant to section 10 of the Act. The specific measures implemented to protect kit fox for any given project shall be determined by the Service based upon the applicant's consultation with the Service.

The purpose of this document is to make information on kit fox protection strategies readily available and to help standardize the methods and definitions currently employed to achieve kit fox protection. The measures outlined in this document are subject to modification or revision at the discretion of the Service.

IS A PERMIT NECESSARY?

Certain acts need a permit from the Service which includes destruction of any known (occupied or unoccupied) or natal/pupping kit fox dens. Determination of the presence or absence of kit foxes and /or their dens should be made during the environmental review process. All surveys and monitoring described in this document must be conducted by a qualified biologist and these activities do not require a permit. A qualified biologist (biologist) means any person who has completed at least four years of university training in wildlife biology or a related science and/or has demonstrated field experience in the identification and life history of the San Joaquin kit fox. In addition, the biologist(s) must be able to identify coyote, red fox,

gray fox, and kit fox tracks, and to have seen a kit fox in the wild, at a zoo, or as a museum mount. Resumes of biologists should be submitted to the Service for review and approval prior to an6y survey or monitoring work occurring.

SMALL PROJECTS

Small projects are considered to be those projects with small foot prints, of approximately one acre or less, such as an individual in-fill oil well, communication tower, or bridge repairs. These projects must stand alone and not be part of, or in any way connected to larger projects (i.e., bridge repair or improvement to serve a future urban development). The Service recommends that on these small projects, the biologist survey the proposed project boundary and a 200-foot area outside of the project footprint to identify habitat features and utilize this information as guidance to situate the project to minimize or avoid impacts. If habitat features cannot be completely avoided, then surveys should be conducted and the Service should be contacted for technical assistance to determine the extent of possible take.

Preconstruction/preactivity surveys shall be conducted no less than 14 days and no more than 30 days prior to the beginning of ground disturbance and/or construction activities or any project activity likely to impact the San Joaquin kit fox. Kit foxes change dens four or five times during the summer months, and change natal dens one or two times per month (Morrell 1972). Surveys should identify kit fox habitat features on the project site and evaluate use by kit fox and, if possible, assess the potential impacts to the kit fox by the proposed activity. The status of all dens should be determined and mapped (see Survey Protocol). Written results of preconstruction/preactivity surveys must be received by the Service within five days after survey completion and prior to the start of ground disturbance and/or construction activities.

If a natal/pupping den is discovered within the project area or within 200-feet of the project boundary, the Service shall be immediately notified and under no circumstances should the den be disturbed or destroyed without prior authorization. If the preconstruction/preactivity survey reveals an active natal pupping or new information, the project applicant should contact the Service immediately to obtain the necessary take authorization/permit.

If the take authorization/permit has already been issued, then the biologist may proceed with den destruction within the project boundary, except natal/pupping den which may not be destroyed while occupied. A take authorization/permit is required to destroy these dens even after they are vacated. Protective exclusion zones can be placed around all known and potential dens which occur outside the project footprint (conversely, the project boundary can be demarcated, see den destruction section).

OTHER PROJECTS

It is likely that all other projects occurring within kit fox habitat will require a take authorization/permit from the Service. This determination would be made by the Service during the early evaluation process (see Survey Protocol). These other projects would include, but are not limited to: Linear projects; projects with large footprints such as urban development; and projects which in themselves may be small but have far reaching impacts (i.e., water storage or conveyance facilities that promote urban growth or agriculture, etc.).

The take authorization/permit issued by the Service may incorporate some or all of the protection measures presented in this document. The take authorization/permit may include measures specific to the needs of the project and those requirements supersede any requirements found in this document.

EXCLUSION ZONES

In order to avoid impacts, construction activities must avoid their dens. The configuration of exclusion zones around the kit fox dens should have a radius measured outward from the entrance or cluster of entrances due to the length of dens underground. The following distances are **minimums**, and if they cannot be followed the Service must be contacted. Adult and pup kit foxes are known to sometimes rest and play near the den entrance in the afternoon, but most above-ground activities begin near sunset and continue sporadically throughout the night. Den definitions are attached as Exhibit A.

Potential den**	50 feet
Atypical den**	50 feet
Known den*	100 feet
Natal/pupping den (occupied and unoccupied)	Service must be contacted

*Known den: To ensure protection, the exclusion zone should be demarcated by fencing that encircles each den at the appropriate distance and does not prevent access to the den by kit foxes. Acceptable fencing includes untreated wood particle-board, silt fencing, orange construction fencing or other fencing as approved by the Service as long as it has openings for kit fox ingress/egress and keeps humans and equipment out. Exclusion zone fencing should be maintained until all construction related or operational disturbances have been terminated. At that time, all fencing shall be removed to avoid attracting subsequent attention to the dens.

**Potential and Atypical dens: Placement of 4-5 flagged stakes 50 feet from the den entrance(s) will suffice to identify the den location; fencing will not be required, but the exclusion zone must be observed.

Only essential vehicle operation on existing roads and foot traffic should be permitted. Otherwise, all construction, vehicle operation, material storage, or any other type of surface-disturbing activity should be prohibited or greatly restricted within the exclusion zones.

DESTRUCTION OF DENS

Limited destruction of kit fox dens may be allowed, if avoidance is not a reasonable alternative, provided the following procedures are observed. The value to kit foxes of potential, known, and natal/pupping dens differ and therefore, each den type needs a different level of protection. **Destruction of any known or natal/pupping kit fox den requires take authorization/permit from the Service**.

Destruction of the den should be accomplished by careful excavation until it is certain that no kit foxes are inside. The den should be fully excavated, filled with dirt and compacted to ensure that kit foxes cannot reenter or use the den during the construction period. If at any point during excavation, a kit fox is discovered inside the den, the excavation activity shall cease immediately and monitoring of the den as described above should be resumed. Destruction of the den may be completed when in the judgment of the biologist, the animal has escaped, without further disturbance, from the partially destroyed den.

Natal/pupping dens: Natal or pupping dens which are occupied will not be destroyed until the pups and adults have vacated and then only after consultation with the Service. Therefore, project activities at some den sites may have to be postponed.

Known Dens: Known dens occurring within the footprint of the activity must be monitored for three days with tracking medium or an infra-red beam camera to determine the current use. If no kit fox activity is observed during this period, the den should be destroyed immediately to preclude subsequent use.

If kit fox activity is observed at the den during this period, the den should be monitored for at least five consecutive days from the time of the observation to allow any resident animal to move to another den during its normal activity. Use of the den can be discouraged during this period by partially plugging its entrances(s) with soil in such a manner that any resident animal can escape easily. Only when the den is determined to be unoccupied may the den be excavated under the direction of the biologist. If the animal is still present after five or more consecutive days of plugging and monitoring, the den may have to be excavated when, in the judgment of a biologist, it is temporarily vacant, for example during the animal's normal foraging activities.

The Service encourages hand excavation, but realizes that soil conditions may necessitate the use of excavating equipment. However, extreme caution must be exercised.

Potential Dens: If a take authorization/permit has been obtained from the Service, den destruction may proceed without monitoring, unless other restrictions were issued with the take authorization/permit. If no take authorization/permit has been issued, then potential dens should be monitored as if they were known dens. If any den was considered to be a potential den, but is later determined during monitoring or destruction to be currently, or previously used by kit fox (e.g., if kit fox sign is found inside), then all construction activities shall cease and the Service shall be notified immediately.

CONSTRUCTION AND ON-GOING OPERATIONAL REQUIREMENTS

Habitat subject to permanent and temporary construction disturbances and other types of ongoing project-related disturbance activities should be minimized by adhering to the following activities. Project designs should limit or cluster permanent project features to the smallest area possible while still permitting achievement of project goals. To minimize temporary disturbances, all project-related vehicle traffic should be restricted to established roads, construction areas, and other designated areas. These areas should also be included in preconstruction surveys and, to the extent possible, should be established in locations disturbed by previous activities to prevent further impacts.

1. Project-related vehicles should observe a daytime speed limit of 20-mph throughout the site in all project areas, except on county roads and State and Federal highways; this is particularly important at night when kit foxes are most active. Night-time construction should be minimized to the extent possible. However if it does occur, then the speed limit should be reduced to 10-mph. Off-road traffic outside of designated project areas should be prohibited.

2. To prevent inadvertent entrapment of kit foxes or other animals during the construction phase of a project, all excavated, steep-walled holes or trenches more than 2-feet deep should be covered at the close of each working day by plywood or similar materials. If the trenches cannot be closed, one or more escape ramps constructed of earthen-fill or wooden planks shall be installed. Before such holes or trenches are filled, they should be thoroughly inspected for trapped animals. If at any time a trapped or injured kit fox is discovered, the Service and the California Department of Fish and Game (CDFG) shall be contacted as noted under measure 13 referenced below.

3. Kit foxes are attracted to den-like structures such as pipes and may enter stored pipes and become trapped or injured. All construction pipes, culverts, or similar structures with a diameter of 4-inches or greater that are stored at a construction site for one or more overnight periods should be thoroughly inspected for kit foxes before the pipe is subsequently buried, capped, or otherwise used or moved in any way. If a kit fox is

discovered inside a pipe, that section of pipe should not be moved until the Service has been consulted. If necessary, and under the direct supervision of the biologist, the pipe may be moved only once to remove it from the path of construction activity, until the fox has escaped.

4. All food-related trash items such as wrappers, cans, bottles, and food scraps should be disposed of in securely closed containers and removed at least once a week from a construction or project site.

5. No firearms shall be allowed on the project site.

6. No pets, such as dogs or cats, should be permitted on the project site to prevent harassment, mortality of kit foxes, or destruction of dens.

7. Use of rodenticides and herbicides in project areas should be restricted. This is necessary to prevent primary or secondary poisoning of kit foxes and the depletion of prey populations on which they depend. All uses of such compounds should observe label and other restrictions mandated by the U.S. Environmental Protection Agency, California Department of Food and Agriculture, and other State and Federal legislation, as well as additional project-related restrictions deemed necessary by the Service. If rodent control must be conducted, zinc phosphide should be used because of a proven lower risk to kit fox.

8. A representative shall be appointed by the project proponent who will be the contact source for any employee or contractor who might inadvertently kill or injure a kit fox or who finds a dead, injured or entrapped kit fox. The representative will be identified during the employee education program and their name and telephone number shall be provided to the Service.

9. An employee education program should be conducted for any project that has anticipated impacts to kit fox or other endangered species. The program should consist of a brief presentation by persons knowledgeable in kit fox biology and legislative protection to explain endangered species concerns to contractors, their employees, and military and/or agency personnel involved in the project. The program should include the following: A description of the San Joaquin kit fox and its habitat needs; a report of the occurrence of kit fox in the project area; an explanation of the status of the species and its protection under the Endangered Species Act; and a list of measures being taken to reduce impacts to the species during project construction and implementation. A fact sheet conveying this information should be prepared for distribution to the previously referenced people and anyone else who may enter the project site.

10. Upon completion of the project, all areas subject to temporary ground disturbances, including storage and staging areas, temporary roads, pipeline corridors, etc. should be

re-contoured if necessary, and revegetated to promote restoration of the area to pre-project conditions. An area subject to "temporary" disturbance means any area that is disturbed during the project, but after project completion will not be subject to further disturbance and has the potential to be revegetated. Appropriate methods and plant species used to revegetate such areas should be determined on a site-specific basis in consultation with the Service, California Department of Fish and Game (CDFG), and revegetation experts.

11. In the case of trapped animals, escape ramps or structures should be installed immediately to allow the animal(s) to escape, or the Service should be contacted for guidance.

12. Any contractor, employee, or military or agency personnel who are responsible for inadvertently killing or injuring a San Joaquin kit fox shall immediately report the incident to their representative. This representative shall contact the CDFG immediately in the case of a dead, injured or entrapped kit fox. The CDFG contact for immediate assistance is State Dispatch at (916)445-0045. They will contact the local warden or Mr. Paul Hoffman, the wildlife biologist, at (530)934-9309. The Service should be contacted at the numbers below.

13. The Sacramento Fish and Wildlife Office and CDFG shall be notified in writing within three working days of the accidental death or injury to a San Joaquin kit fox during project related activities. Notification must include the date, time, and location of the incident or of the finding of a dead or injured animal and any other pertinent information. The Service contact is the Chief of the Division of Endangered Species, at the addresses and telephone numbers below. The CDFG contact is Mr. Paul Hoffman at 1701 Nimbus Road, Suite A, Rancho Cordova, California 95670, (530) 934-9309.

14. New sightings of kit fox shall be reported to the California Natural Diversity Database (CNDDB). A copy of the reporting form and a topographic map clearly marked with the location of where the kit fox was observed should also be provided to the Service at the address below.

Any project-related information required by the Service or questions concerning the above conditions or their implementation may be directed in writing to the U.S. Fish and Wildlife Service at:

Endangered Species Division
2800 Cottage Way, Suite W2605
Sacramento, California 95825-1846
(916) 414-6620 or (916) 414-6600

EXHIBIT "A" - DEFINITIONS

"Take" - Section 9 of the Endangered Species Act of 1973, as amended (Act) prohibits the "take" of any federally listed endangered species by any person (an individual, corporation, partnership, trust, association, etc.) subject to the jurisdiction of the United States. As defined in the Act, take means " . . . to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or attempt to engage in any such conduct". Thus, not only is a listed animal protected from activities such as hunting, but also from actions that damage or destroy its habitat.

"Dens" - San Joaquin kit fox dens may be located in areas of low, moderate, or steep topography. Den characteristics are listed below, however, the specific characteristics of individual dens may vary and occupied dens may lack some or all of these features. Therefore, caution must be exercised in determining the status of any den. Typical dens may include the following: (1) one or more entrances that are approximately 5 to 8 inches in diameter; (2) dirt berms adjacent to the entrances; (3) kit fox tracks, scat, or prey remains in the vicinity of the den; (4) matted vegetation adjacent to the den entrances; and (5) manmade features such as culverts, pipes, and canal banks.

"Known den" - Any existing natural den or manmade structure that is used or has been used at any time in the past by a San Joaquin kit fox. Evidence of use may include historical records, past or current radiotelemetry or spotlighting data, kit fox sign such as tracks, scat, and/or prey remains, or other reasonable proof that a given den is being or has been used by a kit fox. The Service discourages use of the terms "active" and "inactive" when referring to any kit fox den because a great percentage of occupied dens show no evidence of use, and because kit foxes change dens often, with the result that the status of a given den may change frequently and abruptly.

"Potential Den" - Any subterranean hole within the species' range that has entrances of appropriate dimensions for which available evidence is insufficient to conclude that it is being used or has been used by a kit fox. Potential dens shall include the following: (1) any suitable subterranean hole; or (2) any den or burrow of another species (e.g., coyote, badger, red fox, or ground squirrel) that otherwise has appropriate characteristics for kit fox use.

"Natal or Pupping Den" - Any den used by kit foxes to whelp and/or rear their pups. Natal/pupping dens may be larger with more numerous entrances than dens occupied exclusively by adults. These dens typically have more kit fox tracks, scat, and prey remains in the vicinity of the den, and may have a broader apron of matted dirt and/or vegetation at one or more entrances. A natal den, defined as a den in which kit fox pups are actually whelped but not necessarily reared, is a more restrictive version of the pupping den. In practice, however, it is difficult to distinguish between the two, therefore, for purposes of this definition either term applies.

"Atypical Den" - Any manmade structure which has been or is being occupied by a San Joaquin kit fox. Atypical dens may include pipes, culverts, and diggings beneath concrete slabs and buildings.

APPENDIX F

SUMMARY OF TAKE MINIMIZATION MEASURES AS EXCERPTED FROM THE METROPOLITAN BAKERSFIELD URBAN DEVELOPMENT INCIDENTAL TAKE PERMIT #2081-20136-058-04, AS AMENDED

Summary of Take Minimization Measures as Excerpted from the Metropolitan Bakersfield Urban Development Incidental Take Permit #2081-2013-058-04, as Amended

This attachment contains a summary of the take minimization measures excerpted from the Metropolitan Bakersfield Urban Development Incidental Take Permit (ITP). These measures (also known as Conditions of Approval) are generally applicable to all projects within the area of coverage of the ITP, but actual applicability to any specific project is dependent upon findings of site-specific surveys as defined in 7.1 and 7.4 below. These measures and additional measures can be found in the body of the ITP and ITP amendment.

7. Take Minimization Measures:

The following requirements are intended to ensure the minimization of incidental take of Covered Species in the Project Area during Covered Activities. Permittee shall implement and adhere to the following conditions to minimize take of Covered Species:

7.1. Biological Clearance Survey. Prior to either Permittee issuing a Permittee Authorization to a Developer, the Developer applying for such Permittee Authorization shall provide a written Biological Clearance Survey conducted by a CDFW-approved Qualified Wildlife Biologist (Condition of Approval 5.10), no more than 30 calendar days prior to a Developer beginning Covered Activities on a given Permittee-authorized project. The Biological Clearance Survey shall include full coverage transect surveys for SJKF dens (See Condition of Approval 7.4, below), kangaroo rat burrows (in areas identified in Condition of Approval 7.8, below), and Bakersfield cactus (for proposed projects north of State Route (SR) 58 and east of SR 99), in the proposed development footprint and a buffer zone of 50 feet in size beyond the proposed development footprint (except for any portions of the buffer zone that are already fully developed or are beyond the access rights of the developer). The Biological Clearance Survey shall be valid for no more than 30 calendar days. In the event that Covered Activities are not initiated, as authorized by either Permittee, within 30 calendar days of a Biological Clearance Survey, the Biological Clearance Survey shall be repeated. Each Developer pursuing a Permittee Authorization shall bear the costs of the Biological Clearance Survey being conducted and summarized in writing.

7.2. Covered Species Detection. If one or more of the "Conditions" described below in Table 1 is detected during the Biological Clearance Survey (Condition of Approval 7.1) for any proposed Developer project, Permittees shall either: (1) not grant a Permittee Authorization for said Developer project until implementation of the Table 1 referenced "Required Minimization Measures" is demonstrated by the Developer in writing to the Permittees; or (2) any issued Permittee Authorization shall require, via specific written conditions within the Permittee Authorization, that the start of grading/building activities may not occur until implementation

of the Table 1 referenced "Required Minimization Measures" are demonstrated in writing to the Permittees.

Table 1. Conditions within Proposed Development Footprint

Condition Within Proposed Development Footprint	Required Minimization Measures
Known, active, or natal SJKF den	Conditions of Approval 7.5 and 7.6
Kangaroo rat burrows (Conceptual Southwest Focus Area only)	Conditions of Approval7.8, 7.9, and 7.10
One or more Bakersfield cactus clumps/plants	Conditions of Approval 7.11, 7.12, and 7.13

7.3. Developer Notification of Covered Species Detection. For Developer projects on which one or more of the Table 1 "Condition within Proposed Development Footprint" (Condition of Approval 7.2) are present, Permittees shall require the Developer to provide CDFW and Permittees with a written "Notice of Grading Start" at least 5 business days prior to ground disturbance. Such a "Notice of Grading Start" shall only be submitted after all "Required Minimization Measures" referenced in Table 1 are implemented for that specific Developer project. The "Notice of Grading Start" shall include, at a minimum, the following information: (1) project location, including a map and major cross streets; (2) project name; (3) Developer name and contact information (phone, email, and mailing address); (4) name of the Qualified Wildlife Biologist that conducted the Biological Clearance Survey; (5) a copy of the Biological Clearance Survey; and (6) written information submitted to demonstrate compliance with Condition of Approval 7.2, 7.5, 7.6 and 7.8-7.13, as applicable. Developer should keep as a record proof of their notification to CDFW.

In addition to the Biological Clearance Survey as required in Condition of Approval7.1, SJKF den surveys shall be annually conducted each January if Covered Activities are not completed at a Project site, to identify any SJKF that may have occupied the site after completion of the Biological Clearance Survey and to maximize detection of potential natal dens. The Developer shall provide CDFW and Permittees with a written report by February 5th that includes at a minimum the following information: (1) project location, including a map and major cross streets; (2) project name; (3) Developer name and contact information (phone, email, and mailing address); (4) name of the Designated Biologist that conducted the SJKF den survey; (5) a copy of the Biological Clearance Survey as required in Condition of Approval 7.1; and (6) written information submitted to demonstrate compliance with Conditions of Approval 7.2, 7.5, 7.6 and 7.8 through 7.13, as applicable. Developer should keep as a record proof of their notification to CDFW. Each Developer shall bear the costs of implementing the SJKF Den Surveys.

7.4. SJKF Den Survey. SJKF Den Surveys shall evaluate the proposed development footprint and a 50 foot buffer zone (except for any portions of the buffer zone that are already fully developed) for potential, known, active, atypical, and natal SJKF dens, as defined in the Service 2011 "*Standardized recommendations for protection of the San Joaquin kit fox prior to or during ground disturbance*."

7.5. SJKF Den Avoidance. If a known, active, or natal SJKF den is discovered during the SJKF Den Survey/Biological Clearance Survey, the Permittees shall not issue a Permittee Authorization unless the Developer demonstrates that they established a permanent minimum buffer using fencing or flagging as follows: (1) at least 100 feet around den(s); (2) at least 200 feet around natal dens (dens in which SJKF young are reared); and (3) at least 500 feet around any natal dens with pups (except for any portions of the buffer zone that are already fully developed). Buffer zones shall be considered Environmentally Sensitive Areas, and no Covered Activities are allowed within a buffer except per Condition of Approval 7.6., and as follows: If the work within the buffer area will not result in the destruction of the den, the den should be conserved. If the den is unoccupied (based on the required four consecutive days of monitoring), then the den can be covered in a secure manner to prevent access by SJKF while the work is being conducted. After the work is done, the den can be uncovered to allow use by SJKF. If the den is occupied and the SJKF don't want to leave, then a smaller buffer could be established, including a barricade to prevent the SJKF from exiting the den and entering the work site. A qualified biologist shall monitor the den while the work is being conducted. Permittees shall notify the Service and CDFW's Regional Representative immediately via telephone or e-mail if any SJKF active dens, natal dens, or occupied atypical dens are discovered within or immediately adjacent to any proposed development footprint. Each Developer pursuing a Permittee Authorization shall bear the costs of implementing the SJKF den avoidance requirements.

A reduced SJKF den avoidance buffer may be authorized with written approval by CDFW. Buffer reduction requests shall be submitted by the Designated Biologist and describe why a reduced buffer will not impact SJKF. CDFW may add additional minimization measures as a condition of any buffer reduction approval; these additional CDFW specified minimization measures shall be followed by the Developer that proposed the buffer reduction.

7.6. SJKF Den Excavation. For active dens and potential dens that exhibit signs of SJKF use or characteristics suggestive of SJKF dens (including dens in natural substrate and in/under man-made structures) that cannot be avoided as per Condition of Approval 7.5, and if, after four consecutive days of monitoring with tracking medium or infrared camera, a Qualified Wildlife Biologist has determined that SJKF is not currently present, the den may be excavated. Natal dens shall not be excavated until the pups and adults have vacated and then only after consultation with the Service and CDFW. If the excavation process reveals evidence of current use by SJKF then den excavation shall cease immediately and tracking or camera monitoring as described above shall be conducted/resumed. Excavation of the den may be completed when, in the judgment of a Qualified Wildlife Biologist, the SJKF has escaped from the partially excavated den. SJKF dens shall be carefully excavated until it is certain no individuals of SJKF are inside. Dens shall be fully excavated, filled with dirt, and compacted to ensure that SJKF cannot reenter or use the den during Covered Activities. If an individual SJKF does not vacate a den within the proposed construction footprint within a reasonable timeframe, Permittees shall contact the Service and CDFW and get written guidance (email will suffice) from both agencies prior to proceeding with den excavation. Each Developer pursuing a Permittee Authorization shall bear the costs of

implementing the SJKF den excavation requirements.

7.7. SJKF Detection on Construction Site. Permittees shall condition all Permittee Authorizations to require notification to the appropriate Permittee and CDFW within 24 hours in the event that a SJKF is observed denning or utilizing structures or materials within an active construction footprint. In addition, a minimum 100 foot no disturbance buffer from the area being used by SJKF as a denning site shall be implemented until Conditions of Approval7.5 or 7.6 can be implemented by a Qualified Wildlife Biologist funded by the Developer.

7.8. TKR Trapping and Salvage. If the Biological Clearance Survey prepared pursuant to Condition of Approval7.1 identifies TKR burrows within the proposed construction footprint of proposed Developer projects within the "Conceptual Southwest Focus Area" as identified in Figure 4 of the MBHCP, Permittees shall not issue a Permittee Authorization until a TKR Qualified Biologist (see Condition of Approval 5.11) conducts a minimum of five (5) consecutive nights of live small mammal trapping, with high trap densities focused at and around TKR burrows, runways, seed caches, and dust baths. How and where captured animals will be held and the final release location and specifics shall be in accordance a CDFW-approved TKR Relocation Plan prepared in accordance with Condition of Approval 6.8. The Developer for which the Biological Clearance Survey was conducted shall bear the costs of TKR trapping, salvage, and relocation.

7.9. TKR Burrow Excavation. Following live trapping activities conducted in accordance with Condition of Approval 7.8, any potential TKR burrows (e.g., any kangaroo rat burrows) present within the development footprint shall be fully excavated by hand by the TKR Qualified Biologist. The TKR Qualified Biologist shall relocate any TKR encountered in the excavated burrows to the release site(s) identified in the CDFW-approved TKR Relocation Plan prepared in accordance with Condition of Approval 6.8. The TKR Qualified Biologist shall also collect and move dormant or torpid TKR encountered to an artificial burrow installed at the release site(s) identified in the CDFW-approved TKR Relocation Plan prepared in accordance with Condition of Approval 6.8.

7.10. TKR Record of Handling. TKR Qualified Biologist(s) shall maintain a record of all TKR handled. This information shall include for each animal: (1) the locations (Global Positioning System (GPS) coordinates and maps) and time of capture and/or observation as well as release; (2) sex; (3) approximate age (adult/juvenile); (4) weight; (5) general condition and health, noting all visible conditions including gait and behavior, diarrhea, emaciation, salivation, hair loss, ectoparasites, and injuries; and (6) ambient temperature when handled and released. A Relocation Summary shall be prepared by the TKR Qualified Biologist and submitted by the Developer to the Permittees and CDFW as part of the information accompanying the "Notice of Grading Start" described in Condition of Approval7.3.

7.11. Bakersfield Cactus Avoidance. If the Biological Clearance Survey prepared pursuant to Condition of Approval 7.1 identifies Bakersfield cactus within the proposed construction footprint of a proposed Developer project, Permittees shall not issue a Permittee Authorization until the Developer demonstrates that all Bakersfield cacti shall be avoided by a minimum of 25 feet, unless

Condition of Approval 7.13 is implemented. This avoidance distance may be lessened on a specific case-by-case basis if CDFW concurs in writing that a modified distance proposed by a Bakersfield Cactus Qualified Botanist (Condition of Approval 5.12) is sufficient to avoid direct or indirect take of Bakersfield cactus.

7.12. Bakersfield Cactus Avoidance Fencing. Sturdy, highly visible, plastic construction avoidance fencing (or comparable fencing approved in writing by the CDFW Regional Representative) shall be installed around Bakersfield cactus avoidance areas (Condition of Approval7.11) and located in accordance with direction from the Bakersfield Cactus Qualified Botanist. Fencing shall be securely staked and installed in a durable manner that would be reasonably expected to withstand wind and weather events and last at least through the construction period. Fencing shall be inspected at least twice weekly during the construction period. Fencing shall be removed upon completion of construction of the Developer project.

7.13. Bakersfield Cactus Translocation. The Bakersfield Cactus Qualified Botanist shall translocate Bakersfield cactus, which cannot be avoided by construction activities in accordance with Condition of Approval 7.11, to the nearest suitable habitat specifically identified in the Bakersfield Cactus Translocation Plan (Condition of Approval6.9) prior to disturbance of any Bakersfield cacti. Translocated cacti shall be planted in habitat that Permittees have proven to be suitable for Bakersfield cactus by demonstrating that Bakersfield cactus occurs naturally at the same general location and the plantable area has suitable soils, vegetation, and other aspects to support a self-sustaining population of Bakersfield cactus. The density of plantings shall not exceed densities that occur naturally in the vicinity of the Project. Pads shall be taken from the translocated clumps of cacti and planted in the receiver sites to increase the number of plants.

7.14. Covered Species Injury. If a Covered Species is injured as a result of Project related activities, a Qualified Wildlife Biologist shall immediately take it to a CDFW approved wildlife rehabilitation or veterinary facility that routinely evaluates and treats the injured Covered Species. Permittees shall identify the potential facilities before starting Covered Activities. The Developer or appropriate Permittee shall bear any costs associated with the care or treatment of such injured Covered Species. The Permittee with jurisdiction shall notify CDFW of the injury to the Covered Species immediately by telephone and e-mail followed by a written incident report. Notification shall include the date, time, location, and circumstances of the incident and the name of the facility where the animal was taken.

7.15. Daily Entrapment Inspections. Permittee Authorizations shall require that workers on Developer projects shall inspect all open holes, sumps, and trenches within the development footprint covered by the Permittee Authorization at the beginning, middle, and end of each day for trapped Covered Species. All trenches, holes, sumps, and other excavations with sidewalls steeper than a 1:1 (45 degree) slope and that are between two- and eight feet deep shall be covered when workers or equipment are not actively working in the excavation, which includes cessation of work overnight, or shall have an escape ramp of earth or a non-slip material with a less than 1:1 (45 degree) slope. All trenches, holes, and other excavations with sidewalls steeper than a 1:1 (45

degree) slope and greater than eight feet deep shall be covered when workers or equipment are not actively working in the excavation and at the end of each work day. Trenches, holes, sumps, or other excavations that are covered long term shall be inspected at the beginning of each working day to ensure inadvertent entrapment has not occurred. If any worker discovers that Covered Species have become trapped, the Developer and their workers shall cease all Covered Activities in the vicinity and notify Permittees immediately, whom shall in turn notify CDFW immediately. Developer and its workers shall allow the Covered Species to escape unimpeded if possible before Covered Activities are allowed to continue, or, alternatively, a Qualified Wildlife Biologist shall capture and relocate the animal, in accordance with CDFW direction regarding the final disposition of the animal. The Developer for which the Biological Clearance Survey was conducted shall bear the costs of Covered Species salvage.

7.16. Materials Inspection. Permittee Authorizations shall require that workers on Developer projects thoroughly inspect for Covered Species in all construction pipe, culverts, or similar structures with a diameter of 7.6 centimeters (three inches) or greater that are stored for one or more overnight periods before the structure is subsequently moved, buried, or capped. If during inspection one of these animals is discovered inside the structure, workers shall notify Permittees and allow the Covered Species to safely escape that section of the structure before moving and utilizing the structure. In the event that Permittees are notified of such an incident, Permittees shall notify CDFW in writing (via email will suffice) within 48 hours of the incident.

7.17. Equipment Inspection. Permittee Authorizations shall require that workers shall inspect for Covered Species under vehicles and equipment before the vehicles and equipment are moved. If a Covered Species is present, the worker shall wait for the Covered Species to move unimpeded to a safe location. Alternatively, the Developer shall contact a Qualified Wildlife Biologist to determine if they can safely move the Covered Species out of harm's way in compliance with this ITP.

7.18. Sump Surveys. Permittees shall be allowed to train personnel/staff to inspect work areas and buffer zones prior to Operations and Maintenance (O&M) activities in sumps or other similar features to make determinations if there are any potential (as defined in the Service 2011 "Standardized recommendations for protection of the San Joaquin kit fox prior to or during ground disturbance") den sites. If potential den sites are observed, a Qualified Wildlife Biologist shall conduct a SJKF den survey in accordance with Condition of Approval7.4 prior to any O&M activities being conducted in sumps or other similar features within the Project Area by either Permittee. If a known, active, or natal SJKF den is discovered during the SJKF Den Survey, the O&M work shall not proceed unless the Public Works Department (or other Permittee department conducting the O&M work) demonstrates to the appropriate Designated Representative that either: (1) den avoidance will occur as per Condition of Approval7.5; or (2) den excavation has occurred in accordance with Condition of Approval 7.6.