

APPENDIX C-1
BIOLOGICAL TECHNICAL LETTER REPORT



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New River Improvement Project Biological Technical Letter Report

Calexico, Imperial County, California

1.0 INTRODUCTION

Blackhawk Environmental (Blackhawk) was contracted by Michael Baker International (Michael Baker) for the proposed New River Improvement Project (Project). Blackhawk was tasked with conducting a literature review, an onsite reconnaissance level biological survey/special-status species habitat assessment and providing a biological technical letter report (BTLR) to incorporate the results. The Survey Area is comprised of two mesas separated by a ravine through which the New River conveys flows. The Survey Area includes a mix of developed, disturbed and natural areas, and includes the Calexico International Airport at 801 W 2nd St., Calexico, CA 92231. The 373.38-acre Survey Area is on the *Heber, California 7.5'* US Geological Service (USGS) quadrangle, sections 14-15, township 17 south and range 14 east (Attachment A, Figure 1).

Prior to Project construction, as required by the California Environmental Quality Act (CEQA) and the National Environmental Policy Act (NEPA), the State of California and the United States must first determine if special-status plant or wildlife species occur or have the potential to occur within or adjacent to the Survey Area. This BTLR describes the results of the literature review, onsite reconnaissance-level biological survey and special-status species habitat assessment on the Survey Area. The habitat assessment focused on determining the presence or potential for occurrence of special-status biological resources required under the CEQA and NEPA review processes. This BTLR was prepared to provide all biological findings of these surveys for the Project per CEQA and NEPA standards.

2.0 PROJECT DESCRIPTION AND SETTING

The State of California's Clean Water Act Section 303(d) lists the New River as impaired by numerous constituents and is a State of California priority for cleanup purposes. To address point and nonpoint sources of pollution from the New River, a New River Improvement Project Strategic Plan (Plan) was issued. The Plan identifies recommendations to address public health threats in the Calexico area of the New River. Critical infrastructure components of these recommendations include the following:

- A trash screen near the International Boundary to remove trash from the New River prior to the diversion structure. The trash screen will be located directly upstream from the New River Bypass Encasement diversion structure and shall be automated, self-cleaning and capable of removing one ton of trash per day. The trash screen shall not interfere with the New River flows and will be an integral part of the diversion structure design.
- A bypass encasement to divert the New River into an underground conveyance facility near Second Street and discharge back to the New River east of the All-American Canal New River Bypass Encasement Infrastructure. The diversion structure will commence downstream from the international boundary with Mexico, divert flow into the river bypass encasement, and discharge the flow back into the New River, east of the All-American Canal. The river bypass encasement will be designed to capture an average flow of 160 cubic feet per second (cfs). Flows greater than 160 cfs will continue to be carried in the New River.
- A pump back system to use treated wastewater from the City of Calexico Wastewater Treatment Plant to supplant diverted river flow within the existing river alignment downstream of the river diversion structure, New River Pump Back System (NRPBS). The NRPBS shall be capable of pumping up to 5.0 million gallons per day (MGD) of secondary treated and disinfected wastewater. The NRPBS will be located within the Calexico Wastewater Treatment Plant and will convey, on average, approximately 2.25 MGD (3.5 cfs) back to the New River, near (downstream of) the New River Bypass Encasement diversion structure.

A map of the approved Project alignment and Survey Area is included in Attachment A, Figure 2.

The Project is in the central basin of the Colorado Desert within the Salton Trough (aka Salton Sink), a northwestern landward continuation of the Gulf of California rift that is surrounded by mountains, including the Chocolate Mountains to the east, except on the south side where a barrier formed by the Colorado River Delta separates the Salton Trough from the Gulf of California (Waters 1981). Much of the Salton Trough lies below sea level, and at its lowest elevation in Imperial County lies the Salton Sea, a 376-square mile saltwater lake. The Trough extends 140 miles northwest from the head of the Gulf of California and ranges in width from a few miles at its northwest end to 70 miles at the United States-Mexico border. It was formed by a gradual sinking of the land concurrent with the uplift of the surrounding mountains during the Miocene, Pliocene and Pleistocene eras (Dibble 1954).

The Colorado Desert is a hot, dry desert region that consists of low valleys and high mountainous areas. The average annual rainfall and temperature vary with elevation. Throughout much of the lower region, rainfall is approximately 2 inches per year; but some locations receive as little as 1 inch per year, while others receive as much as 8 to 10 inches of precipitation per year. The marked

elevation changes in the area also reflect variations in temperature. In most of the Colorado Desert, summer high temperatures range between 100° and 120° F, while in the mountainous regions, summer high temperatures tend to hover around 90° F. The winters are windier and more variable in temperature, but rarely reach below freezing (University of California, Santa Barbara 2015).

The vegetation reflects the arid environment, and variations in rainfall and temperature result in regional differences in vegetation. Within the Colorado Desert, the lack of frost enables succulents and other frost-sensitive plants to thrive, such as cholla, ocotillo, agave, barrel cactus and rabbit brush. Creosote bush scrub (including ocotillo and cholla cactus) is the dominant plant cover type throughout the lower elevations of the Colorado and Mojave Deserts, which forms a homogeneous cover over vast areas and surrounds riparian plant communities located in large washes and other locations where water is available. Plant communities around springs, marshes and streambeds include tules, cattails and various grasses. In the washes, mesquite, saltbush, desert ironwood, smoke tree and palo verde are found. In the higher elevations, the creosote bush community gives way to the black bush community, including yuccas and agaves. Fault lines, such as those located east of the Salton Sea, and the high western mountains create many springs that support California fan palm oases, reflecting characteristics of a wetter, past climate (University of California, Santa Barbara 2015).

In addition to the natural environment of the Trough, Colorado River water has been historically diverted to the Imperial Valley through a large network of canals, ditches and troughs to support hundreds of thousands of acres of agriculture. Since then, the Imperial Valley has been among the nation's most productive agricultural regions. Due to its year-round warm to hot climate and its expansive, engineered water distribution system, the Imperial Valley agricultural region produces a wide variety of crops on a year-round basis for the consumption of both humans and livestock.

Locally common fauna consists of coyotes, jackrabbits, desert cottontails, ground squirrels, wood rats and various small rodents, lizards and snakes. Large game animals, such as bighorn sheep and mule deer, are sparse in most places. Many special-status wildlife species are known to occur in the Project vicinity at various times of the year. This BTLR details both common and special-status plant and wildlife species found on and adjacent to the Survey Area, as well as discusses the potential for several other special-status species to occur on or adjacent to the Survey Area.

3.0 REGULATORY SETTING

The proposed Project is subject to a host of State and federal regulations associated with a number of regulatory programs. These programs often overlap and were developed to protect natural resources, including: State and federally listed plants and animals; aquatic resources such as rivers, creeks, ephemeral streambeds, wetlands and riparian areas; other special-status species that are not listed as threatened or endangered by the State or federal governments; and other special-status vegetation communities.

3.1 State and/or Federally Listed Plant and Wildlife Species

3.1.1 State of California Endangered Species Act

California's Endangered Species Act (CESA) defines an endangered species as "a native species or subspecies of a bird, mammal, fish, amphibian, reptile, or plant that is in danger of becoming extinct throughout all, or a significant portion, of its range due to one or more causes, including loss of habitat, change in habitat, overexploitation, predation, competition, or disease." The State defines a threatened species as "a native species or subspecies of a bird, mammal, fish, amphibian, reptile, or plant that, although not presently threatened with extinction, is likely to become an Endangered species in the foreseeable future in the absence of the special protection and management efforts required by this chapter. Any animal determined by the commission as rare on or before January 1, 1985 is a threatened species." Candidate species are defined as "a native species or subspecies of a bird, mammal, fish, amphibian, reptile, or plant that the commission has formally noticed as being under review by the department for addition to either the list of endangered species or the list of threatened species, or a species for which the commission has published a notice of proposed regulation to add the species to either list." Candidate species may be afforded temporary protection as though they were already listed as threatened or endangered at the discretion of the Fish and Game Commission. Unlike the Federal Endangered Species Act (FESA), CESA does not list invertebrate species.

Article 3, Sections 2080 through 2085, of the CESA addresses the taking of threatened, endangered, or candidate species by stating "No person shall import into this state, export out of this state, or take, possess, purchase, or sell within this state, any species, or any part or product thereof, that the commission determines to be an endangered species or a threatened species, or attempt any of those acts, except as otherwise provided." Under the CESA, "take" is defined as "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill." Exceptions authorized by the state to allow "take" require permits or memoranda of understanding and can be authorized for endangered species, threatened species, or candidate species for scientific, educational, or management purposes and for take incidental to otherwise lawful activities. Sections 1901 and 1913 of the California Fish and Game Code provide that notification is required prior to disturbance.

3.1.2 Federal Endangered Species Act

The FESA of 1973 defines an endangered species as "any species that is in danger of extinction throughout all or a significant portion of its range." A threatened species is defined as "any species that is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range." Under provisions of Section 9(a)(1)(B) of the FESA it is unlawful to

“take” any listed species. “Take” is defined in Section 3(18) of FESA: “...harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct.” Further, the United States Fish and Wildlife Service (USFWS), through regulation, has interpreted the terms “harm” and “harass” to include certain types of habitat modification that result in injury to, or death of species as forms of “take.” These interpretations, however, are generally considered and applied on a case-by-case basis and often vary from species to species. In a case where a property owner seeks permission from a Federal agency for an action that could affect a federally listed plant and animal species, the property owner and agency are required to consult with USFWS. Section 9(a)(2)(b) of the FESA addresses the protections afforded to listed plants.

3.1.3 State and Federal Take Authorizations for Listed Species

Federal or state authorizations of impacts to or incidental take of a listed species by a private individual or other private entity would be granted in one of the following ways:

- Section 7 of the FESA stipulates that any federal action that may affect a species listed as threatened or endangered requires a formal consultation with USFWS to ensure that the action is not likely to jeopardize the continued existence of the listed species or result in destruction or adverse modification of designated critical habitat. 16 U.S.C. 1536(a)(2).
- In 1982, the FESA was amended to give private landowners the ability to develop Habitat Conservation Plans (HCP) pursuant to Section 10(a) of the FESA. Upon development of an HCP, the USFWS can issue incidental take permits for listed species where the HCP specifies at minimum, the following: (1) the level of impact that will result from the taking, (2) steps that will minimize and mitigate the impacts, (3) funding necessary to implement the plan, (4) alternative actions to the taking considered by the applicant and the reasons why such alternatives were not chosen, and (5) such other measures that the Secretary of the Interior may require as being necessary or appropriate for the plan.
- Sections 2090-2097 of the California Endangered Species Act (CESA) require that the state lead agency consult with CDFW on projects with potential impacts on state-listed species. These provisions also require CDFW to coordinate consultations with USFWS for actions involving federally listed as well as state-listed species. In certain circumstances, Section 2080.1 of the California Fish and Game Code allows CDFW to adopt the federal incidental take statement or the 10(a) permit as its own based on its findings that the federal permit adequately protects the species under state law.

3.2 National Environmental Policy Act

The National Environmental Policy Act (NEPA) was signed into law on January 1, 1970. NEPA is a comprehensive environmental law that promotes the enhancement of the environment for many projects with a federal nexus. The President's Council on Environmental Quality (CEQ) was established to oversee NEPA. NEPA requires the preparation of environmental assessments (EAs) or environmental impact statements (EISs) for federal agency directives. These reports state the potential environmental effects of proposed federal agency actions.

NEPA has been implemented on many major projects, including federal, state and local levels that include federal funding. NEPA also applies for work conducted by federal entities or if permits are issued by a federal agency. Over time, a number of court decisions have expanded the requirement for NEPA-related environmental studies to include actions where permits issued by a federal agency are required regardless of whether federal funds are spent to implement the action, to include actions that are entirely funded and managed by private-sector entities where a federal permit is required. This legal interpretation is based on the rationale that obtaining a permit from a federal agency requires one or more federal employees (or contractors in some instances) to process and approve a permit application, inherently resulting in federal funds being expended to support the proposed action, even if no federal funds are directly allocated to finance the particular action.

The stated goal of NEPA is as follows:

"To declare national policy which will encourage productive and enjoyable harmony between man and his environment; to promote efforts which will prevent or eliminate damage to the environment and biosphere and stimulate the health and welfare of man; to enrich the understanding of the ecological systems and natural resources important to the Nation; and to establish a Council on Environmental Quality."

NEPA contains three sections: the first section outlines national environmental policies and goals; the second establishes provisions for federal agencies to enforce such policies and goals; and the third establishes the CEQ in the Executive Office of the President. Within these three sections, the purpose of NEPA is to ensure that environmental factors are weighted equally when compared to other factors in the decision-making process undertaken by federal agencies and to establish a national environmental policy.

The NEPA process is the evaluation of the relevant environmental effects of a federal project or action mandated by NEPA. This process begins when an agency develops a proposal addressing a need to take action. If it is determined that the proposed action is covered under NEPA, there are three levels of analysis that a federal agency must undertake to comply with the law. These three levels include the preparation of a Categorical Exclusion (CatEx); an environmental assessment (EA); and either a Finding of No Significant Impact (FONSI), or, alternatively, the preparation and drafting of an environmental impact statement (EIS). These documents assess Project-related impacts, analyze alternatives, and address avoidance, minimalization and mitigation measures to reduce impacts to less than significant levels.

3.3 California Environmental Quality Act

Shortly after the United States federal government passed the National Environmental Policy Act (NEPA), the California Environmental Quality Act (CEQA) was passed in 1970 to institute a statewide policy of environmental protection. CEQA does not directly regulate land uses, but instead requires state and local agencies within California to follow a protocol of analysis and public disclosure of environmental impacts of proposed projects and adopt all feasible measures to mitigate those impacts. CEQA makes environmental protection a mandatory part of every California state and local agency's decision-making process.

3.3.1 Thresholds of Significance

Environmental impacts relative to biological resources are assessed using impact significance threshold criteria, which reflect the policy statement contained in CEQA, Section 21001(c) of the California Public Resources Code. Accordingly, the State Legislature has established it to be the policy of the State of California to:

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

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

“The project has the potential to: substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or wildlife community, substantially reduce the number or restrict the range of an endangered, rare, or threatened species, ...”

Therefore, for the purpose of this analysis, impacts to biological resources are considered potentially significant (before considering offsetting mitigation measures) if one or more of the following criteria discussed below would result from implementation of the proposed Project.

3.3.2 Criteria for Determining Significance Pursuant to CEQA

Attachment G of the 1998 State CEQA guidelines indicate that a project may be deemed to have a significant effect on the environment if the project is likely to:

a) *Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service.*

b) *Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service.*

- c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.
- d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species, or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites.
- e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.
- f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

3.3.3 CEQA Guidelines Section 15380

The CEQA requires evaluation of a project's impacts on biological resources and provides guidelines and thresholds for use by lead agencies for evaluating the significance of proposed impacts. Sections 5.1.1 and 5.2.2 below set forth these thresholds and guidelines. Furthermore, pursuant to the CEQA Guidelines Section 15380, CEQA provides protection for non-listed species that could potentially meet the criteria for state listing. For plants, CDFW assigns California Rare Plant Ranks (CRPR) to species categorized as List 1A, 1B, or 2 of the California Native Plant Society (CNPS) *Inventory of Rare and Endangered Plants in California* may meet the criteria for listing and should be considered under CEQA. CDFW also recommends protection of plants, which are regionally important, such as locally rare species, disjunctive populations of more common plants, or plants on the CNPS Lists 3 or 4.

3.4 Special Status Species Designations

3.4.1 Federally-Designated Special-Status Species

Some years ago, the USFWS instituted changes in the listing status of candidate species. Former C1 (candidate) species are now referred to simply as candidate species and represent the only candidates for listing. All references to federally protected species in this report (whether listed, proposed for listing, or candidate) include the most current published status or candidate category to which each species has been assigned by USFWS. Additionally, the USFWS *Birds of Conservation Concern 2008* report was published to identify the migratory and non-migratory bird species (beyond those already federally listed) that represent the highest conservation priorities for USFWS.

For this report, the following acronyms are used for federal special-status species:

- **FE:** Federally listed as Endangered
- **FT:** Federally listed as Threatened
- **FPE:** Federally proposed for listing as Endangered
- **FPT:** Federally proposed for listing as Threatened
- **FC:** Federal Candidate species (Former Category 1 candidates)
- **BCC:** USFWS Birds of Conservation Concern

3.4.2 State-Designated Special-Status Species

Some mammals and birds are protected by the state as Fully Protected (FP) Mammals or Fully Protected Birds, as described in the California Fish and Game Code, Sections 4700 and 3511, respectively. California Species of Special Concern (SSC) are species designated as vulnerable to extinction due to declining population levels, limited ranges, and/or continuing threats. This list is primarily a working document for the CDFW's California Natural Diversity Database (CNDDDB) project. Informally listed taxa are not protected but warrant consideration in the preparation of biotic assessments. For some species, the CNDDDB is only concerned with specific portions of the life history, such as roosts, rookeries, or nest sites.

For this report the following acronyms are used for State special-status species:

- **SE:** State-listed as Endangered
- **ST:** State-listed as Threatened
- **SCE:** State candidate for listing as Endangered
- **SCT:** State candidate for listing as Threatened
- **FP:** State Fully Protected
- **SSC:** Species of Special Concern

3.4.3 California Rare Plant Rank

The CNPS is a private plant conservation organization dedicated to the monitoring and protection of special-status species in California. The California Native Plant Society's *California Native Plant Society's Inventory of Rare and Endangered Plants of California* separates plants of interest into five categories. CNPS has compiled an inventory comprised of the information focusing on geographic distribution and qualitative characterization of Rare, Threatened, or Endangered vascular plant species of California. The list serves as the candidate list for listing as threatened and endangered by CDFW.

3.5 Additional Applicable State and Federal Regulations

Each of the following regulations bears some applicability toward assessing the natural resources of the Survey Area and any effects that construction and long-term operations and maintenance activities may have upon such resources. These are included for informational and referential purposes only.

3.5.1 Bald and Golden Eagle Protection Act

The Bald and Golden Eagle Protection Act (PL 95-616; 16 USC §§ 668 et seq.) provides for protection of the bald and golden eagles by prohibiting taking, possession, and commerce in the birds.

3.5.2 Clean Water Act

The Clean Water Act (CWA) regulates the discharge of pollutants to waters of the United States to protect water quality and the beneficial uses of these waters. Through a permit application process, CWA Section 404 regulates dredge and fill discharges to waters of the United States.

3.5.3 Fish and Wildlife Conservation Act of 1980

The Fish and Wildlife Conservation Act of 1980 (PL 96-366; 16 USC §§2901 et seq.) provides for conservation, protection, restoration and propagation of certain species, including migratory birds threatened with extinction.

3.5.4 Migratory Bird Treaty Act

The Migratory Bird Treaty Act (PL 65-186, as amended; 16 USC §§ 703 et seq.) protects most birds, whether or not they migrate. Birds, their nests, eggs, parts, or products may not be killed or possessed. Game birds are listed and protected except where specific seasons, bag limits, and other features govern their hunting. Exceptions are made for some agricultural pests, which require a USFWS permit (yellow-headed, red-winged, bi-colored red-winged, tri-colored red-winged, Rusty and Brewer's blackbirds, cowbirds, all grackles, crows and magpies). Some other birds that injure crops in California may be taken under the authority of the County Agricultural Commissioner (meadowlarks, horned larks, golden-crowned sparrows, white- and other crowned sparrows, goldfinches, house finches, acorn woodpeckers, Lewis' woodpeckers and flickers). Permits may be granted for various non-commercial activities involving migratory birds and some commercial activities involving captive-bred migratory birds.

3.5.5 California Fish & Game Codes 3500 Series

California Fish & Game Codes 3500, 3503, 3503.5, 3505, 3511 and 3513 are State regulations that cover resident and non-resident game birds, protected bird nests, protected raptor nests, egrets, ospreys, Fully Protected bird species, and take considerations for Migratory Bird Treaty Act birds.

- **Code 3500:** "(a) Resident game birds are as follows:
 - (1) Doves of the genus *Streptopelia*, including, but not limited to, spotted doves, ringed turtledoves, and Eurasian collared-doves.
 - (2) California quail and varieties thereof.
 - (3) Gambel's or desert quail.
 - (4) Mountain quail and varieties thereof.
 - (5) Sooty or blue grouse and varieties thereof.
 - (6) Ruffed grouse.
 - (7) Sage hens or sage grouse.
 - (8) Hungarian partridges.
 - (9) Red-legged partridges including the chukar and other varieties.
 - (10) Ring-necked pheasants and varieties thereof.
 - (11) Wild turkeys of the order *Galliformes*.
- (b) Migratory game birds are as follows:
 - (1) Ducks and geese.
 - (2) Coots and gallinules.
 - (3) Jacksnipe.
 - (4) Western mourning doves.
 - (5) White-winged doves.
 - (6) Band-tailed pigeons.
- (c) References in this code to "game birds" means both resident game birds and

migratory game birds."

- **Code 3503:** "It is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird, except as otherwise provided by this code or any regulation made pursuant thereto."
- **Code 3503.5:** "It is unlawful to take, possess, or destroy any birds in the orders *Falconiformes* or *Strigiformes* (birds-of-prey) or to take, possess, or destroy the nest or eggs of any such bird except as otherwise provided by this code or any regulation adopted pursuant thereto."
- **Code 3505:** "It is unlawful to take, sell, or purchase any egret or egret, osprey, bird of paradise, goura, numidi, or any part of such a bird."
- **Code 3511:** "(a) (1) Except as provided in Section 2081.7 or 2835, fully protected birds or parts thereof may not be taken or possessed at any time. No provision of this code or any other law shall be construed to authorize the issuance of permits or licenses to take any fully protected bird, and no permits or licenses heretofore issued shall have any force or effect for that purpose. However, the department may authorize the taking of those species for necessary scientific research, including efforts to recover fully protected, threatened, or endangered species, and may authorize the live capture and relocation of those species pursuant to a permit for the protection of livestock. Prior to authorizing the take of any of those species, the department shall make an effort to notify all affected and interested parties to solicit information and comments on the proposed authorization. The notification shall be published in the California Regulatory Notice Register and be made available to each person who has notified the department, in writing, of his or her interest in fully protected species and who has provided an e-mail address, if available, or postal address to the department. Affected and interested parties shall have 30 days after notification is published in the California Regulatory Notice Register to provide any relevant information and comments on the proposed authorization.

(2) As used in this subdivision, "scientific research" does not include any actions taken as part of specified mitigation for a project, as defined in Section 21065 of the Public Resources Code.

(3) Legally imported fully protected birds or parts thereof may be possessed under a permit issued by the department.

(b) The following are fully protected birds:

- (1) American peregrine falcon (*Falco peregrinus anatum*).
- (2) Brown pelican.
- (3) California black rail (*Laterallus jamaicensis coturniculus*).
- (4) California clapper rail (*Rallus longirostris obsoletus*).
- (5) California condor (*Gymnogyps californianus*).
- (6) California least tern (*Sterna albifrons browni*).
- (7) Golden eagle.
- (8) Greater sandhill crane (*Grus canadensis tabida*).
- (9) Light-footed clapper rail (*Rallus longirostris levipes*).
- (10) Southern bald eagle (*Haliaeetus leucocephalus leucocephalus*).
- (11) Trumpeter swan (*Cygnus buccinator*).

(12) White-tailed kite (*Elanus leucurus*).

(13) Yuma clapper rail (*Rallus longirostris yumanensis*)."

- **Code 3513:** "It is unlawful to take or possess any migratory nongame bird as designated in the Migratory Bird Treaty Act or any part of such migratory nongame bird except as provided by rules and regulations adopted by the Secretary of the Interior under provisions of the Migratory Treaty Act."

3.5.6 Native Plant Protection Act

The Native Plant Protection Act (NPPA) was enacted in 1977 and allows the California Fish and Game Commission to designate plants as rare or endangered. There are 64 species, subspecies, and varieties of plants that are protected as rare under the NPPA. The NPPA prohibits take of endangered or rare native plants, but includes some exceptions for agricultural and nursery operations, emergencies, and/or with proper notification to the CDFW for vegetation removal from canals, roads, and other sites, changes in land use, and in certain other situations.

3.5.7 Porter-Cologne Water Quality Control Act

The Porter-Cologne Water Quality Control Act (California Water Code §§13000 et seq.) is the State's primary water law. It gives the State Water Resources Control Board (SWRCB) and the nine regional water quality control boards substantial authority to regulate water use of surface and sub-surface waters.

3.6 Local Regulations

3.6.1 City of Calexico, California General Plan

The objectives of the City of Calexico, California General Plan Conservation/Open Space Element include identification, protection, and improvement of significant ecological and biological resources in and around the City of Calexico by:

- 1) Supporting regional and sub-regional efforts to conserve ecological and biological resources in the City and surrounding areas.
- 2) Supporting efforts to integrate natural wetlands treatment systems as part of the New River Improvement Project.
- 3) Requiring projects of one acre or more involving alteration or development of undisturbed land be required to submit a biological survey conducted by a qualified biologist to the City of Calexico. A focused biological study may be required if habitat that could potentially support a listed or threatened species exists on the site.

4.0 METHODS

Initial methods described below focused on determination of potential for occurrence of special-status plant and wildlife species. Species were considered to be special-status, and therefore subject to analysis in this section, if they meet one or more of the following criteria:

- Plant and animal species listed as endangered (FE), threatened (FT), or candidates (FC) for listing under the Federal Endangered Species Act (FESA);
- Plant and animal species listed as endangered (SE), threatened (ST), or candidates (SC) for listing under the California Endangered Species Act (CESA);
- Animals designated as Fully Protected Species (FP), as defined in California Fish and Game Code Sections 3511, 4700, 5050, and 5515;
- Animal species designated as Species of Special Concern (SSC) by the CDFW;
- Bat species designated as High Priority (H) by the Western Bat Working Group;
- Plants that are state-listed as Rare¹; or
- Plant species ranked by the California Native Plant Society (CNPS) as having a California Rare Plant Rank (CRPR) of 1 or 2.²

Special-status natural communities are communities that have a limited distribution and are often vulnerable to the environmental effects of projects. These communities may or may not contain special-status species or their habitats. For purposes of this assessment, special-status natural communities are considered to be any of the following:

- Vegetation communities listed in the California Natural Diversity Database (CNDDDB);
- Communities listed in the Natural Communities List with a rarity rank of S1 (critically imperiled), S2 (imperiled), or S3 (vulnerable); or
- Imperial County General Plan (ICGP) Sensitive Wildlife Areas

4.1 Literature Review

Blackhawk Environmental conducted a database records search centered on the Calexico International Airport within the USGS 7.5' *Heber, California* quadrangle, and also included the *Calexico, California* quadrangle. Overall, a five-mile radius surrounding the Survey Area was reviewed for special-status biological resources. The CDFW California Natural Diversity Database (CNDDDB) RareFind 5 (CDFW 2018), the USFWS Species Occurrence Database (USFWS 2018), and the California Native Plant Society's (CNPS) Electronic Inventory (EI) of Rare and Endangered Vascular Plants of California (CNPS 2018) were reviewed for special-status plant and wildlife species records in the quadrangles containing and surrounding the Survey Area. CNDDDB contains records of reported occurrences of federal- and state-listed species, proposed endangered or threatened species, Federal Birds of Conservation Concern, California Species of Special Concern (SSC), or otherwise special-status

¹ Plants that were previously state listed as "Rare" have been re-designated as state threatened.

² Under the CEQA review process, only CRPR 1 and 2 species are considered, as these are the only CNPS species that meet CEQA's definition of "rare" or "endangered." Impacts to List 3 and 4 species do not meet CEQA's definition of "rare" or "endangered."

species or communities that may occur within or in the vicinity of a project area (CNDDDB accessed April 11, 2018). The United States Department of Agriculture (USDA) Web Soil Survey was used to review soil types documented to occur within the Survey Area. Available drainage feature and wetland data was reviewed from the National Wetlands Inventory (NWI) database as well as through observing aerial imagery. This database and literature review were used to provide details on special-status biological species and/or aquatic resources that have a potential to occur within and/or adjacent to the Survey Area, prior to conducting the special-status species habitat assessment.

Utilizing the background data described above, a field survey was conducted to assess the Survey Area for its existing conditions and its capacity to potentially harbor special-status biological resources identified in the literature review (target species).

4.2 Habitat Assessment Survey

On April 23, 2018, Blackhawk Environmental biologists Kris Alberts, Seth Reimers and Andrew Steyers and Michael Baker International biologist Dan Rosie performed a pedestrian survey of the entire Survey Area. Methods included the biologists walking meandering transects and pausing where appropriate at select vantage points to provide full visual coverage. During the field survey, all plant and wildlife species observed or detected were recorded in field notebooks. Binoculars were used as-needed to identify wildlife species. Plant species observed were identified to species level when feasible according to the nomenclature in *The Jepson Manual: Vascular Plants of California Edition 2* (Baldwin et al. 2012). Vegetation communities were described according to dominant plant(s) species and annotated on high-resolution aerial photographs of the Survey Area. The habitat assessment focused on the potentials for special-status plant and wildlife species to be found on and/or adjacent to the Survey Area, but it did not include other focused or protocol-level surveys for any special-status plant or wildlife species.

Representative photos of the Survey Area, habitats and existing site conditions are included in Attachment B. Habitat assessment conditions are presented below in Table 1.

Table 1. Survey Conditions

	Time	Temperature	Wind Speed	Cloud Cover	Precipitation
Start	0700	72°F	1-3 mph	0%	None
End	1330	99°F	1-4 mph	20%	None

Following the habitat assessment, potentials for special-status species to occur were evaluated based on proximity, recency and abundance of known occurrences, availability of suitable habitats, historic distributions of the species and connectivity to known populations. Potentials for occurrence were generally evaluated based on the following criteria:

- **Present** – The species was observed within the Survey Area during the survey effort.
- **High** – Historic records indicate that the species has been known to occur within the regional vicinity of the Project (5 miles), and suitable habitat occurs onsite.
- **Moderate** – Historic records indicate that the species has been known to occur within the vicinity of the Project, but low-quality suitable habitat occurs onsite, or; no historic records

occur within the vicinity of the Project, but the Survey Area occurs within the historic range of the species, and moderate to high-quality habitat occurs within or adjacent to the Survey Area.

- **Low** – Historic records indicate that the species has not been known to widely occupy the regional vicinity of the Project, and low-quality habitat for the species exists within the Survey Area.
- **Presumed Absent** – The species is restricted to habitats not occurring within or adjacent to the Survey Area, or it is considered extirpated from the vicinity of the Project.

5.0 RESULTS

5.1 Literature Review Results

The literature review resulted in a total of seven special-status wildlife species and four special-status plant species known to occur within five miles of the Project (Attachment A, Figure 3). Of these, none were state- or federally-listed species. The resulting special-status species lists are included in Tables 3 and 4 below.

Two areas classified as wetlands were identified within the Survey Area in a search of the NWI database; the New River riparian area and the treatment basins at the wastewater treatment plant.

No special-status natural communities were found to occur within five miles of the Project.

5.2 Habitat Assessment Results

This section includes results for soil types, vegetation communities and land use types within the Survey Area along with their associated acreages, special-status natural communities, special-status wildlife species and special-status plant species potentials for occurrence, as well as common plant and wildlife species observed during the field survey.

5.2.1 Soil Types

Six distinct soil series occur within the Survey Area (Attachment A, Figure 4). Soil units found within the Survey Area are included in Table 2.

Table 2. Soils Occurring Within the Survey Area

Map Unit Symbol	Map Unit Name	Acres in Survey Area	Percent of Survey Area
102	Badland	19.63	5.30%
104	Fluvaquents, saline	124.36	33.58%
114	Imperial silty clay, wet	17.31	4.67%
115	Imperial-Glenbar silty clay loams, wet, 0 to 2 percent slopes	12.01	3.24%
116	Imperial-Glenbar silty clay loams, 2 to 5 percent slopes	13.64	3.68%
119	Indio-Vint complex	15.66	4.23%
122	Meloland very fine sandy loam, wet	167.19	45.15%
145	Water	0.53	0.14%

5.2.2 Vegetation Communities

A total of 13 vegetation communities and/or land cover types occur in the Survey Area and were described according to *Preliminary Descriptions of the Terrestrial Natural Communities of California* (Holland 1986), further refined according to *A Manual of California Vegetation Second Edition* (Sawyer and Keeler-Wolf 2009), and ultimately characterized based on a site-specific analysis of the existing conditions. Specific vegetation communities were described based on dominant and sub-dominant plant species present at given locations as compared to adjacent species compositions. All observed vegetation communities were mapped directly onto a high-resolution aerial photograph during the field survey (Attachment A, Figure 2). The 13 vegetation communities and/or land cover types and their acreages include:

- 4.03 acres of Arrow Weed Scrub
- 0.32 acres of Bush Seepweed Scrub
- 55.69 acres of Desert Sink Scrub
- 185.07 acres of Developed areas
- 73.55 acres of Disturbed areas

- 9.42 acres of Disturbed Big Saltbush Scrub
- 6.61 acres of Disturbed Desert Sink Scrub
- 22.28 acres of Disturbed Riparian Scrub
- 0.75 acres of Mesquite Bosque
- 0.86 acres of Non-native Grassland
- 6.70 acres of Open Water
- 7.93 acres of Salt Pan
- 0.16 acres of Un-vegetated Channel

Arrow Weed Scrub (Arrow Weed Series)

Arrow Weed Scrub is characterized as moderate to dense thickets within major drainages in the drier parts of southern California that are dominated by arrow weed (*Pluchea sericea*) and may include sub-dominant species such as saltgrass (*Distichlis spicata*), rushes (*Juncus* spp.), cattails (*Typha* spp.), sandbar willow (*Salix exigua*) and tamarisk (*Tamarix* spp.) (Holland 1986). Within the Survey Area, Arrow Weed Scrub is characterized by a dominance of arrow weed with associated sub-dominant annual and perennial vegetation, including big saltbush (*Atriplex lentiformis*). No permanent impacts to Arrow Weed Scrub will occur as a result of Project implementation.

Bush Seepweed Scrub (Bush Seepweed Series)

Bush Seepweed Scrub is characterized by a dominance of bush seepweed and associated scant coverage of additional vegetation, such as tamarisk and saltgrass. Overall bush seepweed shrub coverage within the Survey Area was less than 10 percent cover consisting of only a few individual bush seepweed shrubs. No permanent impacts to Bush Seepweed Scrub will occur as a result of Project implementation.

Desert Sink Scrub (Iodine Bush Series)

Desert Sink Scrub is typically composed of low-growing, widely spaced succulent chenopods within poorly drained soils of valley bottoms and lakebeds scattered throughout the Sonoran Desert (Holland 1986). Within the Survey Area, Desert Sink Scrub is characterized by a dominance of iodine bush (*Allenrolfea occidentalis*) with associated annual and perennial vegetation such as shadscale (*Atriplex canescens*), saltgrass and bush seepweed. Permanent impacts to Desert Sink Scrub associated with implementation of the preferred alignments of the bypass encasement and pump back line total 1.41 acres, whereas permanent impacts associated with implementation of the optional alignment of the bypass encasement and the preferred alignment of the pump back line total 1.64 acres.

Disturbed Desert Sink Scrub (Iodine Bush Series)

Disturbed Desert Sink Scrub is consistent with Desert Sink Scrub but has less shrub coverage and a higher presence of bare ground or non-native annual grasses and/or forbaceous species as a result of natural and/or anthropogenic disturbances. Within the Survey Area, Disturbed Desert Sink Scrub is characterized by a dominance of iodine bush with significantly larger

degrees of open, bare ground and associated annual and perennial vegetation such as shadscale, saltgrass and bush seepweed. The nature of the disturbance within the Survey Area includes vehicular tracks, trash and debris dumping and pollution. Permanent impacts to Disturbed Desert Sink Scrub associated with Project implementation total 0.25 acre.

Disturbed Riparian Scrub (Common Reed - Tamarisk Series)

Disturbed Riparian Scrub is characterized by riparian zones dominated by non-native small trees or shrubs that lack taller riparian trees along major river systems where flood scour occurs and is expanded from increased urban and agricultural runoff (Holland 1986). Within the Survey Area, Disturbed Riparian Scrub is characterized by a dominance of common reed (*Phragmites australis*) and tamarisk (*Tamarix ramosissima*). Associated perennial vegetation includes sub-dominant non-native species such as big saltbush. The nature of the disturbance within the Survey Area is relative to the prevalence of non-native species within this vegetation community, trash and debris, and source pollution in the New River. Permanent impacts to Disturbed Riparian Scrub associated with Project implementation total 0.13 acre.

Mesquite Bosque (Mesquite Series)

Mesquite Bosque is an open to fairly dense, drought-deciduous streamside thorn forest dominated by mesquite (*Prosopis* spp.) that also occurs on higher alluvial terraces away from perennial streams that support riparian forests closer to the water (Holland 1986). Within the Survey Area, Mesquite Bosque is characterized by a dominance of honey mesquite (*P. glandulosa*) with reduced coverage of big saltbush and shadscale in some areas. No permanent impacts to Mesquite Bosque will occur as a result of Project implementation.

Non-native Grassland (California Annual Grassland Series)

Non-native Grasslands are a dense to sparse cover of annual grasses with flowering culms 0.2 to 0.5 meters high that can be associated with numerous showy-flowered, native annual forbs, especially in years of favorable rainfall (Holland 1986). Within the Survey Area, Non-native Grassland is characterized by a dominance of non-native annual grasses such as Bermuda grass (*Cynodon dactylon*). No permanent impacts to Non-native Grassland will occur as a result of Project implementation.

Disturbed Big Saltbush Scrub (Big Saltbush Series)

Disturbed Big Saltbush Scrub consists of low-growing, grayish, microphyllous shrubs, up to 1 meter tall, found within poorly drained soils with high alkalinity and/or salinity; in the surrounding playas on slightly higher ground than Desert Sink Scrub but has less shrub coverage and a higher presence of non-native annual grasses and/or forbaceous species as a result of natural and/or anthropogenic disturbances. Within the Survey Area, Disturbed Big Saltbush Scrub is characterized by a dominance of big saltbush with scant annual and perennial vegetation that includes a significant level of non-native, weedy species present in some areas. Evidence of vehicular disturbance trash and/or debris dumping and pollution are also present. Permanent impacts to Disturbed Big Saltbush Scrub associated with Project implementation total 0.004 acre.

Open Water

Open Water is comprised of year-round bodies of fresh water in the form of lakes, streams, ponds or rivers (Holland 1986). Within the Survey Area, Open Water is characterized by the permanent flowing water of the New River. Permanent impacts to Open Water associated with Project implementation total 0.0004 acre.

Salt Pan

Salt Pan is characterized by a lack of vegetation of any kind, bare ground, highly saline soils and muddy areas immediately adjacent to open water, wetlands and riparian areas. These areas are at least partially covered in salt crust that is formed from evaporating water following periods of inundation. No permanent impacts to Salt Pan will occur as a result of Project implementation.

Un-vegetated Channel

Un-vegetated Channel is simply the sandy, gravelly, or rocky portion of a waterway that remains unvegetated on a permanent or relatively permanent basis due to frequent scouring and/or variable water lines that inhibit the growth of vegetation (Holland 1986). Weedy species and/or grasses may grow sparsely on the fringes, but total cover is typically less than 10%. Within the Survey Area, the Un-vegetated Channel is generally defined by the OHWM between the banks of drainage features. Permanent impacts to Un-vegetated Channel associated with Project implementation total 0.01 acre.

Disturbed

Disturbed areas are characterized by predominantly non-native species introduced and established through human action (Holland 1986). Within the Survey Area, Disturbed areas are illustrated by the absence or near absence of native vegetation communities and high levels of anthropogenic disturbance, such as off-road vehicle use, trash and debris dumping and pollution. Dominant plant species included Russian thistle (*Salsola tragus*), prickly lettuce (*Lactuca serriola*), curly dock (*Rumex crispus*), fountain grass (*Pennisetum setaceum*) and Bermuda grass. Disturbed areas also include uncompacted dirt roads, previously graded uplands and other areas within the Survey Area that were historically altered by past grading activities; many of these areas contain little to no vegetation. Permanent impacts to Disturbed areas associated with implementation of the preferred alignments of the bypass encasement and pump back line total 2.4 acres, whereas permanent impacts associated with implementation of the optional alignment of the bypass encasement and the preferred alignment of the pump back line total 1.9 acres.

Developed

Developed areas consist of man-made structures, an absence of native vegetation communities and high levels of anthropogenic disturbance, with little to no chance for natural succession without human intervention. Within the Survey Area, numerous Developed areas exist, including the Calexico International Airport, Calexico Wastewater Treatment Plant and

various paved roads, compacted dirt/gravel roads, sidewalks and other forms of infrastructure. Permanent impacts to Developed areas associated with implementation of the preferred alignments of the bypass encasement and pump back line total 2.4 acres, whereas permanent impacts associated with implementation of the optional alignment of the bypass encasement and the preferred alignment of the pump back line total 2.49 acres.

5.2.3 Special-Status Plant Species

The literature review resulted in a list of four special-status plant species with the potential to occur within the Project vicinity. These species and their potential for occurrence are further described in Table 3 below. A complete list of plant species observed is included in Attachment C.

Table 3. Special-Status Plant Species Potentially Occurring Within the Survey Area

Species Name	Status	Habitat Requirements	Potential for Occurrence
Abram's spurge <i>Euphorbia abramsiana</i>	Federal: None State: None CRPR: 2B.2	Annual herb that occurs in sandy areas. <ul style="list-style-type: none"> • Mojavean desert scrub • Sonoran desert scrub Blooms: (Aug) Sep – Nov Elevation: -5 – 1310 m	Absent. Historical occurrences were recorded 3.41 miles from the Survey Area and at the Survey Area. Suitable habitat is no longer present at the Survey Area.
California satintail <i>Imperata brevifolia</i>	Federal: None State: None CRPR: 2B.1	Perennial rhizomatous herb that occurs in mesic habitat. <ul style="list-style-type: none"> • Chaparral • Coastal scrub • Mojavean desert scrub • Meadows & seeps (often alkali) • Riparian scrub Blooms: Sep – May Elevation: 0 – 1215 m	Low. One historical occurrence was recorded 3.28 miles from the Survey Area. Although this species was not found during the survey, some suitable habitat is present at the Survey Area along the New River disturbed riparian scrub corridor.
Chaparral sand-verbena <i>Abronia villosa</i> var. <i>aurita</i>	Federal: None State: None CRPR: 1B.1	Annual herb occurs in sandy areas. <ul style="list-style-type: none"> • Chaparral • Coastal scrub • Desert dunes Blooms: (Jan) Mar – Sep Elevation: 75 – 1600 m	Absent. A single historical occurrence was recorded at the Survey Area, however suitable habitat is no longer present at the Survey Area.
Gravel milk-vetch <i>Astragalus sabulorum</i>	Federal: None State: None CRPR: 2B.2	Annual herb occurs in sandy, sometimes gravelly, flats, washes, & roadsides. <ul style="list-style-type: none"> • Desert dunes • Mojavean desert scrub • Sonoran desert scrub Blooms: Feb – Jun Elevation: -60 – 930 m	Absent. A single occurrence was recorded at the Survey Area, however suitable habitat is no longer present on or adjacent to the Survey Area

The habitat assessment survey was conducted within the typical blooming period for three of the special-status plant species identified in the literature review (chaparral sand-verbena, gravel milk-

vetch and California satintail), but none of these three species were found during the survey. Due to their absence during the survey and the lack of suitable habitat within the Survey Area, chaparral sand-verbena and gravel milk-vetch were determined to be absent. While California satintail was also not detected during the survey, there is some suitable habitat present within the Survey Area along the New River disturbed riparian-scrub corridor; therefore, the potential for occurrence of this species was determined to be low. The survey occurred outside the Abram's spurge known blooming period, and this species was also not detected during the survey. While two historical records were found of Abram's spurge occurring in the area, there is no longer suitable habitat present within the Survey Area; therefore, this species was also determined to be absent. Since chaparral sand-verbena, gravel milk-vetch and Abram's spurge are assumed absent from the Survey Area, and California satintail has a low potential for occurrence and was not observed during the initial field survey or associated follow-on surveys, no further focused rare plant survey effort should be required for these species.

5.2.4 Special-Status Wildlife Species

The literature review resulted in a list of seven special-status wildlife species with the potential to occur within the Survey Area. These species and their potentials for occurrence are further described in Table 4 below. A complete list of wildlife species observed is included in Attachment D.

Table 4. Special-Status Wildlife Species Potentially Occurring Within the Survey Area

Species Name	Status	Habitat Requirements	Potential for Occurrence
BIRDS			
<p>Burrowing owl (burrow sites and some wintering sites) <i>Athene cunicularia</i></p>	<p>Federal: BCC State: None CDFW: SSC</p>	<p>Shortgrass prairies, grasslands, lowland scrub, agricultural lands (particularly rangelands), coastal dunes, desert floors, and some artificial, open areas as a year-long resident. Occupies abandoned ground squirrel burrows as well as artificial structures such as culverts and underpasses.</p>	<p>Present. Several burrowing owls were observed within the Survey Area during the survey. Three historical records were found of occurrences within five miles of the Project, and suitable habitat is found on and adjacent to the Survey Area.</p>
<p>Yellow warbler (nesting) <i>Setophaga petechia</i></p>	<p>Federal: BCC State: None CDFW: SSC</p>	<p>Mature, riparian vegetation in proximity to water along streams and in wet meadows.</p>	<p>Absent. A single historical record was found of an occurrence within the Survey Area, but the site lacks enough suitable riparian vegetation to support this species.</p>
Reptiles			
<p>Flat-tailed horned lizard <i>Phrynosoma mcallii</i></p>	<p>Federal: None State: None CDFW: SSC</p>	<p>Fine, wind-blown sand and sparse vegetation in desert scrub, wash, succulent shrub, and alkali scrub habitats, with ample ant colonies in the area.</p>	<p>Absent. A single historical record was found of an occurrence within the Survey Area, but the area lacks windblown sands, connectivity to occupied areas and suitable habitat.</p>

Species Name	Status	Habitat Requirements	Potential for Occurrence
MAMMALS			
<p>American badger <i>Taxidea taxus</i></p>	<p>Federal: None State: None CDFW: SSC</p>	<p>Found in a variety of open grassland, savannah and scrub habitats, fallow agricultural lands, meadows and prairies where rodent prey is ample.</p>	<p>Low. A single historical record was found of an occurrence within the Survey Area. Possible connectivity to fallow agricultural habitat via the New River riparian corridor creates a low potential for occurrence.</p>
<p>Pocketed free-tailed bat <i>Nyctinomops femorosaccus</i></p>	<p>Federal: None State: None CDFW: SSC</p>	<p>Colonial species that roosts primarily in crevices of rugged cliffs, high rocky outcrops and slopes. It has been found in a variety of plant associations, including desert shrub and pine-oak forests. The species may also roost in buildings, caves, and under roof tiles. Found from 0 – 2250 m.</p>	<p>High (foraging) Absent (roosting). One record of occurrence within the Survey Area was found. This species has a high potential to forage around the riparian area, but no potential to roost due to a lack of suitable roosting habitat.</p>
<p>Western mastiff bat <i>Eumops perotis californicus</i></p>	<p>Federal: None State: None CDFW: SSC WBWG: H</p>	<p>Requires significant rock features offering suitable roosting habitat. Found in a variety of habitats, from desert scrub to chaparral to oak woodland and into the ponderosa pine belt and high elevation meadows of mixed conifer forests 0 – 3050 m.</p>	<p>High (foraging) Absent (roosting). One record of occurrence within the Survey Area was found. This species has a high potential to forage around the riparian area, but no potential to roost due to a lack of suitable roosting habitat.</p>

Species Name	Status	Habitat Requirements	Potential for Occurrence
<p>Western yellow bat <i>Lasiurus xanthinus</i></p>	<p>Federal: None State: None CDFW: SSC WBWG: H</p>	<p>Roosts in palm trees in foothill riparian, desert wash and palm oasis habitats with access to water for foraging.</p>	<p>High (foraging) Moderate (roosting). One record of occurrence within the Survey Area, and another 3.41 miles from the Project were found. This species has a high potential to forage around the riparian area, and a moderate potential to roost in palm trees on site.</p>

No additional special-status species were observed during the field survey within the Survey Area that were not identified during the literature review.

Of the seven special-status wildlife species identified during the literature review, only burrowing owls were observed to be present within the Survey Area during the habitat assessment survey. Two species were found to be absent from the Survey Area due to insufficient habitat (yellow warbler; nesting) and due to lacking windblown sands, connectivity to occupied areas and suitable habitat (flat-tailed horned lizard). American badger habitat onsite was found to be low-quality, but potential connectivity through the New River riparian corridor to suitable habitat in nearby agricultural fields creates a low potential of occurrence within the Survey Area. Pocketed free-tailed bat, western mastiff bat and western yellow bat all have high potentials to forage over the New River riparian corridor and/or the Survey Area. However, suitable roosting habitat was found only for western yellow bat, with a moderate potential to roost in the Mexican fan palms (*Washingtonia robusta*) growing onsite. No suitable roosting habitat was observed for the other two assessed special-status bat species.

5.3 Existing Survey Area Conditions Analysis

The proposed Project site is located within 373.38 acres of disturbed, developed and natural habitats in Calexico, California. The site is comprised of two mesas separated by a floodplain ravine containing the New River channel, which conveys flows roughly southeast-to-northwest through the area. Elevations on the Survey Area range from 6 feet above mean sea level (amsl) at the highest point of the south mesa, to -43 feet amsl at the bottom of the west end of the ravine. At the Project's east end, the New River crosses the international border into the U.S. and conveys flows through an area of disturbed unpaved lots and developed parking areas. The river is bounded on either side throughout the Survey Area by a narrow border of disturbed riparian scrub and disturbed areas. On

the way into the Survey Area, the river passes through a pair of trash racks, under a bridge at 2nd Street, and under an elevated pipeline before entering the ravine that characterizes most of the Survey Area. The elevated pipeline runs southwest-to-northeast within a protective earthen berm that ends at the river crossing before resuming on the other side. Just past the pipeline, the river passes through several developed bare-ground storage yards on either side. To the north, the yards contain numerous piles of dirt, debris, and broken concrete, and on the mesa above stand a group of large water storage tanks.

During the survey, a burrowing owl pair was observed utilizing a void beneath some broken concrete as a burrow, and a second pair was seen using the open end of a drain pipe. Numerous suitable burrowing owl burrows were found throughout the Survey Area, including the many piles of broken concrete and debris, and in drain pipes and rodent burrows in the earthen berms and ravine slopes.

Beyond the disturbed riparian scrub border, the ravine flood terraces are covered by a patchwork of desert sink scrub, disturbed desert sink scrub, disturbed riparian scrub, salt pan and disturbed bare-ground areas, with much of the soil bearing a thin, white alkaline crust. The sloped sides of the channel are intermittently vegetated with patches of disturbed riparian scrub, arrow weed scrub and mesquite bosque. Two small concrete spillways to the north and northwest, and a series of erosional gullies/drainage features to the southwest provide drainage from the surrounding mesas to the New River below. The largest drainage feature extends halfway into the airport grounds and is vegetated with bush seepweed scrub and disturbed riparian scrub. As the New River flows out of the west end of the Survey Area, it passes under a second elevated pipeline that conveys the waters of the All-American Canal as it crosses over the New River. The New River disturbed riparian scrub area continues to the northwest after leaving the Survey Area, providing a potential avenue of connectivity for wildlife utilizing the agricultural fields and natural habitats beyond.

The disturbed riparian area was observed to be used by numerous native bird species, including red-winged blackbird (*Agelaius phoeniceus*), semi-palmated plover (*Charadrius semipalmatus*), black-necked stilt (*Himantopus mexicanus*) and killdeer (*Charadrius vociferans*), some of which use the area to nest. During the survey, an active black-necked stilt nest with four eggs was found along the southern terrace on a mudflat adjacent to the riparian area, and a killdeer adult and fledgling were observed foraging together on the riverbank. The riparian area also likely serves as a foraging area for pocketed free-tailed bat, western mastiff bat, western yellow bat and other bat species.

The north mesa is primarily composed of a flat strip of disturbed bare ground with occasional patches of disturbed big saltbush scrub, mesquite bosque and arrow weed scrub, which separates the ravine from a residential neighborhood to the north and a commercial/industrial area to the northeast.

The south mesa is mostly developed land, containing the 155-acre Calexico International Airport and a 27-acre wastewater treatment facility. The majority of the airport is composed of two developed bare ground runways, with occasional patches of non-native grasses, and an area of disturbed big saltbush scrub at its west end. To the west, the airport is bordered by the All-American Canal, beyond which are extensive agricultural lands. The airport is bordered by Anza Road to the south, past which a shopping mall and an area of disturbed bare ground separates the airport from the International Border fence and the densely developed residential, commercial and industrial areas of Mexicali, Mexico. The wastewater treatment facility adjacent to the north side of the airport is made up of

developed bare ground containing the wastewater treatment facility storage yard, aerators, clarifiers and a series of treatment basins. Effluent from the treatment facility is discharged through an underground pipeline to the New River below and east. Several active black-necked stilt nests were observed on the bare-ground walkways between the wastewater treatment basins during the survey. Mexican fan palms (*Washingtonia robusta*) growing at the entrance to the facility may be used as roosts by western yellow bats.

The New River provides habitat for non-native freshwater fish species that include common carp (*Cyprinus carpio*) and mosquitofish (*Gambusia affinis*). No native fish species are known to occur in the New River.

6.0 RECOMMENDATIONS & CONCLUSION

Blackhawk Environmental biologists conducted a literature review for the Survey Area resulting in a list of seven special-status wildlife species and four special-status plant species to evaluate during the ensuing habitat assessment survey. The habitat assessment determined that of the seven special-status wildlife species evaluated, one was determined to be present (burrowing owl), while three were determined to have a high potential for foraging occurrence (pocketed free-tailed bat, western mastiff bat, western yellow bat), one was determined to have a moderate potential for roosting (western yellow bat), and one was determined to have a low potential for occurrence (American badger). The two remaining special-status wildlife species evaluated were determined to be absent from the Survey Area due to insufficient suitable habitat (yellow warbler), and a lack of windblown sands, connectivity to occupied areas and suitable habitat (flat-tailed horned lizard). The only wildlife species that will require additional focused surveys for this Project is burrowing owl.

Three of the evaluated special-status plant species were determined to be absent from the Survey Area (chaparral sand-verbena, gravel milk-vetch and Abram's spurge) due to going undetected during the survey and a lack of suitable habitat. Despite going undetected during the initial field survey and associated follow-on surveys, one species (California satintail) was determined to have a low probability of occurrence in limited suitable habitat found onsite. Considering the low potential for occurrence of this single species, focused rare plant surveys should not be required; however, a pre-construction biological sweep by an approved biological monitor is recommended to identify and avoid impacting this species.

The Project would include permanent impacts associated with the construction and installation of the trash screen, bypass encasement infrastructure and pump back system within the overall 373.38-acre Survey Area. The Survey Area was analyzed for both direct and indirect impacts that would be associated through the construction, operations and maintenance phases of the proposed Project. Direct impacts are correlated with the construction footprints for the three Project elements (i.e., Bypass Encasement Optional Alignment – Limit of Disturbance, Bypass Encasement Preferred Alignment – Limit of Disturbance, Pump Back Line Preferred Alignment), while indirect impacts are correlated with the altered hydrological regimes that the Project would entail for the New River and its floodplain. However, no indirect impacts are anticipated for the remainder of the Survey Area above the floodplain and outside of the construction footprint. Indirect impacts would include reduced and/or altered water flows of the New River within the Survey Area that could alter the existing vegetative composition within the floodplain. After the construction phase of the Project and

over the long term, wetland and riparian vegetation within the New River and its floodplain could feasibly shift to include a greater degree of upland vegetation, resulting in a reduction of wetland vegetation and function. As such, indirect impacts within the Survey Area include all of the open water and natural vegetation communities within the New River and its floodplain that are outside the construction footprints for the three Project elements.

Permanent and direct impacts to undeveloped, native and natural vegetation communities will require mitigation to offset the loss of habitat. Mitigation can be achieved in a number of ways, including but not limited to: establishment of on-site mitigation (i.e., habitat restoration) and/or purchase of mitigation credits from a regulatory-approved mitigation bank. Mitigation ratios would likely be 2:1 for directly impacted, undeveloped, native and natural vegetation communities, including Desert Sink Scrub, Disturbed Big Saltbush Scrub, Disturbed Desert Sink Scrub, Disturbed Riparian Scrub and Unvegetated Channel. If onsite or offsite habitat restoration is to occur, success criteria parameters would be established in conjunction with CDFW and other Project stakeholders to achieve vegetative cover thresholds within five years of initial planting. Habitat restoration activities would be specified within a Habitat Mitigation & Monitoring Plan (HMMP).

The proposed Project may constitute changes in land use that may require further review under CEQA and NEPA. Under the CEQA and NEPA review processes, special-status species with the potential to occur may require additional surveys and/or mitigation measures to comply with CEQA, NEPA, CESA and/or FESA.

In addition to conducting focused burrowing owl surveys, the following mitigation measures are proposed for the avoidance, minimization and/or mitigation of special-status biological resources that occur, or that may occur, on or adjacent to the Survey Area:

- **MM-BIO 1:** To the extent feasible, conduct vegetation removal outside of the nesting bird season (generally between February 1 and August 31). If vegetation removal is required during the nesting bird season, conduct pre-construction avoidance surveys for MBTA and CDFW-protected nesting birds within 100 feet of areas proposed for vegetation removal and/or initial grading activities; additionally, surveys shall be extended to 500 feet for raptors and be included from January 1 to July 15; note that burrowing owl surveys (also a raptor) are to be conducted according to MM-BIO 2 and MM-BIO 3. Surveys shall be conducted by a qualified biologist(s) within four days (=96 hours) of vegetation removal and/or initial grading activities. If active, protected nests are observed within the survey area(s), a qualified biologist will determine appropriate minimum disturbance buffers or other adaptive mitigation techniques (e.g., biological monitoring of active nests during construction-related activities, staggered work schedules, altered work locations, sound walls, noise abatement, etc.) to ensure that direct and indirect impacts to all protected nesting birds are avoided until such nests are no longer active.
- **MM-BIO 2:** Conduct focused burrowing owl surveys within the Project site and 150-meter survey area surrounding the Project site according to the *Staff Report on Burrowing Owl Mitigation* (CDFW 2012). A total of four surveys shall occur as follows; 1) conduct at least one site visit between 15 February and 15 April, and 2) conduct a minimum of three survey visits, at least three weeks apart, between 15 April and 15 July, with at least one visit after

15 June. The surveys should occur during favorable weather conditions, during early morning hours (one hour before sunrise until two hours after sunrise) or during late afternoon hours (two hours before sunset until one hour after sunset). After completion of the appropriate surveys, a final report shall be prepared for CDFW review that discusses survey methods, transect widths, duration, conditions and results of the survey. The report will discuss any additional required mitigation for CEQA adequacy.

- **MM-BIO 3:** Conduct one 14-Day and one 24-Hour pre-construction burrowing owl survey within the Area of Potential Effects (APE) and 150-meter survey area surrounding the APE. The surveys should occur during the breeding season between February 15 and July 15 but may be conducted any time of year. The surveys should occur during favorable weather conditions, during early morning hours (one hour before sunrise until two hours after sunrise) or during late afternoon hours (two hours before sunset until one hour after sunset). The first pre-construction survey must occur from 30 to 14 days of initiating construction activities, after which a report shall be submitted to the appropriate Project parties that discusses survey methods, transect widths, survey duration, survey conditions, survey results and any mitigation recommendations. Following the 24-Hour preconstruction survey, a memo report shall be sufficient that will further discuss any additional required mitigation per CEQA standards. Such follow-up mitigation may include passive relocation procedures, “shelter in place” procedures, the development of a Burrowing Owl Mitigation Plan, and or/ the usage of sound walls, visual barriers, biological monitoring during construction, or other methods to avoid and minimize indirect and direct impacts to burrowing owls.
- **MM-BIO 4:** Develop a Storm Water Pollution Prevention Plan (SWPPP) for the Project to implement Best Management Practices (BMPs) during construction activities to avoid unanticipated impacts to adjacent, potentially jurisdictional irrigation ditches, drainage features and water bodies. All BMPs shall be regularly inspected for integrity and repaired or replaced as-needed.
- **MM-BIO 5:** Keep onsite speed limits below 15 miles per hour to reduce fugitive dust levels during construction. Fugitive dust levels must be kept below 20% opacity, per Imperial County Air Pollution Control District (ICAPCD) standards.
- **MM-BIO 6:** No Project personnel may litter on or adjacent to the Project site. Keep trash in secured containers onsite with regular disposal timelines to approved facilities, and/or in Project vehicles.
- **MM-BIO 7:** No Project personnel may bring pets or firearms to the Project site.
- **MM-BIO 8:** To prevent the accidental introduction of non-native, invasive plant material and/or seed stock to the Project environment, all vehicles must arrive to the Project site clean and free of mud and debris.
- **MM-BIO 9:** All Project vehicles must be kept in good maintenance and shall not leak fluids onto the Project site. In such cases, spills and leaks are to be cleaned up and disposed of properly, following Imperial County guidelines, and the causes of such spills and leaks shall

be immediately repaired. When staging Project-related construction equipment overnight, spill kits, secondary containment devices, spill mats and/or other measures should be employed to catch unanticipated leaks or spills.

- **MM-BIO 10:** Develop a HMMP in conjunction with the jurisdictional delineation results and directly impacted Desert Sink Scrub, Disturbed Big Saltbush Scrub, Disturbed Desert Sink Scrub, Disturbed Riparian Scrub and Unvegetated Channel vegetation community acreages. The HMMP would be intended to guide habitat restoration efforts as mitigation for direct and indirect impacts associated with Project construction, operations and maintenance phases.

If there are any questions or concerns regarding the findings of this report, please contact me at 619-972-8714 or kris@blackhawkenv.com.

Sincerely,

A handwritten signature in cursive script that reads "Kris Alberts".

Kris Alberts
Principal Biologist



ATTACHMENTS

- A: Figures**
- B: Representative Site Photos**
- C: Plant Species Observed List**
- D: Wildlife Species Observed List**

7.0 REFERENCES

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