Appendix E

General Biological and Focused Western Burrowing Owl Surveys

Prepared by: HDR Engineering, Inc.

111 Calexico Place Development Project

General Biological and Focused Western Burrowing Owl Surveys

Calexico, California

August 2006

Prepared for:

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1.0 INTRODUCTION

This report details the results of a biological resource survey, as well as a focused western burrowing owl (*Athene cunicularia hypugaea*) habitat assessment and breeding season survey for the 111 Calexico Place Development Project, within the City of Calexico, Imperial County, California.

2.0 PROJECT AND SITE DESCRIPTION

The proposed 218.37 acre 111 Calexico Place Development Project is located in the City of Calexico within the southern portion of Imperial County, California (Figure 1). The proposed project area is accessed from Interstate 8 by major roadways including State Highway 111 and State Highway 98 (SH 111 and SH 98, respectively). The site is located west of SH 111, north of the Central Main Canal, and south of Jasper Road (Figure 2). The site is located in Section 2, Township 17 South, Range 14 East of the Calexico U.S. Geological Survey topographic quadrangle.

Current land uses surrounding the proposed project location involve agriculture (with associated earthen canals and irrigation ditches) to the north, east and west, and to the south a vacant lot and storage yard for semi-truck trailers (Figures 3 and 4; Appendix A, Photographs). It is expected that the proposed development of the 111 Calexico Place project site will encompass the entire 218.37 acres.

The 111 Calexico Place Development Project will consist of a mixed use 218.37-acre commercial development to include office park, entertainment, retail, and hotel land uses. Proposed improvements include the widening of Jasper road along the northern boundary of the project.

The agricultural area within the project site has recently been utilized for agricultural production of Bermuda grass (*Cynodon dactylon*), Sudan grass (*Sorghum vulgare* var. *sudanese),* and millet (*Panicum miliaceum*) but is currently fallow. Due to the agricultural activity on the site, the entire project area has been altered from its natural state.

3.0 PURPOSE OF STUDY

The purpose of this study was to inventory the property and adjoining lands for biological resources; identify and map all onsite habitats; and search for signs of rare, endangered, threatened, or otherwise sensitive plants or animals which could potentially occur. The purpose of the focused burrowing owl portion of this study was threefold: (1) to determine if suitable burrowing owl habitat occurs within the project area; (2) to characterize suitable burrowing owl habitat; and (3) to characterize any burrowing owls that are detected within suitable habitat. These data were used in an assessment of biological resource values with an analysis that allows for a determination of project-related direct and indirect impacts, as required by CEQA, and to include mitigation measures, as appropriate.

4.0 BIOLOGICAL RESOURCE SURVEY METHODOLOGIES

A search of scientific literature was conducted for the project prior to initiating fieldwork. This included a review of the California Natural Diversity Database (CNDDB), relevant field guides, and other sources to identify the potential for sensitive species to occur on the site.

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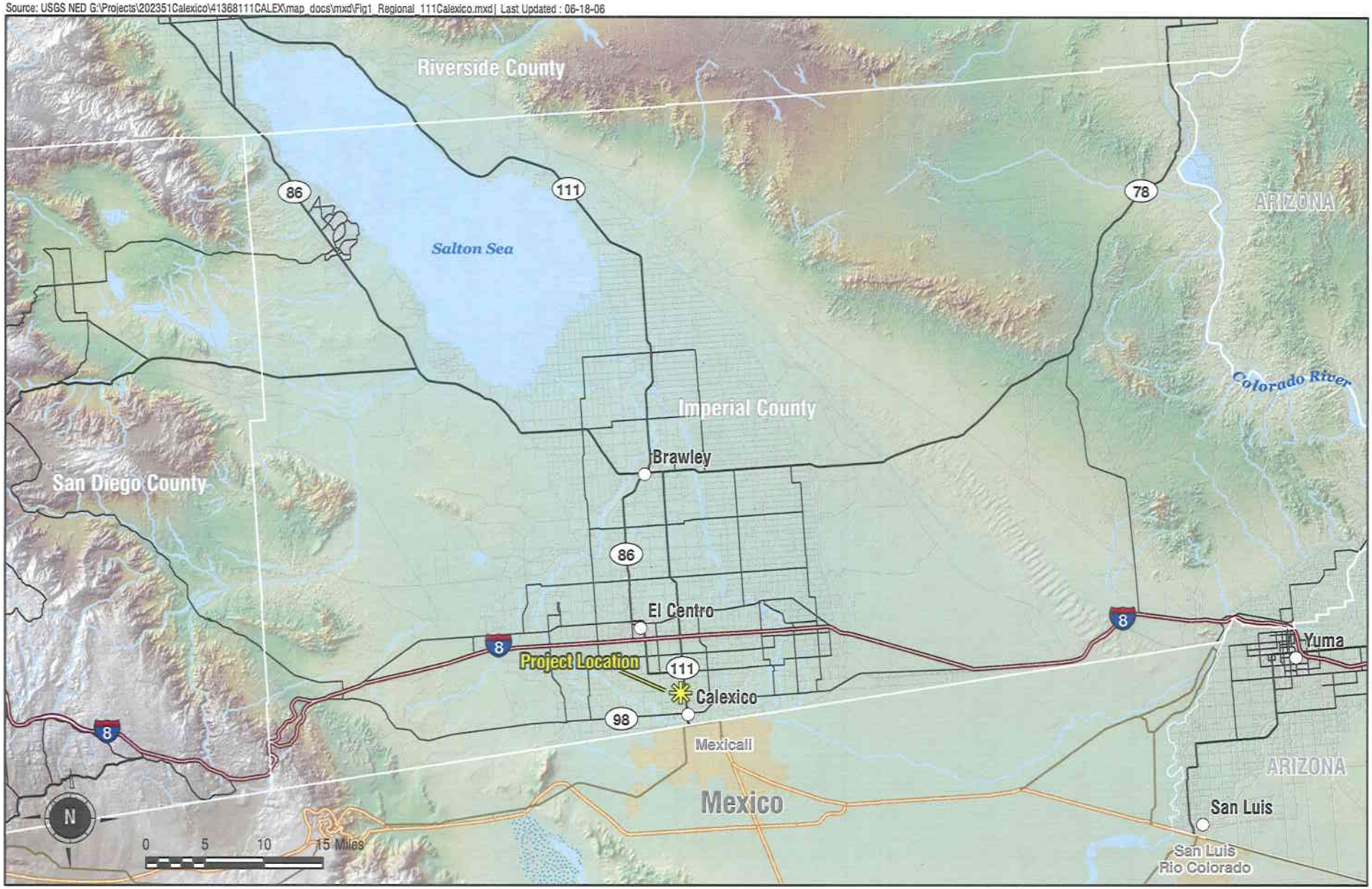

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Regional Location

FIGURE 1

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Project Vicinity

FIGURE 2

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Source: HDR; 2006, Aerial, Landiscor; 2004 | \\G:\Projects\202351Calexico\41368111CALEX\map_docs\mxd\Fig3_Veg111Calexico.mxd | Last Updated : 08-09-06

Vegetation and Features Map

FIGURE 3

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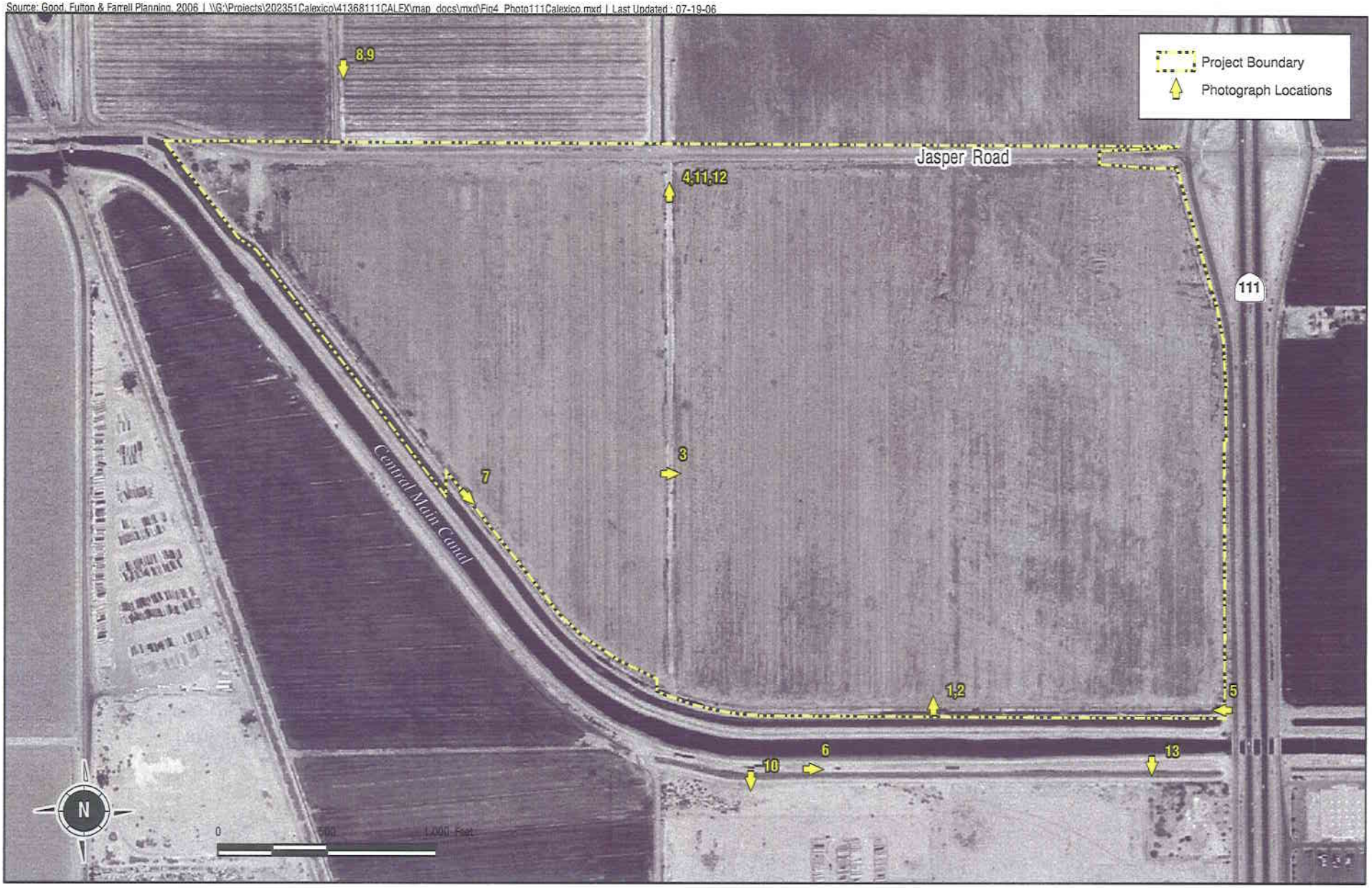
Source: Good, Fulton & Farrell Planning, 2006 | \\G:\Projects\202351Calexico\41368111CALEX\map_docs\mxd\Fig4_Photo111Calexico.mxd | Last Updated : 07-19-06



Photograph Location Map

FIGURE 4

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It was determined that the site would have a high potential to support the western burrowing owl, a Federal Species of Concern and migratory bird species, and a California Species of Special Concern. Other sensitive species that could potentially occur onsite have likely been extirpated from the property as a result of agricultural practices, which have significantly altered the biological nature of the site. This does not preclude the use of the irrigated and non-irrigated agricultural fields from raptorial and migratory bird species such as the mountain plover (*Charadrius montanus*), also a Federal Species of Concern and migratory bird species, and a California Species of Special Concern.

A baseline biological survey, vegetation map, and an analysis of potential wetlands and state and federal jurisdictional waters of the United States was completed at the 111 Calexico Place Development Project site by Eric Peffer (Wildlife Ecologist), and Nick Muscolino (Biologist) on May 26, 2006 between 1600 and 2000 hours. Weather conditions were conducive to site surveying, with cloud cover ranging from 50-75 percent to clear skies, temperatures ranging from 74 to 81 degrees Fahrenheit, and winds of 4 to 12 mph out of the west.

All plants, animals, and habitats encountered during the survey were noted in the field and all accessible portions of the project site were traversed on foot. The limits of each habitat type were mapped in the field utilizing an aerial photograph of the 111 Calexico Place Development Project site along with a Trimble GeoXt GPS hand held unit. Plants were identified in situ, or based on characteristic floral parts collected, and later examined in detail. Floral nomenclature used in this report follows Hickman (1993), Wetherwax (2002), and others. Wildlife observations were made opportunistically. Binoculars were used to aid in observations and all wildlife species detected were noted. Zoological nomenclature used in this report is taken from Stebbins (1985) for reptiles and amphibians, American Ornithologist's Union (2005) for birds, and Burt/Grossenheider (1980) for mammals.

4.1 RARE PLANTS

Rare plants with potential to occur onsite include Abram's spurge (*Chamaesyce abramsiana*) and mud nama (*Nama stenocarpum*). Due to the timing of the biological survey, only mud nama would be expected to be present and/or observable.

Abram's spurge is a member of the Euphorbiaceae family and is listed by the California Native Plant Society (CNPS) as a List 2 species. Abrams's spurge is found on sandy flats at an elevation of less than 20 meters in Mohave desert scrub, Sonoran desert scrub, and sandy habitats. The blooming period for the Abram's spurge is September to November.

Mud nama is a member of the Hydrophyllaceae family and is a CNPS List 2 species. Mud nama grows in intermediate wet areas, marshes, swamps, lake margins, and riverbanks at an elevation of less than 50 meters and blooms from January to July.

4.2 WESTERN BURROWING OWL

Pursuant to the California Department of Fish and Game (CDFG) 1995 Memorandum Staff Report on western burrowing owl mitigation, focused morning and evening surveys were conducted by Eric Peffer and Nick Muscolino of HDR Engineering, Inc. on May 23, 24, 25 and 26, 2006 (see Section 5.3.4.1).

5.0 BIOLOGICAL SURVEY RESULTS

5.1 PLANT COMMUNITIES

Vegetation types or plant communities are assemblages of plant species that usually coexist in the same area. The classification of plant communities is based upon the life form of the dominant species within that community and associated flora. The vegetation types follow modifications of Holland (1986). Scientific and common names follow that of Baldwin et al. (2002) or Hickman (1993). The 111 Calexico Place Development project site supports Active Agriculture, Fallow Agriculture, Arrow-Weed Scrub, Tamarisk Scrub, Ruderal, and Disturbed Cismontane Alkali Marsh vegetation communities, as well as Disturbed/Developed features (e.g., canals, irrigation ditches, paved and dirt roads) (Figure 3 and Appendix A –Site Photographs).

Thirty species of vascular plants were detected on the 111 Calexico Place Development project area within the above-mentioned features. The plant species observed typify the diversity normally found in active agriculture and disturbed habitats within Imperial County. A complete list of the plants detected, listed alphabetically, can be found in Appendix C. This list is a compilation of plant species detected during the focused western burrowing owl surveys.

5.1.1 Active Agriculture

Three narrow patches (1.50 acres total) north of Jasper Road are currently under agricultural practices (Figure 3). Alfalfa is the crop that is currently cultivated (Figure 4 and Appendix A – Photographs 4, 8, and 11).

5.1.2 Fallow Agriculture

201.50 acres of the site have recently been in agricultural use (Figure 3). Currently, the fallow agricultural fields contain the remnants of the cultivated crops, Bermuda grass, Sudan grass, and millet. Emory's baccharis (*Baccharis emoryi),* a native plant species, is found scattered throughout the fallow agricultural fields (Figure 4 and Appendix A – Photographs 1-3).

5.1.3 Arrow-Weed Scrub

Arrow-weed scrub is found along the banks of the Central Main Canal (Figure 3). These stands, totaling 1.98 acres, are characterized entirely by arrow-weed (*Pluchea sericea*), a native species (Figure 4 and Appendix A – Photograph 5).

5.1.4 Tamarisk Scrub

Tamarisk (*Tamarix* sp.) scrub occurs in three small patches (0.84 acres) along the irrigation canals within the project area (Figure 3) (Figure 4 and Appendix A –Photograph 6). Tamarisk is an invasive plant species that occurs within desert riparian systems and as an invasive where conditions are appropriate, such as irrigation canals. Stands of tamarisk may support sensitive and/or listed bird species depending upon size of stand, density, distance to open water, and distance to other riparian associated areas.

5.1.5 Disturbed Cismontane Alkali Scrub

A small (0.22 acres) patch of disturbed cismontane alkali marsh (CAM), dominated entirely by saltgrass (*Distichlis spicata*), is found in a low-lying area near the northwestern property corner (Figure 3). CAM is a native vegetation community comprised of plant species adapted to alkaline (salt) conditions.

5.1.6 Ruderal

Ruderal vegetation (8.83 acres) is found primarily along the roadsides, within the smaller irrigation canals, and along the edges of the agricultural fields (Figure 3). Ruderal habitats are found within frequently disturbed areas. Species adapted to a frequent disturbance regime typically dominate this plant community. Species found in this type of habitat include common "weedy" species such as Russian thistle (*Salsola tragus*), pig weed (*Amaranthus* spp.), mustards, and non-native grasses (e.g., *Bromus* spp. and *Avena* spp.). Due to the occasional flooding as a result of agricultural irrigation, several species adapted to wet conditions; e.g., cattails (*Typha* sp.), are also found within this vegetation community along the irrigation ditch south of the fallow agricultural fields.

5.1.7 Disturbed/Developed

This unvegetated feature is found along the dirt roads, irrigation canal berms, and Jasper Road (Figure 3). These 3.5 acres of disturbed/developed habitat are repeatedly disturbed by ongoing irrigation canal and road maintenance activities.

5.2 ZOOLOGICAL SPECIES

Thirty-five species of animals were observed utilizing, inhabiting, and/or flying over the project site. These are common species, abundant in the site's general vicinity. Animals observed onsite are listed in Appendix C. This list is a compilation of animal species detected during the general biological survey and focused western burrowing owl survey. The two species of concern observed utilizing and inhabiting the property were the western burrowing owl and the yellow warbler (*Dendroica petechia brewsteri*).

5.3 SENSITIVE BIOLOGICAL RESOURCES

5.3.1 Sensitive Vegetation Communities

Vegetation communities (habitats) are generally considered "sensitive" if: (a) they are considered rare within the region by various agencies including U.S. Fish & Wildlife Service (USFWS), CDFG, and other local agencies; (b) if they are known to support sensitive animal or plant species; and/or (c) they are known to serve as important wildlife corridors. Sensitive habitats are typically depleted throughout their known ranges, or are highly localized, and/or fragmented.

Although the western burrowing owl is considered both a State and Federal Species of Concern, its current inhabitation of the property is within manmade features such as road and irrigation ditch berms. The western burrowing owls and the yellow warblers inhabiting the property are not found within any natural habitats; therefore, under item (b) of the above definition, no naturally occurring sensitive habitats occur on the 111 Calexico Place Development project site.

5.3.2 Federal and State Jurisdictional Waters and Wetlands of the United States

The 111 Calexico Place Development project site does not have any Federal or State Jurisdictional Waters or Wetlands as defined by Sections 401 and 404 of the Clean Water Act and Section 1600 of the State Fish and Game Code. Although the 111 Calexico Place Development project site has multiple agricultural irrigation ditches associated with and located on the project site, they are not jurisdictional due to the fact that they are artificially man-made and maintained, have not been abandoned, and continue to be used for the purpose in which they are intended.

5.3.3 Sensitive Botanical Species

Sensitive plants include those listed by USFWS and CDFG, candidates for listing (USFWS and CDFG), and/or are considered sensitive by the CDFG and/or the CNPS. Sensitive plants also include the categories of rare and narrow endemic.

The species listed in this section were obtained from the Rare Find CDFG CNDDB and may occur in the Calexico USGS Quadrangle in which the site is located. Due to the ongoing active agricultural use of the property, the probability of encountering the following sensitive botanical species was low-to-none on the project site: mud nama and Abram's spurge (Appendix B). Both of these plant species occur within the soil types found within the area and within the elevation range of the site. Neither of these species were detected onsite nor are they expected to occur due to recent agricultural disturbance. No other Federal, State, or rare botanical species were identified during the surveys.

5.3.4 Sensitive Zoological Species

Sensitive animals are species or subspecies listed as threatened, endangered, or being evaluated (proposed) for listing by the USFWS or CDFG, and/or are considered sensitive by these agencies. A sensitive designation includes those listed as rare or of "Special Concern."

The CNDDB identifies four sensitive zoological species that occur in the same USGS quad as the project area. CNDDB species for the Calexico USGS Quadrangle include western yellow bat (*Lasiurus xanthinus*), a California Species of Special Concern; American badger (*Taxidea taxus*), a California Species of Special Concern; flat-tailed horned lizard (*Phrynosoma mcallii*), a Federal Species of Concern and a California Species of Special Concern; western burrowing owl, a Federal Species of Concern, a migratory bird species, and a California Species of Special Concern; and yellow warbler, a migratory bird species and a California Species of Special Concern (Appendix B). In addition to the information from the CNDDB, other species of concern may also occur within the general vicinity of the project site. These may include raptors (birds of prey) that are California Species of Special Concern and mountain plover, a Federal Species of Concern (proposed for threatened listing in 1999 and 2002 and then withdrawn from the list in 2003 [Federal Register 2003]), a migratory bird species, and a California Species of Special Concern (Appendix B). Western burrowing owl, yellow warbler, mountain plover, and various raptor species have the potential to occur within the 111 Calexico Place Development project site based on historical and recent survey data, soils, and vegetation.

Western Yellow Bats are a migratory species that occur from Central America to North America (distributed as far north as the Muddy River in Nevada) and are present in California throughout the spring, summer, and fall months. They are found to exclusively roost in fan and other ornamental

palm trees that have not been trimmed of their dead fronds (Schmidly 1991). No large, untrimmed palm trees occur within or adjacent to the project area. Consequently, western yellow bats would not roost on-site but would have a low potential to forage over the project area.

American Badgers are medium-sized carnivores that feed on ground squirrels, cottontail rabbits, jackrabbits, small rodents, pocket gophers, snakes, birds, and insects (Messick and Hornocker 1981; Snead and Hendrickson 1942; Errington 1937) within associated dry, open, treeless regions, prairies, parklands, grasslands, and cold desert areas. Badgers are fossorial animals (burrowing) that live in dens. Badgers have multiple dens within their territory and all are utilized for various functions such as caching prey, birthing and rearing of young, winter torpor, diurnal resting sites, etc. (Messick and Hornocker 1981; Lindzey 1978; Snead and Hendrickson 1942). Badgers typically prefer grasslands but will also inhabit scattered and fragmented grassy areas such as pastures, roadsides, fence rows, field borders, ditch banks, and railroad rights-of-way. No badgers, badger sign, or badger dens were observed within the 111 Calexico Place Development project site nor are badgers expected to occur on the property or disperse through the property due to the lack of appropriate habitat, development, disturbance, and agricultural land use on the property and within the surrounding area.

Flat-tailed horn lizards are one of 14 currently recognized species of horned lizard and is believed to be most closely related to the desert horned lizard (*P. platyrhinos*). It has a round, flattened body shape and is distinguished from other species in its genus by its dark vertebral stripe; lack of external ear openings; long, broad and flattened tail; and comparatively long spines on the head. The 111 Calexico Place Development project site is within the historic range of the flat-tailed horn lizard. The flat-tailed horned lizard has a discrete habitat requirement of stabilized and partially-stabilized desert dunes (Foreman 2003). There is no potential for this species to occur onsite due to the lack of appropriate habitat, development, disturbance, and agricultural land use on the property and within the surrounding area.

The **yellow warbler** is a small migratory song bird that occurs in the Imperial Valley in riverine or riparian areas during the spring and fall months. Once a common to locally abundant summer resident in riparian areas, it is absent from much of it historic range due to the loss of riparian habitats and susceptibility to cowbird (*Molothrus* sp.) parasitism (Remsen 1978). Four individuals, two adults and two juveniles, were observed foraging in Arrow Weed and Tamarisk Scrub habitats within the northwestern corner of the project area and along Dogwood Canal (north of Central Main Canal). Although no nests were located, given the time of year and the presence of juveniles, it is likely that the yellow warblers were residents within and adjacent to the project area.

Mountain plovers are small migratory birds within the shorebird family. However, the mountain plover is found exclusively within upland habitats characterized by short-grass prairie and shrub-steppe landscapes throughout its breeding and wintering range. Mountain plover are insectivores and eat a variety of beetles, grasshoppers, crickets, and ants (Baldwin 1971; Knopf 1998). They form loose foraging and roosting flocks ranging in size from four to over 1,000 individuals (Hunting and Fitton 1999). Mountain plovers breed and nest within the short-grass prairies, plains, and farmlands from Montana south to Nuevo Leon, Mexico, with their primary nesting grounds occurring within eastern Colorado. Over 95 percent of the North American mountain plovers migrate from these nesting locations to over-winter in the grasslands and agricultural fields of California (Hunting and Fitton 1999), to include both the Central Valley in Northern California and the Imperial Valley in Southern California (Grinnel and Dixon 1918) between September and March. The predominant winter habitat for the mountain plover in the Imperial Valley includes irrigated farmlands, burned

Bermuda grass fields, and grazed alfalfa fields (Wunder and Knopf 2003). Plovers have been observed to move onto fields for short periods following harvest, especially where the fields are turned over, burned, or grazed. Insect availability, furrow depth, size of dirt clods, and the vegetation of contiguous land parcels are believed to influence the suitability of individual cultivated fields (Marquis-Brong, in litt. 1999 in Federal Register 2002). Therefore, while cultivated lands are abundant throughout the Imperial Valley, not all of them are suitable wintering habitat and when rainfall levels produce a greater cover of vegetation, mountain plover are not observed. Due to the lack of disturbance at the site associated with fallow agriculture, mountain plover were not observed on the 111 Calexico Place Development project site during the time of the focused western burrowing owl survey or the general biological survey.

Raptors are defined as birds of prey and include all the species within the Accipitridae (e.g., Cooper's hawk, red-tailed hawk, golden eagle, etc.), Falconidae (e.g., American kestrel, prairie falcon, etc.), Tytonidae (e.g., barn owl), and Strigidae (e.g., great horned owl, western burrowing owl, etc.) families. Several of these species have been observed utilizing the 111 Calexico Place Development project site for various life functions. Raptors observed inhabiting the site, foraging over the site, or flying over the site include turkey vulture (*Cathartes aura*) (flying over), western burrowing owl (inhabiting and foraging), and American kestrel (*Falco sparverius*) (perching and foraging). Although the 111 Calexico Place property offers foraging opportunities for raptors within the agricultural habitats, nesting raptors are not expected due to the lack of mature trees or other support structures such as powerline transmission towers.

5.3.4.1 Western Burrowing Owl Survey

5.3.4.1.1 Western Burrowing Owl Status and Biology

The western burrowing owl is a Federal Species of Concern and a State of California Species of Special Concern. The western burrowing owl has a broad distribution that includes open country throughout the mid-west and western United States, Texas, southern Florida, parts of central Canada, and into Mexico and the drier regions of Central and South America. In southern California, it is known from lowlands over much of the region, particularly in agricultural areas. This species is greatly reduced in numbers throughout its range (DeSante 1991 and 1992). Western burrowing owls follow a crepuscular habit, being most active during the early morning and evening hours. Their diet is predominantly large insects and small rodents, but they will also take small birds, reptiles, amphibians, fish, scorpions, and other available prey. They are often observed perched on fence posts or utility wires or in close association with their burrow. They typically live eight years or more. An influx of migrating (wintering) western burrowing owls may occur in Imperial County, but locations are not well documented. It may be assumed that spring and summer observations are of year-round resident individuals.

Within the Imperial County area, western burrowing owls are often found in open terrain throughout and in close association with agricultural areas. The combination of earthen berms associated with irrigation canals and ditches, as well as stacks of hay bales have made for optimal western burrowing owl habitat. They occur in open desert areas where mesquite hummocks and incised washes occur, in fallow fields, along irrigation dikes and levees, in construction debris piles and dirt mounds to include pipes and culverts, in/under haystacks, and wherever burrows are available away from intense human activity. Since they do not typically construct their own burrows, they will utilize the burrows of other animal species such as California ground squirrel (*Spermophilus beecheyi*) and

desert tortoise (*Gopherus agassizi*). However, they have been observed excavating their own burrows during the nesting season in the Imperial Valley (Marie Barrett, October 2005, pers. comm.). They can and often do occur adjacent to residential development where drinking and foraging opportunities are available.

Western burrowing owls follow a crepuscular habit, being most active during the early morning and evening hours. Their diet is predominantly large insects and small rodents, but they will also take small birds, reptiles, amphibians, fish, scorpions, and other available prey. They are often observed perched on fence posts or utility wires or in close association with their burrow. They typically live eight years or more. An influx of migrating (wintering) western burrowing owls may occur in Imperial County but locations are not well documented. It is assumed that spring and summer observations are of year-round resident individuals.

5.3.4.1.2 Western Burrowing Owl Survey Methodology

A focused western burrowing owl habitat assessment and survey was conducted for the 111 Calexico Place Development Project site May 23, 24, 25, and 26, 2006 during variable times and environmental conditions (Table 1).

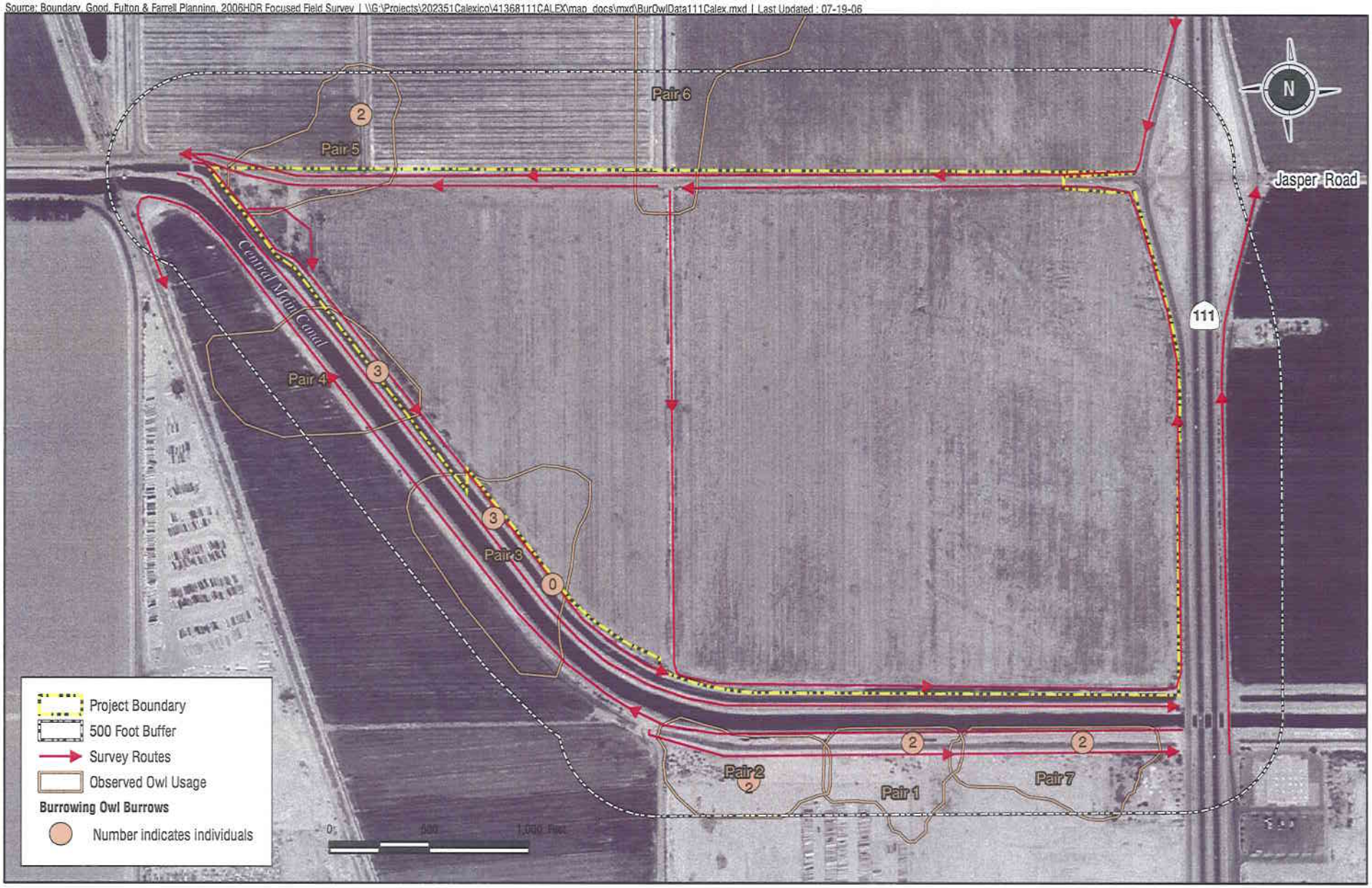
Table 1. Survey Dates, Times, and Environmental Conditions

Date	Start Time	End Time	Temp (°F)	Wind (mph)	Cloud Cover
05/23/06	0630	1130	66 – 85	0 – 3	Clear Skies
05/23/06	1530	2000	79--94	0 -- 5	Clear Skies
05/24/06	0700	1100	77 – 95	0 – 4	Clear Skies
05/24/06	1730	2010	85 -- 99	0 – 4	Clear Skies
05/25/06	1800	2015	87 – 101	0 –12	Clear Skies
05/26/06	0700	1100	70 – 87	2 – 5	Clear Skies

Guidelines presented in the California Department of Fish and Game (CDFG) Staff Report (1995) and the Burrowing Owl Consortium (1997) were followed during the survey. Per the guidelines, the project area and a 150-meter (500-foot) buffer surrounding the site were surveyed where appropriate habitat was found (Figure 5). Potential habitat was limited to areas that contained earthen berms, including the edges of agricultural fields, irrigation canals and ditches, and dirt roads. A 100 percent coverage survey of suitable habitat located within the 150-meter buffer within the project area was conducted using 5 meter wide transects. Survey routes are depicted in Figure 5.

During the focused western burrowing owl survey, locations and numbers of burrowing owls and active burrows were documented using a Trimble GeoXT GPS unit. Burrowing owl burrows were considered active if any of the following were found at the burrow: burrowing owls, or recent owl sign (e.g., owl feathers, pellets, or prey remains) (Figure 4 and Appendix A – Photographs 7 through 10).

Source: Boundary, Good, Fulton & Farrell Planning, 2006HDR Focused Field Survey | \\G:\Projects\202351Calexico\41368111CALEX\map_docs\mxd\BurOwlData111Calex.mxd | Last Updated : 07-19-06



Burrowing Owl Map

FIGURE 5

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After the initial identification, owls were observed during subsequent site visits, but not more frequently than during one site visit per day. Observations were made using 10 power binoculars and a Fujinon Super 80ED 20 – 60 power spotting scope. Pursuant to the 1995 CDFG Staff Report the 1997 Burrowing Owl Consortium guidelines, the observations were made in the morning and evening hours.

5.3.4.1.3 Western Burrowing Owl Survey Results

The 111 Calexico Place Development project site supports three active burrows, supporting two nesting pairs (identified in this report by the order in which they were observed) each with one chick (Pairs 3 and 4). Four active burrows are found within the 150-meter buffer and currently provide nesting habitat for four pairs (Pairs 1, 2, 5, and 7) (Figure 5). In addition, one burrow located outside of the 150 meter buffer area, was found along the irrigation canal and dirt road associated with the agricultural operation located to the north of Jasper Road, provided nesting habitat for a pair (Pair 6) and several young (Figure 5). During the course of the survey, observations were focused on the owls located within the project area (Pairs 3 and 4).

Given the time of year, it was assumed that the pairs observed were either feeding chicks or incubating eggs. During the observational periods, typically one adult owl was in the burrow while the mate was foraging or perched outside of the burrow. Feeding of young was observed with Pair 6. Given the high level of movement during the observational periods, it was possible to delineate use territories during the survey (Figure 5).

Several interesting observations were made during the survey. It was noted that the western burrowing owls appeared to be habituated to the lack of avian predators and were using high and exposed perches such as telephone and power poles for relatively long periods of time. The lack of raptors appears be a result of rodent eradication programs reducing the number of available prey items necessary to sustain large raptors. Despite ambient temperatures of 100° Fahrenheit, Pair 6 was observed actively foraging during the early evening (1800-1830 hours). It is believed that the project area would have more western burrowing owl use if the area was under active agricultural practice.

5.3.4.1.4 Pair-Specific Western Burrowing Owl Observations

Pair 1 – Off-site burrow, within survey buffer. No offspring were observed with this pair. The burrow was located in the slope of the earthen bank of the irrigation canal to the south of the Central Main Canal (Figure 5). Pair 1 was often observed perching on a stack of haybales, a large pile of concrete rubble, and on top of parked semi-truck trailers. In addition to the burrow, cover sites were used within the disturbed Tamarisk scrub, and underneath the semi-truck trailers. Use territory overlap was noted with Pairs 2 and 7.

Pair 2 – Off site burrow, within survey buffer. No offspring were observed with this pair. The burrow was located in an earthen berm within disturbed saltbush scrub habitat located west of the semi-truck trailer storage yard (Figure 5 and Photograph 10 in Appendix A). Pair 2 was often observed perching outside of their burrow on top of a pile of discarded tires, occasionally on a stack of haybales, and on top of the semi-truck trailers. In addition to the burrow, cover sites were used within the disturbed saltbush scrub, and underneath semi-truck trailers. Use territory overlap was noted with Pair 1.

Pair 3 – Onsite burrow. Primary and alternate active burrow were located within the earthen berm associated with the irrigation ditch bordering the project area (Figure 5). One juvenile owl was associated with this burrow in addition to the pair. Foraging and perching occurred along the irrigation canals and within the fallow agricultural field.

Pair 4 – Onsite burrow. Primary burrow located within the earthen berm associated with the irrigation ditch bordering the project area (Figure 5 and Photograph 7 in Appendix A). One juvenile owl was associated with this burrow in addition to the pair. Foraging occurred within the active agricultural field to the west of the burrow. Perching was observed primarily outside of the burrow and on power poles located west of the Central Main Canal.

Pair 5 – Off site burrow, within survey buffer. No offspring were observed with this pair. The burrow was located in an earthen berm associated with the irrigation ditch north of the property boundary (Figure 5 and Photographs 8 and 9 in Appendix A). Perching was only observed adjacent to the burrow. Foraging occurred within the active agricultural fields to the east and west of the burrow and occasionally within the northwestern corner of the project area containing Tamarisk Scrub, disturbed cismontane alkali marsh, and ruderal vegetation communities.

Pair 6 – Off-site burrow, outside of survey buffer. The burrow is located in the bank of an irrigation canal north of the project area and outside of the survey buffer, but the use territory extends into the project area (Figure 5). The exact location of the burrow was not determined as it was located outside of the 500-foot survey buffer. As many as six western burrowing owls were observed at this location. Frequent foraging activity was observed primarily to the east of the burrow, within the active agricultural field to the north of the project boundary. Although perching occurred primarily along the irrigation canal, perching owls were frequently seen just north of the project area on a stack of hay bales and on a metal post (Photograph 11 in Appendix A). In addition, a burrowing owl from this pair was observed perching on a utility pole along the northern boundary of the project area (Photograph 12 in Appendix A).

Pair 7 – Off site burrow, within survey buffer. No offspring were observed with this pair. The burrow was located in the earthen bank of the irrigation canal to the south of the Central Main Canal, located east of the semi-truck trailer storage yard (Figure 5 and Photograph 13 in Appendix A). Pair 7 was frequently seen perching on a large pile of concrete rubble, on a telephone pole, but seldomly observed perching outside of their burrow. It is noteworthy to mention that it could not be determined that this was a separate pair from Pair 1 until the last observational period as a result of several factors: use territory overlap with Pair 1, frequent use of the western portion of their territory, and commonly observed perching away from their burrow.

5.3.5 WILDLIFE DISPERSAL CORRIDORS AND LINKAGES

Wildlife movement corridors, also called dispersal corridors or landscape linkages, are linear features whose primary wildlife function is to connect at least two significant habitat areas (Beier and Loe 1992). Other definitions of corridors and linkages are as follows:

- A corridor is a specific route that is used for movement and migration of species. A corridor may be different from a "linkage" because it represents a smaller, or narrower avenue for movement. "Linkage" shall mean an area of land which supports or contributes to the long-term movement of wildlife and genetic material.

- A linkage is a habitat area that provides connectivity between habitat patches as well as year-round foraging, reproduction, and dispersal habitat for resident plants and animals.

Wildlife corridors and linkages are important features in the landscape, and the viability and quality of a corridor or linkage are dependent upon site-specific factors. Topography and vegetative cover are important factors for corridors and linkages. These factors should provide cover for both predator and prey species. They should direct animals to areas of contiguous open space or resources and away from humans and development. The corridor or linkage should be buffered from human encroachment and other disturbances (e.g., light, loud noises, domestic animals) associated with developed areas that have caused habitat fragmentation (Schweiger, et al. 2000). Wildlife corridors and linkages may function at various levels depending upon these factors and as such, the most successful of wildlife corridors and linkages will accommodate all or most of the necessary life requirements of predator and prey species. Width and connectivity are assumed to be the primary factors of a "good" corridor (Forman 1987) and with that connectivity should also be included the concept of stepping stone reserves for pollinators, seed dispersers, and other flying species such as birds, bats, and insects (Soulé 2003). The level of connectivity needed to maintain a population of a particular species will vary with the demography of the population, including population size, survival and birth rates, and genetic factors such as the level of inbreeding and genetic variance (Rosenberg et al. 1997).

Areas not considered as functional wildlife dispersal corridors or linkages are typically obstructed or isolated by concentrated development and heavily traveled roads, known as "chokepoints." One of the worst scenarios for dispersing wildlife occurs when a large block of habitat leads animals into "cul-de-sacs" of habitat surrounded by development. These habitat "cul-de-sacs" frequently result in adverse human/animal interface.

The 111 Calexico Place Development project area does not currently provide for future protection of wildlife movement corridors and linkages. The project site does not currently function as a wildlife corridor or linkage based on the current conditions of high volume of vehicle traffic, surrounding rapid development, habitat disturbance and degradation, human presence (residential), and agricultural practices.

6.0 DIRECT AND INDIRECT IMPACTS (TEMPORARY AND PERMANENT) TO BIOLOGICAL RESOURCES

Impacts assessed to biological resources include direct, indirect, and cumulative impacts of both a temporary or permanent nature. These impacts are defined as follows:

- Direct impacts are those that affect the biological resources such that those resources are not expected to recover to their pre-impacted state (e.g., permanent development of a site through grading and building of structures, etc.). Direct impacts may be considered temporary or permanent (e.g., the installation of a pipeline is considered a direct and temporary impact, whereas the construction of a building is considered a direct and permanent impact).
- Indirect impacts occur secondary to the project's direct impacts, such as changes in general plant composition due to loss of substrate or other factors that may affect resources such as noise, dust, lighting, etc. Indirect impacts may be considered temporary or permanent depending upon the situation, for example, the dust or noise levels associated with the

construction of the new building is considered an indirect and temporary impact, whereas the support functions of a structure, such as the parking lot, will have indirect and permanent impacts such as lighting, and storm water runoff.

- Cumulative impacts are assessed to determine the long term cumulative effects of the specific project's implementation, as well as any other projects occurring within the foreseeable future on a local and regional scale (e.g., incremental habitat or species reduction).

Impacts to biological resources associated with the proposed 111 Calexico Place Development Project are assessed as being either "significant" or "less than significant" pursuant to CEQA. In accordance with Appendix G of the CEQA Guidelines, a significant impact would occur if the project would: (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 CDFG or the USFWS; (b) have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies or regulations or by CDFG or USFWS; (c) have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act; (d) interfere substantially with the movement of native resident or migratory fish or wildlife species, wildlife corridors, or wildlife nursery sites; (e) conflict with local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance; and (f) conflict with the provisions of an approved local, regional, or state habitat conservation plan.

Permanent and direct impacts will occur within the entire 218.37 acres of the proposed 111 Calexico Place Development Project site (Table 2). Direct impacts will not occur to the irrigation canals and associated berms located in the southern portion of the property (Figure 3).

Three active burrowing owl burrows, with two pairs (Pairs 3 and 4) and their young, are found within the 111 Calexico Place Development project site. Given the timing of the survey (i.e., breeding season, during egg incubation and raising of chicks), it is likely that the two pairs (Pairs 3 and 4) of owls and juveniles (six individuals) represent a relatively accurate estimate of the number of resident owls occurring within the project site. However, within the 150-meter buffer for the project area, four additional burrows are found, providing habitat for four pairs of western burrowing owls (Pairs 1, 2, 5, and 7). Although the burrow for Pair 6 was located outside of the survey area, these owls were observed well within the 500-foot buffer and onto the northern portion of the project site (Figure 5). In conclusion, based on use territories, four pairs (Pairs 3, 4, 5, and 6) of western burrowing owls will be affected by direct and indirect impacts as a result of the proposed development of 111 Calexico Place. In addition, three pairs (Pairs 1, 2, and 7) of burrowing owls will be affected by indirect impacts with the construction of the proposed project.

With the proposed development expected to encompass the project site, it is likely that the burrowing owls found within the project site and/or using the 150-meter buffer area will be directly impacted by the proposed construction activities. In addition, these burrowing owls may be indirectly impacted by the increased light, traffic, and noise associated with the development of the project area.

Table 2. Acreage Summary and Proposed Project Impacts and Mitigation

Habitat Type / Feature	Existing Acreage	Proposed Permanent Impacts (Onsite) (Acres)	Proposed Permanent Impacts (Offsite)	Proposed Temporary Impacts (Onsite)	Proposed Temporary Impacts (Offsite)	Required State, Federal, or Local Mitigation
Active Agriculture (includes Western Burrowing Owl)	1.50	1.50	N/A	N/A	N/A	Passive Relocation of Western Burrowing Owls[1]
Fallow Agriculture (includes Western Burrowing Owl)	201.50	201.50	N/A	N/A	N/A	Passive Relocation of Western Burrowing Owls[1]
Arrow-weed scrub (includes Western Burrowing Owl and Yellow Warbler)	1.98	1.98	N/A	N/A	N/A	Passive Relocation of Western Burrowing Owls[1]. No formally established mitigation guidelines have been established for Yellow Warbler
Tamarisk Scrub (includes Western Burrowing Owl and Yellow Warbler)	0.84	0.84	N/A	N/A	N/A	Passive Relocation of Western Burrowing Owls[1]. No formally established mitigation guidelines have been established for Yellow Warbler
Disturbed Cismontane Alkali Marsh (includes Western Burrowing Owl)	0.22	0.22	N/A	N/A	N/A	Passive Relocation of Western Burrowing Owls[1]
Ruderal (includes Western Burrowing Owl)	8.83	8.83	N/A	N/A	N/A	Passive Relocation of Western Burrowing Owls[1]
Disturbed/Developed (includes Western Burrowing Owl)	3.50	3.50	N/A	N/A	N/A	Passive Relocation of Western Burrowing Owls[1]
TOTALS	**218.37**	**218.37**	**N/A**	**N/A**	**N/A**	

[1] Note: No approved western burrowing owl mitigation banks currently exist.

7.0 REQUIRED AND RECOMMENDED MITIGATION MEASURES

7.1 WESTERN BURROWING OWL MITIGATION MEASURES

Mitigation requirements for impacts to western burrowing owls are currently under review by USFWS and CDFG. A regional Habitat Conservation Plan (HCP) that would include mitigation requirements for impacts to western burrowing owls is being planned. It is recommended that the mitigation requirements be reviewed during project planning.

The western burrowing owl is a migratory species protected by international treaty under the Migratory Bird Treaty Act (MBTA) of 1918 (16 U.S.C. 703-711). The MBTA makes it unlawful to take, possess, buy, sell, purchase, or barter any migratory bird listed in 50 C.F.R. Part 10, including feathers, or other parts, nests, eggs, or products, except as allowed by implementing regulations (50 C.F.R 21). Sections 3505, 3503.5, and 3800 of the California Department of Fish and Game Code prohibit the take, possession, or destruction of birds, their nests, or eggs. Disturbance that

causes nest abandonment and/or loss of reproductive effort (e.g., killing or abandonment of eggs or young) may be considered take and is potentially punishable by fines or imprisonment (CDFG 1995). Project-related disturbance at active nesting territories must be reduced or eliminated during the nesting cycle (February 1 to August 31) to avoid violation of the take provisions of these laws.

1. Due to the presence of suitable habitat onsite for the western burrowing owl, a pre-construction survey is recommended pursuant to CDFG protocols to ensure that any owls that may be occupying the site are identified. The pre-construction survey will need to be performed within 30 days of the start of construction. An experienced and qualified biologist shall conduct this survey. Should western burrowing owls be present on the site prior to construction, CDFG will be contacted and consulted.

2. A 75-meter (250-foot) no construction buffer between onsite construction and peripheral nesting pairs with burrows is currently required from February 1 to August 31. Prior to any earth moving, any onsite burrows need to be evaluated by an experienced western burrowing owl biologist and confirmed as unoccupied before being graded. This can be accomplished by a combination of behavioral observations, diagnostic sign at the burrow entrances, and fiber optic scope observation of the burrow. Outside of the breeding season and in consultation with CDFG, passive relocation of western burrowing owls may be accomplished through the construction of artificial burrows at an adjacent offsite and pre-approved location. CDFG is currently allowing "passive relocation" until such time as mitigation land banks or approved conservation banks are dedicated (Kim Nicol, CDFG, October 2005, pers. comm.) (Table 2).

3. At a recent Burrowing Owl Conservation Group meeting, (held on March 9, 2006), it was stated by CDFG Biologist Ms. Nicol that the Lead Agency, in this case the City of Calexico, will make the final determination on which mitigation measures will be complied with pursuant to the CDFG 1995 Staff Report on Burrowing Owls (Nichol, pers. comm., 2006). These options include passive relocation and/or establishing or paying into an approved mitigation bank. Should a mitigation bank be established, 6.5 acres would be needed to compensate for the loss of each pair or individual owl.

7.2 Yellow Warbler Mitigation Measures

The yellow warbler is a migratory species protected by international treaty under the Migratory Bird Treaty Act (MBTA) of 1918 (16 U.S.C. 703-711). The MBTA makes it unlawful to take, possess, buy, sell, purchase, or barter any migratory bird listed in 50 C.F.R. Part 10, including feathers, or other parts, nests, eggs, or products, except as allowed by implementing regulations (50 C.F.R 21). Sections 3505, 3503.5, and 3800 of the California Department of Fish and Game Code prohibit the take, possession, or destruction of birds, their nests, or eggs. Disturbance that causes nest abandonment and/or loss of reproductive effort (e.g., killing or abandonment of eggs or young) may be considered take and is potentially punishable by fines or imprisonment (CDFG 1995). Project-related disturbance at active nesting territories must be reduced or eliminated during the nesting cycle (February 1 to August 31) to avoid violation of the take provisions of these laws.

1. To avoid impacts to the yellow warbler and other nesting birds, the removal of potential nesting vegetation (i.e., trees, shrubs, ground cover, etc.) supporting migratory birds shall be

avoided during the nesting season (if feasible), recognized from February 1 through August 31.

2. If vegetation removal must occur during the nesting season, a qualified biologist shall conduct a migratory nesting bird survey to ensure that vegetation removal would not impact any active nests. Surveys must be conducted no more than three days prior to vegetation removal. If active nests are identified during nesting bird surveys, then the nesting vegetation would be avoided until the nesting event has completed and the juveniles can survive independently from the nest. The biologist shall flag the nesting vegetation and establish an adequate buffer (e.g., construction fencing) around the nesting vegetation. The size of the buffer would be based on the type of bird nesting (i.e., raptors shall be afforded larger buffers). Clearing/grading shall not occur within the buffer until the nesting event has completed.

7.3 CONSTRUCTION-RELATED RESOURCE PROTECTION MEASURES

The following measures are provided to reduce potentially significant onsite and offsite indirect and direct temporary impacts:

1. Activities, including staging areas, equipment access, and disposal of temporary placement of excess fill, shall be prohibited within drainages outside of the identified construction area. Runoff from project-related hardscape surfaces shall be retained onsite, and no discharge of contaminated materials shall be directed into offsite areas pursuant to stormwater pollution prevention measures.

Implementation of the above measures will reduce all direct and indirect impacts to "below a level of significance," under CEQA. No other mitigation is required.

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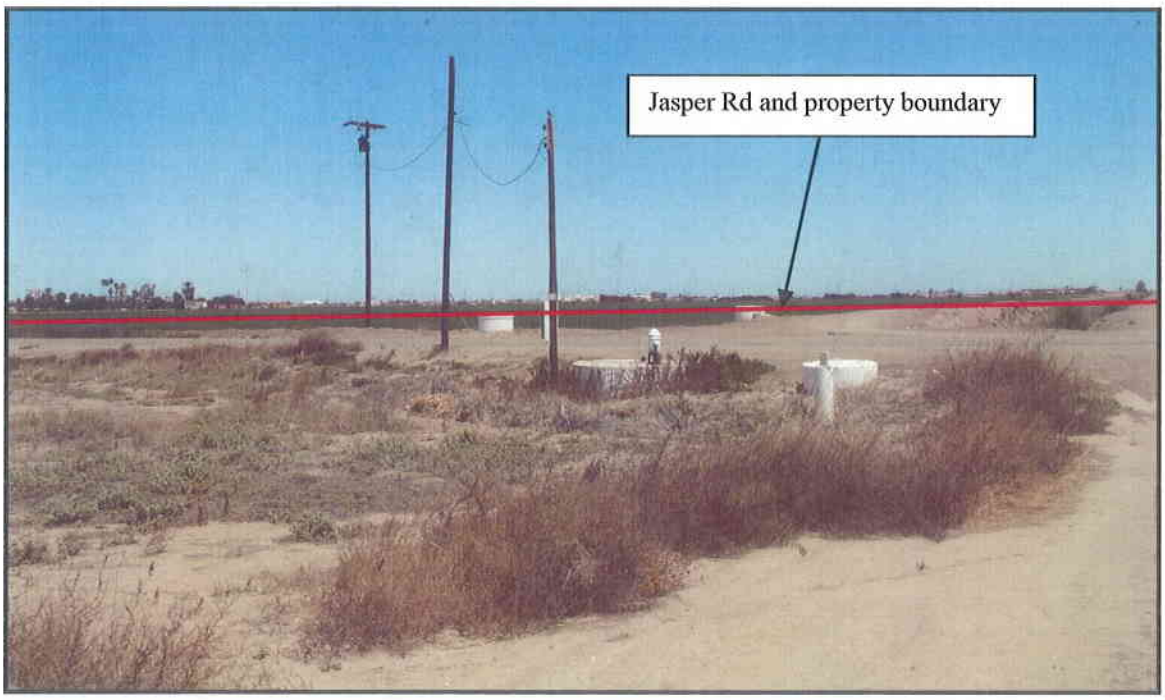
APPENDIX A

Site Photographs

Photograph 1. 111 Calexico Place Development project. Northerly view of fallow agricultural field from southern property boundary.

Photograph 2. 111 Calexico Place Development project. Northerly detailed view of fallow agricultural field from southern property boundary.

Photograph 3. 111 Calexico Place Development project. Easterly view of fallow agricultural field from central portion of project site.



Photograph 4. 111 Calexico Place Development project. Northerly view of on-site ruderal vegetation and adjacent off-site active agriculture.

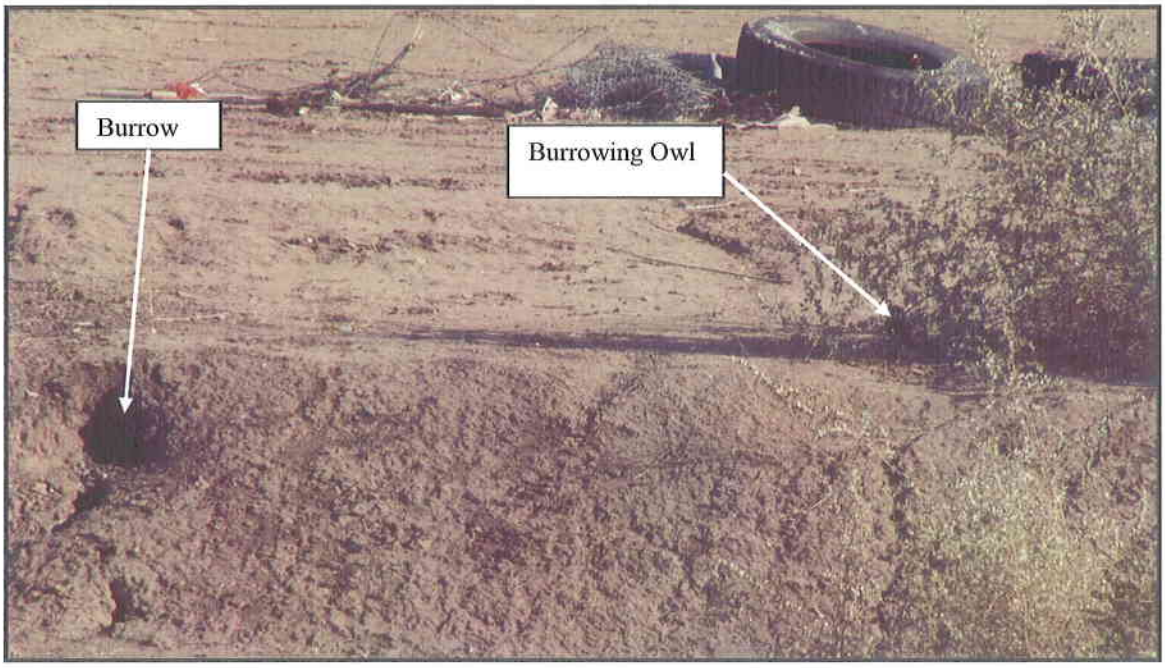
Photograph 5. 111 Calexico Place Development project. Westerly view of arrow-weed scrub along southern property boundary.

Photograph 6. 111 Calexico Place Development project. Easterly view of off-site irrigation canal with tamarisk scrub.

Photograph 7. 111 Calexico Place Development project. Southeasterly view of on-site active burrowing owl burrow (Pair 4) along southwestern property boundary.

Photograph 8. 111 Calexico Place Development project. Southerly view of off-site active burrowing owl burrow (Pair 5) within active agriculture north of project site.

Photograph 9. 111 Calexico Place Development project. Detailed view of off-site active burrowing owl burrow (Pair 5) within active agriculture north of project site.



Photograph 10. 111 Calexico Place Development project. Southerly view of off-site active burrowing owl burrow (Pair 2) within disturbed area south of project site.

Photograph 11. 111 Calexico Place Development project. Northerly view of off-site burrowing owl (Pair 6) within active agriculture area to the north of the project site.

Photograph 12. 111 Calexico Place Development project. Detailed view of off-site burrowing owl (Pair 6) on powerpole perch along the northern property boundary.

Photograph 13. 111 Calexico Place Development project. Detailed view of off-site burrowing owl (Pair 7) along irrigation canal berm south of the project site.

APPENDIX B

Potentially Occurring Botanical and Zoological Species

APPENDIX B
Potential for Occurrence of Sensitive Botanical and Zoological Species

Species	Sensitivity[1] Status	Preferred Habitat	Observed Onsite	Potential for Occurrence
Botanical Species				
Mud Nama *Nama stenocarpum*	CNPS: 2	Grows in intermediate wet areas, marshes, swamps, lake margins, and riverbanks; annual herb blooms January – July, less than 50 meters in elevation	No	Low to None – Based on elevation and appropriate soil types
Abrams Spurge *Chamaesyce abramsiana*	CNPS: 2	Mohavean desert scrub, Sonoran desert scrub / sandy; annual herb blooms September – November; 5 to 915 meters in elevation	No	Low to None – Based on elevation and appropriate soil types
Zoological Species				
American Badger *Taxidea taxus*	State: CSC	Drier open stages of most shrub, forest, and herbaceous habitats with frail soil	No	None - Based on habitat type and lack of connectivity to open desert lands
Western Yellow Bat *Lasiurus xanthinus*	State: CSC	Believed to occur throughout the Imperial Valley in the palm oases and in residential areas with untrimmed palm trees.	No	Low – No roosting sites available, however may forage over the site.
Flat-tailed horned lizard *Phrynosoma mcallii*	Federal: FSC State: CSC	Restricted to areas of fine sand and sparse vegetation in desert washes and desert flats. It is probably most abundant in areas of creosote bush and is found in desert scrub, wash, succulent shrub, and alkali scrub habitats.	No	None – Based on lack of appropriate sandy and sandy stabilized soils and lack of connectivity to flat-tailed horned lizard Management Areas
Western Burrowing Owl *Athene cunicularia hypugea*	Federal: FSC / MBTA State: CSC	Short grass prairies, grasslands, lowland scrub, agricultural lands (particularly rangelands), coastal dunes, desert floors, and some artificial, open areas as a yearlong resident. Occupies abandoned ground squirrel burrows as well as artificial structures such as culverts and underpasses.	Yes	High - Based on appropriate features such as road and irrigation ditch berms for burrows, topography, and recent focused survey results
Mountain Plover *Charadrius montanus*	Federal: FSC / MBTA State: CSC	Short grass prairies, shrub-steppe, agricultural lands in the Imperial Valley and Central Valley during the winter months.	No	Low to High – Determinate upon timing of harvests, burning, or grazing during the winter season.
Yellow Warbler *Dendroica petechia brewsteri*	Federal: MBTA State: CSC	Riparian and riverine systems.	Yes	Moderate – Found within arrow-weed and tamarisk scrub habitat on-site.

Notes:

1 **Federal**
FE – Federally Endangered
FT – Federally Threatened
FSC – Federal Species of Concern
MBTA – Migratory Bird Treaty Act

State
SE – State Endangered
ST – State Threatened
CSC – California Species of Concern
CFP – California Fully-Protected Species

CNPS
List 1B – Plants rare, threatened, or endangered in California
List 2 – Plants rare, threatened, or endangered in California, but more common elsewhere
List 3 – Plants about which more information is needed

APPENDIX C

Botanical and Zoological Species

APPENDIX C
Botanical and Zoological Species Identified on the 111 Calexico Place Development Project

Common Name	Scientific Name
Fallow Agriculture	
Bermuda Grass	*Cynodon dactylon*
Millett	*Panicum miliaceum*
Sudan Grass	*Sorghum vulgare* var. *sudanese*
Emory Baccharis	*Baccharis emoryii*
Arrow-weed Scrub	
Arrow Weed	*Pluchea sericea*
Tamarisk	*Tamarix* sp.
Tamarisk Scrub	
Tamarisk	*Tamarix* sp.
Saltgrass	*Distichlis spicata*
Five-hooked Bassia	*Bassia hypssopifolia*
Cismontane Alkali Marsh	
Saltgrass	*Distichlis spicata*
Ruderal	
Black Mustard	*Brassica nigra*
Alkali Mallow	*Malvella leprosa*
Goosefoot	*Chenopodium murale*
Prickly Sow-Thistle	*Sonchus asper*
Bermuda Grass	*Cynodon dactylon*
Night Shade	*Atropa belladonna*
Tumbling pigweed	*Amaranthus albus*
Fivehooked Bassia	*Bassia hypssopifolia*
Pigweed	*Amaranthus retroflexus*
Field Bindweed	*Convolvolus arvensis*
Telegraph Weed	*Heterotheca grandiflora*
Wild Oat	*Avena fatua*
Cultivated Oat	*Avena sativa*
Wire Lettuce	*Stephanomeria* sp.
Field Mustard	*Hirshfeldia incana*
Salt Heliotrope	*Heliotropium curassavicum*
Horseweed	*Conyza canadensis*
Arrowweed	*Pluchea sericea*
Cheeseweed	*Malva neglecta*
Yellow Sweet Clover	*Melilotus indicus*
Horehound	*Marrubium vulgare*

Cattails	*Typha* sp.
Prickly Lettuce	*Lactuca serriola*
Russian Thistle	*Salsola tragus*

Disturbed/Developed

California Fan Palm	*Washingtonia filifera*
Night Shade	*Atropa belladonna*
Tamarisk	*Tamarix* sp.
Bermuda Grass	*Cynodon dactylon*
Pigweed	*Amarathus retroflexus*
Fivehooked Bassia	*Bassia hypssopifolia*
Watergrass	*Echinochloa crus-galli*
Prickly Sow-Thistle	*Sonchus asper*
Alkali Mallow	*Malvella leprosa*
Field Bindweed	*Convolvolus arvensis*
Tumbling Pigweed	*Amaranthus albus*
Goosefoot	*Chenopodium murale*
Telegraph Weed	*Heterotheca grandiflora*
Curly Dock	*Rumex crispus*
Saltgrass	*Distichlis spicata*
Wild Oat	*Avena fatua*
Cultivated Oat	*Avena sativa*
Wire lettuce	*Stephanomeria* sp.
Black Mustard	*Brassica nigra*
Field Mustard	*Hirshfeldia incana*
Salt Heliotrope	*Heliotropium curassavicum*
Ditchgrass	*Ruppia cirrhosa*
Horseweed	*Conyza canadensis*
Arrowweed	*Pluchea sericea*
Cheeseweed	*Malva neglecta*
Nutsedge	*Cyperus* sp.
Yellow Sweet Clover	*Melilotus indicus*
Cattails	*Typha* sp.

BIRDS

Black-Crowned Night Heron	*Nycticorax nycticorax*
Green Heron	*Butorides virescens*
Cattle Egret	*Bubulcus ibis*
Great Egret	*Ardea alba*
Snowy Egret	*Egretta thula*
Mallard	*Anas platyrhynchos*
Turkey Vulture	*Cathartes aura*
American Kestrel	*Falco sparverius*
Ring-necked Pheasant	*Phasianus colchicus*
American Coot	*Fulica americana*
Snowy Plover	*Charadrius alexandrius*
Killdeer	*Charadrius vociferus*
Black-necked Stilt	*Himantopus mexicanus*
Rock Dove	*Columba livia*
Mourning Dove	*Zenaida macroura*

White-Winged Dove	*Zenaida asiatica*
Common Ground Dove	*Columbina passerina*
Greater Roadrunner	*Geococcyx californianus*
Burrowing Owl	*Athene cunicularia*
Lesser Nighthawk	*Chordeiles acutipennis*
Black Phoebe	*Sayornis nigricans*
Horned Lark	*Eremophila alpestris*
Cliff Swallow	*Petrochelidon pyrrhonota*
Northern Rough-winged Swallow	*Stelgidopteryx serripennis*
Yellow Warbler	*Dendroica petechia*
Western Meadowlark	*Sturnella neglecta*
Red-winged Blackbird	*Agelaius phoeniceus*
Great-tailed Grackle	*Quiscalus mexicanus*
House Finch	*Carpodacus mexicanus*

Mammals

Coyote	*Canis latrans*
Pocket Gopher	*Thomomys* sp.
Desert Cottontail	*Sylvilagus audubonii*

Reptiles and Amphibians

Gophersnake	*Pituophis catenifer*
Bullfrog	*Rana catesbiana*
Long-Nosed Leopard Lizard	*Gambelia wislizenii*
Turtle	Unknown