General Biological Resources Assessment
Vista Del Agua Project
and Off-site Infrastructure Improvements

City of Coachella,
Riverside County, California

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Biological Resources Assessment for the Vista Del Agua Development Project and Off-site Infrastructure Improvements City of Coachella, Riverside County, California

1.0 INTRODUCTION

This report presents the results of a general biological resources assessment conducted by AMEC Environment and Infrastructure (AMEC) for the proposed CVP Palm Springs, LLC Vista Del Agua Project (project) located in the City of Coachella, Riverside County, California. AMEC was contracted to perform this work by United Engineering Group. Additionally, United Engineering Group contracted AMEC to perform a general biological resources assessment for approximately 11,600 feet of off-site street, water, and sewer line improvements in October 2014. This report presents the regulatory framework, methods, and results of baseline biological surveys for the proposed project and off-site infrastructure improvements.

1.1 Project Description

The proposed project includes developing eleven parcels in the City of Coachella for residential, commercial, park, and open space development. The parcels are listed on the Riverside County Land Information System (online) as: Assessor's Parcel Number (APN) 1) 603-150-006 & -007, 2) 603-150-009, 3) 603-150-010, 4) 603-150-011, 5) 603-150-012, 6) 603-150-008, 7) 603-130-004, 8) 603-130-003, 9) 603-130-009, 10) 603-122-005, and 11) 603-150-004. The combined area of the twelve parcels encompasses 255.33 acres. The proposed project will include the development of single-family homes, multi-family attached and detached units, suburban retail, a neighborhood center, parks, and open space. AMEC biologists also surveyed approximately 11,600 feet of off-site street, water and sewer line improvement routes (see Map 4 in Appendix III) as an addendum to the main project site surveys. These consisted of linear segments located within the existing road bed of Avenue 48 (3,000 feet), Avenue 47 (3,500 feet), and an approximately 5,100 foot alignment that ran north/northwest from the western end of the Avenue 47 and 48 improvement alignments to a "tie in" point on Dillon Road. AMEC biologists surveyed an approximately 3,000 foot route located in the road bed of Avenue 48. This alignment extended west from the existing water tank and booster station adjacent to the southwest corner of the Vista del Agua project site across Tyler Street to a point in Avenue 48 approximately 1,700 feet west of Tyler Street. AMEC biologists also surveyed a similar route in the Avenue 47 road bed that extended from a point approximately 1,300 feet east of Tyler Street to a point in the extension of Avenue 47 approximately 2,200 feet west of Tyler Street (see Map 4 in Appendix III). The 5,100 foot north/northwest trending alignment mainly crossed active agricultural fields (okra); and some areas of fallow fields grown to dense grass, as well as a large area of cleared ground near the "tie in" with Dillon Road.

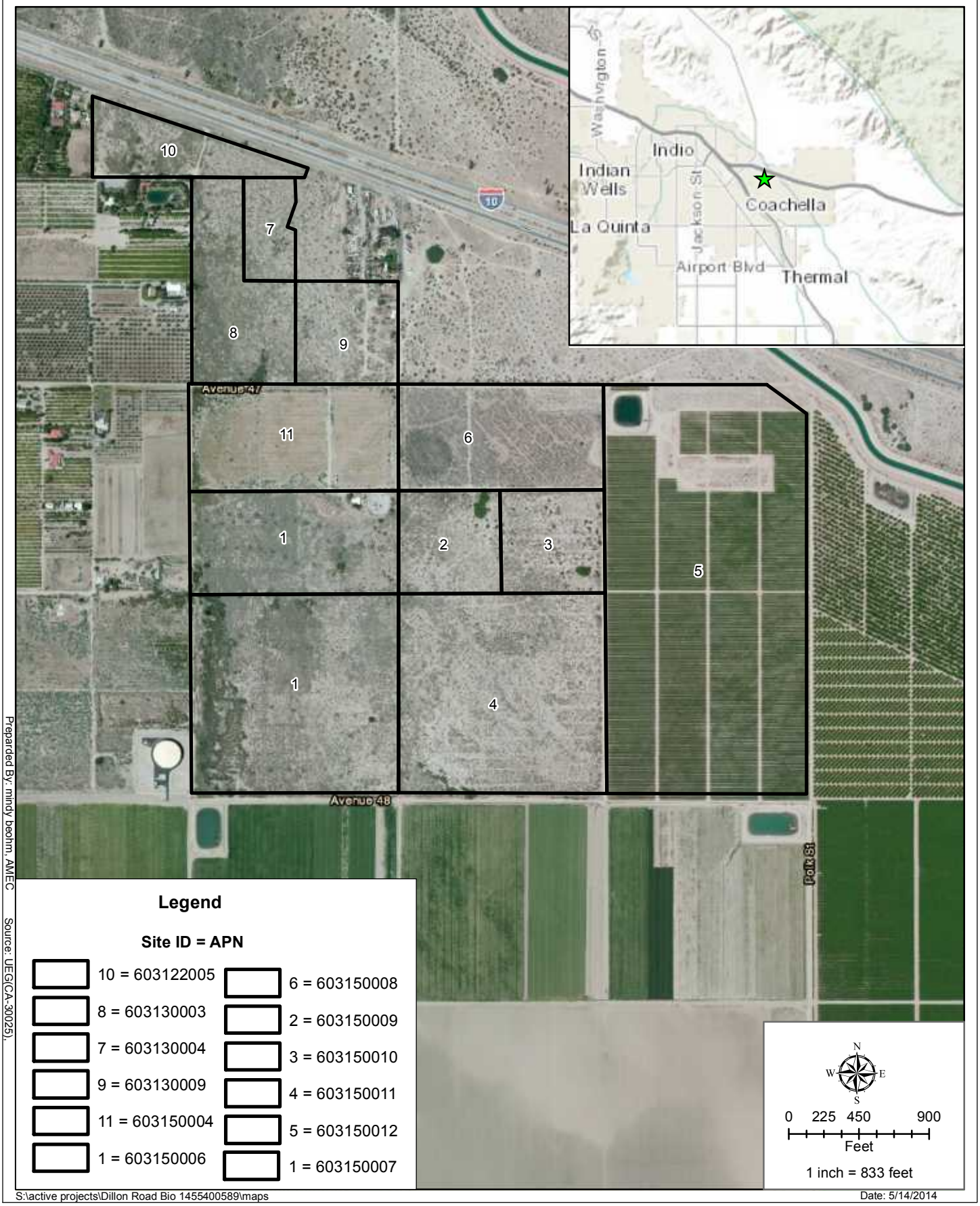
1.2 Project Site Description/Existing Conditions

As shown on Figures 1 and 2, the project is bounded by 48th Avenue on the south, Polk Street on the east, Interstate Highway 10 and undeveloped lands on the north, and low density residential development and agricultural lands on the west. Surrounding land uses consist of active agriculture on the east, west, and south; and the Interstate 10 corridor to the north of the site. The project is located within Section 28 of Township 5 South, Range 8 East, as shown on the United States Geological Survey (USGS) 7.5 minute *Indio, California* quadrangle. The geographic coordinates near the approximate "center" of the project site are 33.72405 North latitude and -116.16150 West longitude.

Elevations within the study area range from approximately 33 feet above mean sea level (MSL) near the northeast corner of the study area to 60 feet below MSL at the southwest corner of the project site, with the majority of the project site below sea level. The average rainfall for the area is 5.53 inches per year and the average snowfall is 0 inches per year (Western Regional Climate Center 2013). Weather data were recorded at the Palm Springs International Airport, approximately 20 miles west/northwest of the project site.

The USDA online Web Soil Survey (based on the Riverside County, Coachella Valley Area, California Soil Survey) (Soil Survey Staff 2014) was consulted to determine the soil types mapped as occurring within the project area. Soils within the study area occur on alluvial fans or flood plains. The study area contains four different soil types (Figure 3) including:

- Coachella fine sand, wet (CrA) – A nearly level soil that occurs on alluvial fans and flood plains of the Coachella Valley with 0 to 2 percent slopes. The water table is usually at a depth between 40 and 60 inches. Grapes are commonly grown on this soil type (this is the dominant soil type on Parcel 5 – see Map 2). It is composed of light olive gray fine sand.
- Gilman fine sandy loam, wet (GcA) – Another nearly level soil (0 to 2 percent slopes) that is on alluvial fans and flood plains of the Coachella Valley. This is another soil type on which grapes, citrus, and "truck crops" are often grown. The water table is usually at depth between 40 and 60 inches.
- Myoma fine sand (MaB) – This somewhat excessively drained soil occurs on alluvial fans with 0 to 5 percent slopes. It is composed of fine sand on the surface and sand below and the parent material is composed of windblown sandy alluvium. Another soil on which grapes are grown (this is the second-most prevalent soil type on Parcel 5).
- Carsitas cobbly sand (ChC) – This is a gently to moderately sloping soil that is on alluvial fans, valley fill, and remnants of dissected alluvial fans along the east, north, and west edges of the Coachella Valley. Cobbles and some stones cover 1 to 3 percent of the surface. Unlike the previous three soil types, this soil is not often used for crop production; and is only present on the northeast corner of the project site (see Map 2).



Prepared By: mindy beohm, AMEC

Source: UEG(CA-30025).

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Date: 5/14/2014

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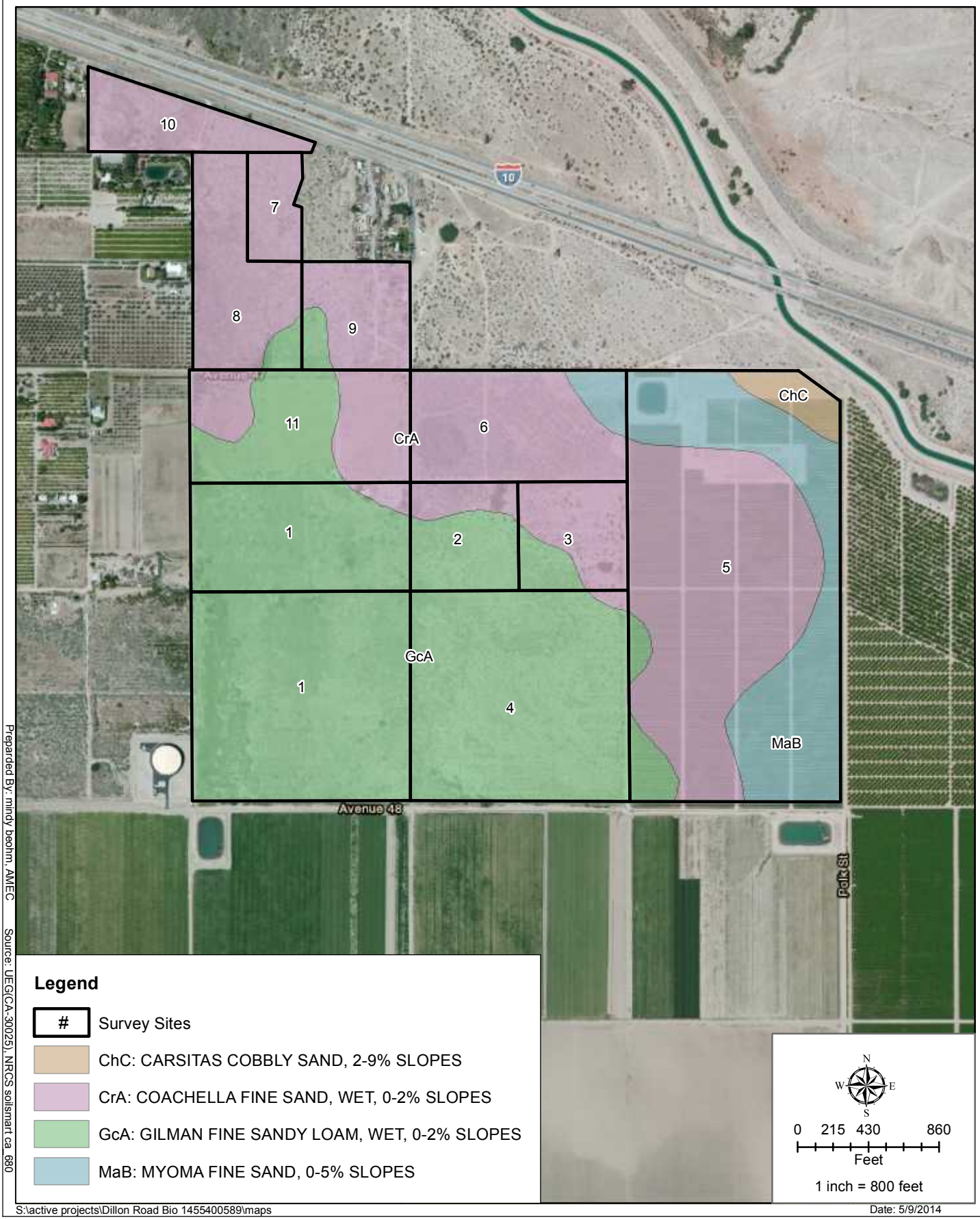
Vicinity & Location Map
Vista Del Agua Project

FIGURE
1



Prepared By: mindy beohm, AMEC

Source: UEG(CA-30025), NRCS soilsmart.ca 680

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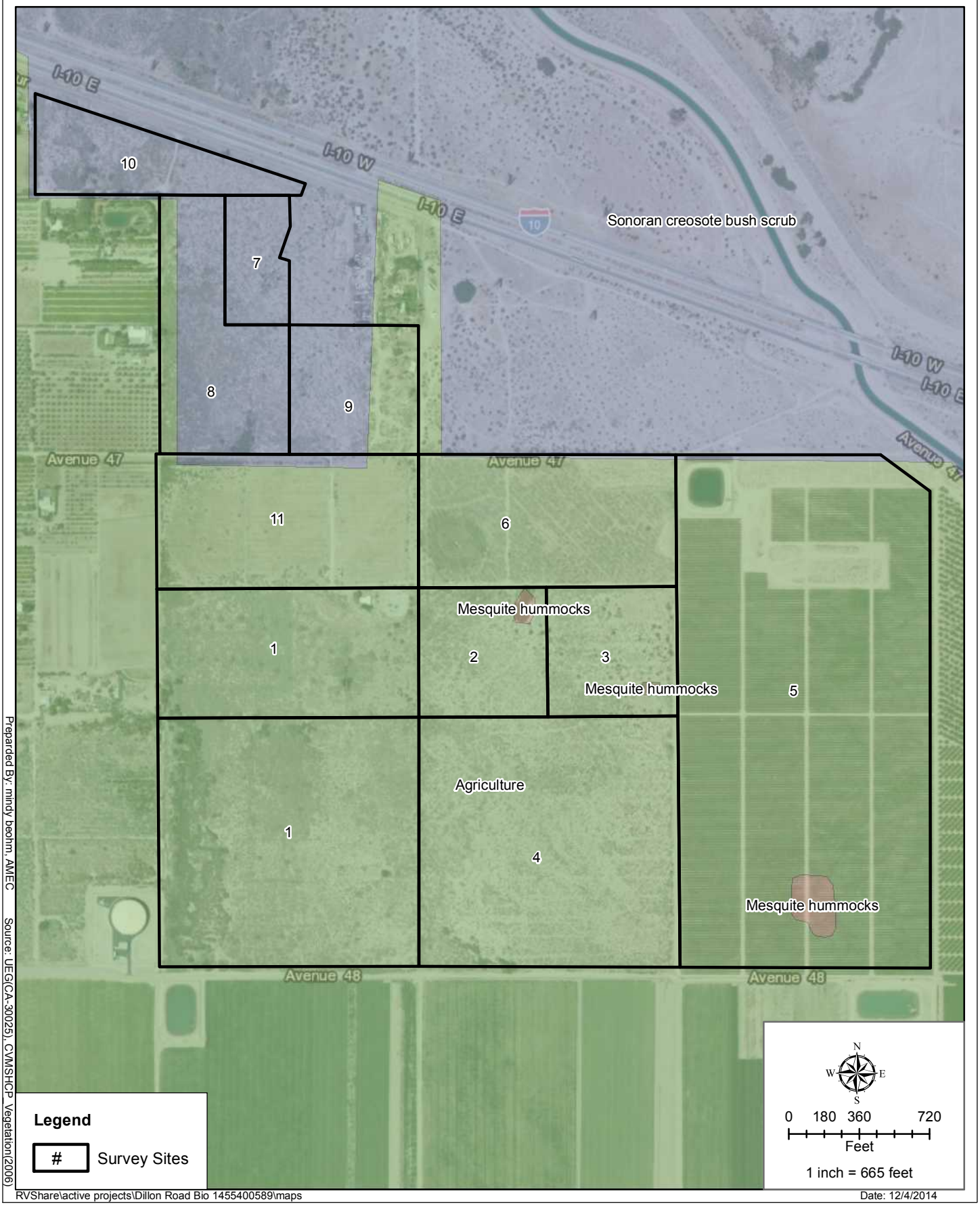
Soils Map
Vista Del Agua Project

FIGURE
2



Prepared By: mindy beohm, AMEC Source: UEG(CA-30025), CVMSHCP_Vegetation(2006)

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CVMSHCP Vegetation Map
Vista Del Agua Project

FIGURE
3

1.3 Regulatory Framework

1.3.1 Federal

Endangered Species Act (ESA) – The United States Fish and Wildlife Service (USFWS) and the National Marine Fisheries Service are the designated federal agencies accountable for administering the ESA. The ESA defines species as "endangered" or "threatened" and provides regulatory protection at the federal level.

- Section 9 of the ESA prohibits the "take" of listed (i.e., endangered or threatened) species. The ESA's definition of take is "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, collect, or attempt to engage in such conduct." Recognizing that take cannot always be avoided, Section 10(a) includes provisions for take that is incidental to, but not the purpose of, otherwise lawful activities. Specifically, Section 10(a)(1)(A) permits (authorized take permits) are issued for scientific purposes. Section 10(a)(1)(B) permits (incidental take permits) are issued for the incidental take of listed species that does not jeopardize the species.
- Section 7 (a)(2) requires federal agencies to evaluate the proposed project with respect to listed or proposed listed, species and their respective critical habitat (if applicable). Federal agencies must employ programs for the conservation of listed species and are prohibited from authorizing, funding, or carrying out any action that would jeopardize a listed species or destroy or modify its "critical habitat."

As defined by the ESA, "individuals, organizations, states, local governments, and other non-federal entities are affected by the designation of critical habitat only if their actions occur on federal lands, require a federal permit, license, or other authorization, or involve federal funding.

Section 10(a) of the ESA authorizes the issuance of incidental take permits and establishes standards for the content of habitat conservation plans (see Section 3.3 below).

Migratory Bird Treaty Act (MBTA) – Treaties signed by the U.S., Great Britain, Mexico, Japan, and the countries of the former Soviet Union make it unlawful to pursue, capture, kill, and/or possess, or attempt to engage in any such conduct to any migratory bird, nest, egg or parts thereof listed in the document. The Secretary of the Interior can issue permits for incidental take of migratory bird species. As with the ESA, the MBTA also allows the Secretary of the Interior to grant permits for the incidental take of these protected migratory bird species.

National Environmental Policy Act (NEPA) – If portions of a proposed project could fall under the jurisdiction of a federal agency (i.e., U.S. Army Corps of Engineers) they are subject to environmental review pursuant to NEPA. NEPA establishes certain criteria that must be adhered to for any project that is "financed, assisted, conducted or approved" by a federal agency. The federal lead agency is required to "determine whether the proposed action will significantly affect the quality of the human environment."

Section 404 of the Clean Water Act – This section of the Clean Water Act, administered by the U.S. Army Corps of Engineers (USACE), regulates the discharge of dredged and fill material

into “waters of the United States.” The USACE has created a series of nationwide permits that authorize certain activities within waters of the U.S. provided that the proposed activity does not exceed the impact threshold of 0.5 acre for nationwide permits, takes steps to avoid impacts to wetlands where practicable, minimizes potential impacts to wetlands, and provides compensation for any remaining, unavoidable impacts through activities to restore or create wetlands. For projects that exceed the threshold for nationwide permits, individual permits under Section 404 can be issued.

1.3.2 State

California Endangered Species Act (CESA) – This legislation is similar to the federal ESA, but it is administered by the California Department of Fish and Wildlife (CDFW – formerly Department of Fish and Game). The CDFW is authorized to enter into “memoranda of understanding” with individuals, public agencies, and other institutions to import, export, take, or possess state-listed species for scientific, educational, or management purposes. CESA prohibits the take of state-listed species except as otherwise provided in state law. Unlike the federal ESA, the CESA applies the take prohibitions to species currently petitioned for state-listing status (candidate species). State lead agencies are required to consult with CDFW to ensure that actions are not likely to jeopardize the continued existence of any state-listed species or result in the destruction or degradation of occupied habitat.

California Environmental Quality Act (CEQA) – The basic goal of CEQA is to maintain a high-quality environment now and in the future. The specific goals are for California's public agencies to:

1) identify the significant environmental effects of their actions; and, either
2) avoid those significant environmental effects, where feasible; or
3) mitigate those significant environmental effects, where feasible.

CEQA applies to "projects" proposed to be undertaken or requiring approval by state and local government agencies. Projects are activities that have the potential to have a physical impact on the environment and may include the enactment of zoning ordinances, the issuance of conditional use permits and the approval of tentative subdivision maps. Where a project requires approvals from more than one public agency, CEQA requires one of these public agencies to serve as the "lead agency."

A "lead agency" must complete the environmental review process required by CEQA. The most basic steps of the environmental review process are to:

1) Determine if the activity is a "project" subject to CEQA;
2) Determine if the "project" is exempt from CEQA;
3) Perform an Initial Study to identify the environmental impacts of the project and determine whether the identified impacts are "significant". Based on its findings of "significance", the lead agency prepares one of the following environmental review documents:

a) Negative Declaration if it finds no "significant" impacts;
b) Mitigated Negative Declaration if it finds "significant" impacts but revises the project to avoid or mitigate those significant impacts;
c) Environmental Impact Report (EIR) if it finds "significant" impacts.

While there is no ironclad definition of "significance", Article 5 of the State CEQA Guidelines provides criteria to lead agencies in determining whether a project may have significant effects.

The Native Plant Protection Act (NPPA) – The NPPA includes measures to preserve, protect, and enhance rare and endangered native plant species. Definitions for “rare and endangered” are different from those contained in CESA. However, the list of species afforded protection in accordance with the NPPA includes those listed as rare and endangered under CESA. NPPA provides limitations on take as follows: “no person will import into this state, or take, possess, or sell within this state” any rare or endangered native plants, except in accordance with the provisions outlined in the act. If a landowner is notified by CDFW, pursuant to section 1903.5 that a rare or endangered plant is growing on their property, the landowner shall notify CDFW at least 10 days prior to the changing of land uses to allow CDFW to salvage the plants.

Natural Community Conservation Planning (NCCP) Program – The NCCP, which is managed by the CDFW, is intended to conserve multiple species and their associated habitats, while also providing for compatible use of private lands. Through local planning, the NCCP planning process is designed to provide protection for wildlife and natural habitats before the environment becomes so fragmented or degraded by development that species listing are required under CESA. Instead of conserving small, often isolated “islands” of habitat for just one listed species, agencies, local jurisdictions, and/or other interested parties have an opportunity through the NCCP to work cooperatively to develop plans that consider broad areas of land for conservation that would provide habitat for many species. Partners enroll in the programs and, by mutual consent, areas considered to have high conservation priorities or values are set aside and protected from development. Partners may also agree to study, monitor, and develop management plans for these high value “reserve” areas. The NCCP provides an avenue for fostering economic growth by allowing approved development in areas with lower conservation value. See further discussion in Section 3.3 below.

Sections 1600-1603 of the State Fish and Game Code – The California Fish and Game (Wildlife) Code, pursuant to Sections 1600 through 1603, regulates all diversions, obstructions, or changes to the natural flow or bed, channel, or bank of any river, stream, or lake that supports fish or wildlife resources. Under state code, CDFW jurisdiction is assessed in the field based on one, or a combination, of the following criteria:

1) At minimum, intermittent and seasonal flow through a bed or channel with banks and that also supports fish or other aquatic life.
2) A watercourse having a surface or subsurface flow regime that supports or that has supported riparian vegetation.
3) Hydrogeomorphically distinct top-of-embankment to top-of-embankment limits.

4) Outer ground cover and canopy extents of, typically, riparian associated vegetation species that would be sustained by surface and/or subsurface waters of the watercourse.

The CDFW requires that public and private interests apply for a "Streambed Alteration Agreement" for any project that may impact a streambed or wetland. The CDFW has maintained a "no net loss" policy regarding impacts to streams and waterways and requires replacement of lost habitats on at least a 1:1 ratio.

Section 2081 of the State Fish and Game Code – Under Section 2081 of the California Fish and Game Code, the CDFW authorizes individuals or public agencies to import, export, take, or possess state endangered, threatened, or candidate species in California through permits or memoranda of understanding. These acts, which are otherwise prohibited, may be authorized through permits or "memoranda of understanding" if (1) the take is incidental to otherwise lawful activities, (2) impacts of the take are minimized and fully mitigated, (3) the permit is consistent with regulations adopted in accordance with any recovery plan for the species in question, and (4) the applicant ensures suitable funding to implement the measures required by the CDFW. The CDFW shall make this determination based on the best scientific information reasonably available and shall include consideration of the species' capability to survive and reproduce.

Section 3505.5 of the State Fish and Game Code – This section makes it unlawful to take, possess, or destroy any birds in the order Falconiformes or Strigiformes (birds-of-prey, e.g.: owls, hawks, eagles, etc.) or to take, possess, or destroy the nest or eggs of any bird-of-prey.

1.3.3 CVAG/Coachella Valley Conservation Commission

Coachella Valley Multiple Species Habitat Conservation Plan (HCP)/ Natural Community Conservation Plan – Subsequent to the establishment of the Fringe-toed Lizard HCP in the early 1980s, continued growth in the Coachella Valley impacted other species and their habitats. Several species that occur in the Coachella Valley have been listed as threatened or endangered, and several more have been proposed for listing or identified as candidates for listing. A scoping study was prepared for the Coachella Valley Association of Governments (CVAG) by the Coachella Valley Mountains Conservancy (Conservancy) in 1994. It recommended that a Multiple Species Habitat Conservation Plan (MSHCP) be prepared for the entire Coachella Valley and surrounding mountains to address potential state and federal Endangered Species Act issues in the MSHCP area. Subsequently, a Memorandum of Understanding (MOU) was developed to govern the preparation of the MSHCP. In late 1995 and early 1996, the cities of Cathedral City, Coachella, Desert Hot Springs, Indian Wells, Indio, La Quinta, Palm Desert, Palm Springs, and Rancho Mirage, Coachella Valley Water District, Riverside County Flood Control and Water Conservation District, Imperial Irrigation District, the County of Riverside, USFWS, CDFW, the Bureau of Land Management (BLM), the U. S. Forest Service (USFS), and the National Park Service (NPS) signed the MOU to initiate the planning effort. In late 1996 and early 1997 the parties to the MOU approved an amendment stipulating that the MSHCP will meet the intent of the Natural Community Conservation Planning (NCCP) Act as well as the California Endangered Species Act (CESA) and the Federal Endangered Species Act (FESA), and, further, that the MOU constitutes an agreement to prepare a NCCP.

Final state and federal resource agency approval and permitting for this MSHCP occurred in September and October 2008.

Preparation of the MSHCP serves two main purposes: balancing environmental protection and economic development objectives in the MSHCP area, and simplifying compliance with endangered species related laws. The MSHCP intends to accomplish this through the following means.

Conserving adequate habitat in an unfragmented manner to provide for the protection and security of long-term viable populations of the species that are either currently listed as threatened or endangered, are proposed for listing, or are believed by the Scientific Advisory Committee, USFWS and CDFW, to have a high probability of being proposed for listing in the future if not protected by the MSHCP. It is intended to proactively address requirements of the state and federal endangered species acts to avoid disruption of economic development activities in the MSHCP area.

For species that are currently listed as threatened or endangered, the MSHCP is the basis for securing incidental take permits. For species that are not currently listed, the MSHCP addresses the conservation of the species and its habitat as if the species were listed, so that if the species is subsequently listed, an incidental take permit will be issued on the basis of the MSHCP, and no further mitigation requirements will be imposed. A further goal of the plan is to remove the need to list species as threatened or endangered by taking proactive conservation measures.

It should be recognized that the MSHCP does not address Section 404 of the Clean Water Act nor the Streambed Alteration Agreement provisions of the California Fish and Game Code, (Section 1600). Projects that currently require a Section 404 permit or Streambed Alteration Agreement will continue to do so notwithstanding the MSHCP. Additionally, the MSHCP does not provide a means of compliance with the federal Migratory Bird Treaty Act (MBTA).

The Riverside County Land Information System website was consulted to determine the parcel numbers that were surveyed on the subject project site, and the status with regards to the various county plan areas. According to this website and a review of the approved MSHCP, the subject parcels are not located within any conservation areas established by the Coachella Valley MSHCP, but do fall within the CVMSHCP Fee Area (please see Section 4.2 for an explanation of requirements for the Fee Area as related to this project).

2.0 METHODS

Methods employed in the performance of this biological assessment consisted of a literature review, followed by two site surveys to obtain a general inventory of plant and animal occurrences on the project site. The surveys were also performed to determine the potential for, or presence of, sensitive biological resources on the project site. In addition to the general biological assessment described herein, AMEC biologists also performed a habitat assessment and focused burrow search for burrowing owl (*Athene cunicularia*) on the project site. The habitat assessment and burrow search were conducted in accordance with the methodology presented in the *Staff Report on Burrowing Owl Mitigation* (California Department of Fish and

Game, March 7, 2012). This included walking transects over adjacent areas of potential habitat for burrowing owl within 500 feet of the project boundary (when access was possible).

2.1 Literature Review

A literature review was conducted to identify sensitive biological resources known from the vicinity of the project site. This included consultation with the California Department of Fish and Wildlife's California Natural Diversity Data Base (CNDDB 2014) computerized data base (Rarefind 4), and a review of the California Native Plant Society's (CNPS) *Rare and Endangered Vascular Plants of California* (2014). The Coachella Valley MSHCP was also reviewed. Pertinent documents from the AMEC library and files were also consulted.

2.2 Biological Reconnaissance of the Project Site

The project site was surveyed on 2 & 3 April 2014, by senior AMEC biologists Nathan Moorhatch and Michael Wilcox (see Table 1 on next page). Weather conditions on both days were cool in the mornings, warming as the day progressed (60-80°F), with clear to partially cloudy skies and generally moderate wind speeds (2 – 9 miles per hour), that tended to be higher in the afternoon compared to the morning. In addition to the general biological reconnaissance surveys and habitat assessment, AMEC biologists also conducted a habitat assessment and burrow search for burrowing owl on the project site, and where accessible, within 500 feet of the project boundary. Since the site is bounded on all sides (except for the north) by active agriculture and scattered residences, the majority of this buffer area surveyed was located on the undeveloped land between the northern boundary of the site and the Interstate 10 corridor. Parcel 5 consists of ~ 80-acres of active vineyard, and is not potential habitat for burrowing owl. AMEC biologists surveyed the areas along the edges of this parcel, but did not walk transects through the rows of grape vines. The time and weather data for the general biological and burrowing owl burrow surveys is presented in Table 1 on the following page. Surveys were conducted on foot, visually inspecting all areas of the site and adjacent accessible areas for components of burrowing owl habitat (i.e., sparsely vegetated areas with appropriate sized burrows or man-made structures suitable for burrowing owl use). AMEC biologists Nathan Moorhatch and Michael Wilcox surveyed the Vista del Agua Off-site Improvement "routes" on October 29, 2014 (see Table 1 for weather conditions).

The assessment of the potential for occurrence of sensitive biological resources known from the project vicinity was based on geographic range, CNDDB records, habitat associations, general site conditions, and soil types. All plant and vertebrate species observed were recorded in field notes. Unobserved wildlife species were identified through indirect sign (*e.g*. scat, tracks, nests, burrows, etc.). Bird species were identified through binoculars, and by vocalizations. Scientific nomenclature for this report is from the following standard reference sources: plant communities, Holland (1986) and Sawyer et al (2009), reptiles and amphibians, Stebbins (2003); birds, California Bird Records Committee (2014); and mammals, CDFG (2011). Vegetation nomenclature follows The Jepson Manual, Vascular Plants of California, 2nd Edition (Baldwin 2012). When The Jepson Manual does not list a common name, common name nomenclature follows the United States Department of Agriculture, Natural Resources Conservation Service (USDA) Plants Database (USDA 2014).

3.0 RESULTS

3.1 Vegetation and Flora

Appendix 1 includes the scientific and common names for plant species identified during the surveys. A total of 29 plant species were identified during the field survey. Of the plant species detected on the site during the survey, 24% were non-native species.

Table 1. General Biological Survey Data for the Vista Del Agua Project

Date/Survey Type	Observer(s)	Time	Temp. (°F)	Sensitive species observed?
2 April 2014	Moorhatch & Wilcox	0840-1550	60-74	No
3 April 2014	Moorhatch & Wilcox	0838-1435	64-80	Yes (Loggerhead Shrike)
29 October 2014	Moorhatch & Wilcox	0958 - 1210	81 - 87	No

Photograph 1. View of dense, almost unbroken Alkali Goldenbush (*Isocoma acradenia*) on Parcel 8. This habitat is too dense to support burrowing owls.

The project site occurs in an area that appears to have been mainly used for agriculture both in the past, and continuing today. Parcels 1-4, 6, and 11 all show signs of former agricultural

use, especially when viewed on an aerial photograph. According to historical aerials, Parcel 6 was under active agriculture as recently as 2006, and Parcel 11 up till 2004. Parcel 1 has been fallow for much longer, but was under active agriculture in 1975. Although Parcels 2, 3, and 4 may have been used for agriculture in the past, no aerials could be found that show this, indicating that such use must have been prior to 1975. Parcel 5 is currently being used to grow grapes (apparently since 2004). Only Parcels 7-10 do not show obvious signs of former agricultural use, although they are bordered by active agriculture on the west. Most of Parcels 1-4, 6, and 11 support a "regrowth" of alkaline/halophytic plant species with a few scattered areas of mesquite thicket. Large areas of parcels 1 and 11 were devoid of vegetation and sand, with bare "hard pan" substrate remaining. A significant portion of the southeast corner of Parcel 11 and the northeast corner of Parcel 1 is being used as a very large paintball arena, complete with two separate areas of various wooden "hides" and tire stacks (see Photos 2 - 4). AMEC biologists also observed fairly extensive trash dumping in this area, including what appeared to be a former irrigation pond that is now used for trash dumping and burning (see Photo 5). The majority of the southern ¾ of Parcel 1 consists of large expanses of barren ground that appears to have been cleared in the recent past (see Photo 7). Parcels 7, 9, and 10 had more sandy substrates than the majority of the remainder of the parcels, and were vegetated with a mixture of plant species that favor sandy habitats and some species that can tolerant halophytic conditions. Parcel 8 and the northern ¼ of Parcel 1 supported a growth of very dense halophytic vegetation (see Cover Photo and Photo 1). These parcels had also received a variety of manmade impacts in the form of ground clearing, domestic dog use, and some trash deposition, likely due to their close proximity to residential dwellings. The habitat on the northern portions of the site is characterized as Stabilized and Partially-stabilized Desert Sand Field habitat by Holland (1986), and as Creosote bush – white burr sage scrub (Sandy association) by Sawyer et al (2009), although no white burr sage (*Ambrosia dumosa*) was observed on the site. The majority of the remaining natural habitat on the rest of the project site is characterized as Allscale scrub (*Atriplex polycarpa* Shrubland Alliance) by Sawyer et al (2009) and as Desert saltbush scrub by Holland (1986). The quality and composition of this habitat varies throughout the site, with some very dense areas of vegetation with little or no open ground, ranging to areas consisting of a sparse regrowth of halophytic (salt-tolerant) plants on areas that had been cleared in the not-too-distant past. Dominant plants characteristic of this vegetation community that are present on the site include: alkali goldenbush (*Isocoma acradenia*), allscale (*Atriplex polycarpa*), four-wing saltbush (*Atriplex canescens*), and cheesebush (*Ambrosia salsola*). The final two vegetation communities present on the site consist of small stands of vegetation consisting of just one species: Arrow weed thickets (*Pluchea sericea* Shrubland Alliance) and Mesquite thickets (*Prosopis glandulosa* Woodland Alliance) as defined by Sawyer et al (2009). There are only three or four areas of mesquite thickets on the project site, located on Parcels 1, 2, and 3. Arrow weed thickets occur throughout the project site, particularly on the edges of parcels such as Parcel 1, 4, and 11.

The best quality blow sand habitat on the project site is present on the southeastern portion of Parcel 3 (see Photo 9), although this represents a fairly small and restricted area. This area had very fine-grained aeolian sands capable of supporting Coachella Valley fringe-toed lizards (*Uma inornata*), although due to its small size and proximity to active agriculture (~60 feet west of the edge of the vineyards) this species may be unlikely to occupy the site.

Photograph 2. Paintball arena on the southeastern portion of Parcel 11.

Photograph 3. Paintball arena on the northeast portion of Parcel 1.

Photograph 4. View of paintball-covered ground on the southeast portion of Parcel 11. Trash dumping also evident in the background.

Photgraph 5. Former irrigation pond on northeast corner of Parcel 1, now used for trash deposition and burning.

Photograph 6. Western edge of Parcel 5, facing east. Active vineyards.

Photograph 7. Southern portion of Parcel 1, showing extensive barren ground. No burrows capable of supporting burrowing owls found here.

Two of the off-site improvement routes are to be located within the road beds of Avenues 47 and 48. These two routes are surrounded by active agriculture, disturbed land, and a few areas of fallow fields (please see Appendix II for photographs of these areas). The third off-site improvement "route" appears to be located almost entirely on active agricultural lands; and crosses a few areas of fallow field and a significant area of cleared ground near Dillon Road (please see Appendix II). No native vegetation communities are present within, or along these three off-site improvement routes (see Map 4 in Appendix III).

3.2 Wildlife

The list of animals detected on the project site and off-site improvement routes during the general biological surveys totaled 64 species (1 amphibian, 5 reptiles, 54 birds and 4 mammals). The inventory was limited by the seasonal timing and short duration of the survey periods, and by the nocturnal and fossorial habits of many animals.

The only amphibian observed in the project area (along the Avenue 48 off-site improvement route) was a road-killed Woodhouse's toad (*Bufo woodhousii*). This toad is not native to the Coachella Valley, but has spread into southeastern California via the aqueduct systems and is usually found in our area in irrigated agricultural regions. Five common desert reptiles were observed on the site visits, Great Basin whiptail (*Aspidoscelis tigris tigris*), desert iguana (*Dipsosaurus dorsalis*), long-tailed brush lizard (*Urosaurus graciosus*), and western side-blotched lizard (*Uta stansburiana elegans*). A single desert banded gecko (*Coleonyx variegatus variegatus*) was found under a board on the site. The disturbed nature of much of the project site reduces the potential for use of the site by a greater variety of desert reptiles, as many of these species require better quality natural habitats, and some are substrate specialists (typically on dunes or wind-deposited sands – not very well represented on most of the site). Other common reptiles that may be expected on the site include: Colorado Desert sidewinder (*Crotalus cerastes laterorepens*), red coachwhip (*Coluber flagellum piceus*), and desert glossy snake (*Arizona elegans eburnata*).

Birds observed during the survey included a mix of species common to desert scrub and developed areas of the Coachella Valley, as well as several species observed during Spring and Fall migration. Some of the resident birds observed included: house finch (*Haemorhous mexicanus*), verdin (*Auriparus flaviceps*), Say's phoebe (*Sayornis saya*), common raven (*Corvus corax*), black-tailed gnatcatcher (*Polioptila melanura*), mourning dove (*Zenaida macroura*), and American kestrel (*Falco sparverius*). Migrating species included: MacGillivray's warbler (*Geothlypis tolmiei*), Nashville warbler (*Oreothlypis ruficapilla*), Violet-green Swallow (*Tachycineta thalassina*), and Swainson's Hawk (*Buteo swainsoni*).

Common mammals (or their sign) observed during the surveys included: desert cottontail (*Sylvilagus audubonii*), black-tailed jackrabbit *(Lepus californicus),* and coyote *(Canis latrans*). Additionally, evidence of domestic dog use (scat, diggings) was prevalent throughout the project site, especially on those areas adjacent to residences.

Photograph 8. More open saltbush scrub on Parcel 4, no burrows capable of supporting burrowing owls found in this habitat.

Photograph 9. Sandy "dune" habitat (with mesquite thicket in background) on the southeast portion of Parcel 3. Potential habitat for Coachella Valley Fringe-toed Lizard, but limited in size.

3.3 Sensitive Elements

Plant or animal taxa may be considered "sensitive" due to declining populations, vulnerability to habitat change or loss, or because of restricted distributions. Certain sensitive species have been listed as Threatened or Endangered by the United States Fish and Wildlife Service (USFWS) or by the CDFW, and are protected by the federal and state Endangered Species Acts and the California Native Plant Protection Act. Other species have been identified as sensitive by the USFWS, the CDFW, or by private conservation organizations, including the CNPS, but have not been formally listed as Threatened or Endangered. Such species can still be considered significant under the California Environmental Quality Act (CEQA).

The literature review and AMEC biologists' knowledge of the project vicinity indicated that as many as 18 sensitive biological resources potentially occur in the vicinity of the project site. For a summary of sensitive species and habitats known to occur or potentially occurring in the vicinity of the project site, see Tables 2 through 6.

Photograph 10. Verdin nest in one of the mesquite thickets on the project site.

Table 2. Sensitive Plants: Vista Del Agua Project Site

Species	Protective Status	Habitat	Flowering Period	Occurrence Probability
Abronia villosa var. *aurita* Chaparral Sand-Verbena	F: ND C: ND CNPS: List 1B.1 State Rank: S2.1 MSHCP: No	Sandy areas in chaparral and coastal sage scrub habitats, between 262 and 5,249 feet	January - August	Absent (this variety not likely to occur on the northern valley floor)
Astragalus lentiginosus var. *coachellae* Coachella Valley Milk-vetch	F: END C: ND CNPS List: 1B.2 State Rank: S2.1 MSHCP: Yes	Sandy flats, washes, alluvial fans, sand field, dunes and dune edges, 130 – 2,150 feet, a CA endemic	February - May	Absent (no *Astragalus* observed onsite, limited sandy habitat)
Astragalus preussi var. *laxiflorus* Lancaster Milk-vetch	F: ND C: ND CNPS List: 1B.1 State Rank: S1 MSHCP: No	Chenopod scrub on alkaline clay flats, gravelly/sandy washes, 2,300 feet	March - May	Absent (Currently only known from near Lancaster & Edwards AFB, 1928 Coachella CNDDB record may be in error)
Astragalus sabulonum Gravel milk-vetch	F: ND C: ND CNPS List: 2B.2 State Rank: S2 MSHCP: No	Desert dunes, Mojavean & Sonoran Desert scrubs, 200 – 3,050 ft. elevation	February - June	Absent (Site too low in elevation, only 1 1906 CNDDB record, mapped as best guess near Indio)
Ditaxis claryana Glandular Ditaxis	F: ND C: ND CNPS List: 2B.2 State Rank: S1 MSHCP: No	Sandy soils in Sonoran Desert Scrub, dry washes, and rocky hillsides, 0 – 1,500 feet elevation,	October - March	Absent (no *Ditaxis* found on site, most of site is below sea level)

Table 3. Sensitive Reptiles: Vista Del Agua Project Site

Species	Protective Status (F=Federal, C=California)	Habitat	Occurrence Probability
Flat-tailed Horned Lizard (*Phrynosoma mcallii*)	F: ND C: CSC State rank: S2 MSHCP: Yes	Low elevation sandy habitats in the Colorado Desert, favors dune/hardpan interface areas	Low (habitat marginal on most of site, CNDDB record [1997] from ~ 2 miles NW of site)
Coachella Valley Fringe-toed Lizard (*Uma inornata)*	F: THR C: END State rank: S1 MSHCP: Yes	Sandy areas of the Coachella Valley (dunes and sand field habitats)	Low (most habitat too disturbed and/or too densely vegetated, one area of potential habitat on SE portion of parcel 3, 1975 CNDDB record ~ 440 feet north of NE corner of site)

Table 4. Sensitive Birds: Vista Del Agua Project Site

Species	Protective Status (F=Federal, C=California)	Habitat	Occurrence Probability
Burrowing Owl (*Athene cunicularia*)	F: ND C: CSC State rank: S2 MSHCP: Yes	Inhabits a variety of open habitats (including edges of agricultual fields), often occupies unused ground squirrel burrows	Absent (no burrows capable of supporting owls found on site, native habitat too dense, large area converted to vineyard)
Loggerhead Shrike (*Lanius ludovicianus*)	F: ND C: CSC State rank: S4 MSHCP: No	A variety of open habitats throughout southern California, fairly dense shrubs and/or brush used for nesting	Occurs (observed onsite)
Vermilion Flycatcher (*Pyrocephalus rubinus*)	F: ND C: CSC State rank: S2S3 MSHCP: No	Often nests in desert riparian habitats adjacent to irrigated fields, irrigation ditches, pastures	Absent (not observed onsite, no desert riparian present for nesting)
Crissal Thrasher (*Toxostoma crissale*)	F: ND C: CSC State rank: S2S3 MSHCP: Yes	Year-round resident in southeastern deserts in riparian and desert wash habitats	Low (not observed onsite, no desert wash or riparian but limited mesquite thickets present)
Le Conte's Thrasher (*Toxostoma lecontei)*	F: BCC C: CSC State rank: S3 MSHCP: Yes	Resident of open desert wash, scrub, alkali scrub, succulent scrub habitats, nests in dense spiny shrubs and cacti in washes	Low (not observed, site lacks wash habitat for nesting, CDFW designation is only for San Joaquin population)

Table 5. Sensitive Mammals: Vista Del Agua Project Site

Species	Protective Status (F=Federal, C=California)	Habitat	Occurrence Probability
Western Mastiff Bat (*Eumops perotis californicus*)	F: ND C: CSC State rank: S3? WBWG: H MSHCP: No	Forages over many open, semi-arid to arid habitats, roosts in crevices in cliffs, buildings, trees and tunnels	Low (foraging only, no roosting habitat present)
Western Yellow Bat (*Lasiurus xanthinus* or *L. ega*)	F: ND C: CSC State rank: S3 WBWG: H MSHCP: Yes	Found in a variety of habitats: Valley foothill riparian, desert riparian, desert wash, and palm oasis habitats	Low (foraging over site, Low: roosting – palm trees on site)
Palm Springs Pocket Mouse (*Perognathus longimembris bangsi*)	F: ND C: CSC State rank: S2S3 MSHCP: Yes	Most common in Creosote-dominated scrub, but also in desert riparian, scrubs, wash, and sagebrush habitats	Low (habitat lacking over majority of site, very few rodent burrows of any type found onsite)

American Badger (*Taxidea taxus*)	F: ND C: CSC State rank: S4 MSHCP: No	Favors open (uncultivated) habitats with friable soils for digging,	Low (very little open habitat, large area under cultivation)
Palm Springs Round-tailed Ground Squirrel (*Xerospermophilus tereticaudus chlorus)*	F: ND C: CSC State rank: S1S2 MSHCP: Yes	Restricted to the Coachella Valley. Prefers desert succulent scrub, desert wash, desert scrub, alkali scrub, & levees.	Low (no burrows observed on site capable of supporting species, no squirrels observed during surveys, 2000 CNDDB record from < 1 mile N of site)

Table 6. Sensitive Insects: Vista Del Agua Project Site

Species	Protective Status (F=Federal, C=California)	Habitat	Occurrence Probability
Coachella Giant Sand Treader Cricket (*Macrobaenetes valgum*)	F: ND C: ND State rank: S1S2 MSHCP: Yes	Wind-deposited sand dune ridges, winter rains somewhat regulate abundance	Absent (site is east of currently known range, closest CNDDB record is from ~ 6 miles west of site [now developed])

Definitions of status designations and occurrence probabilities.

Federal designations: (federal Endangered Species Act, US Fish and Wildlife Service):

END: Federally listed, Endangered.
THR: Federally listed, Threatened.
BCC: Birds of Conservation Concern
C: Candidate for Federal listing
ND: Not designated.

State designations: (California Endangered Species Act, California Dept. of Fish and Game)

END: State listed, Endangered.
THR: State listed, Threatened.
RARE: State listed as Rare (Listed "Rare" animals have been re-designated as Threatened, but Rare plants have retained the Rare designation.)
CSC: California Special Concern Species.
ND: Not designated.

California Native Plant Society (CNPS) designations: (Non-regulatory, compilation by a non-profit organization which tracks rare plants)

CNPS California Rare Plant Ranks (CRPR) Note: According to the CNPS (http://www.cnps.org/programs/Rare_Plant/inventory/names.htm), ALL plants on Lists 1A, 1B, 2A, and 2B meet definitions for state listing as threatened or endangered under Secs. 2062 and 2067 (California Endangered Species Act) of the California Department of Fish and Game Code. Certain plants on Lists 3 and 4 do as well.
The CDFW (http://www.dfg.ca.gov/hcpb/species/t_e_spp/nat_plnt_consv.shtml) states that plants on Lists 1A, 1B, 2A, and 2B of the CNPS Inventory consist of plants that may qualify for listing, and recommends they be addressed in CEQA projects (CEQA

Guidelines Section 15380). However, a plant need not be in the Inventory to be considered a rare, threatened, or endangered species under CEQA. In addition, CDFW recommends, and local governments may require, protection of plants which are regionally significant, such as locally rare species, disjunct populations of more common plants, or plants on the CNPS Lists 3 and 4.

List 1A: Plants presumed extinct in California .
List 1B: Plants rare and endangered in California and throughout their range.
List 2A: Plants presumed extirpated in California, but more common elsewhere.
List 2B: Plants rare, threatened, or endangered in California, but more common elsewhere.
List 3: Plants for which more information is needed.
List 4: Plants of limited distribution; a "watch list."
CA Endemic: Taxa that occur only in California

CNPS Threat Code:

.1 - Seriously endangered in California (over 80% of occurrences threatened / high degree and immediacy of threat)
.2 – Fairly endangered in California (20-80% occurrences threatened)
.3 – Not very endangered in California (<20% of occurrences threatened or no current threats known)

Note: All List 1A (presumed extinct in California) and some List 3 (need more information- a review list) plants lacking any threat information receive no threat code extension. Also, these Threat Code guidelines represent a starting point in the assessment of threat level. Other factors, such as habitat vulnerability and specificity, distribution, and condition of occurrences, are also considered in setting the Threat Code.

Definitions of occurrence probability:

Occurs: Observed on the site by AMEC personnel, or recorded on-site by other qualified biologists.
High: Observed in similar habitat in region by qualified biologists, or habitat on the site is a type often utilized by the species and the site is within the known range of the species.
Moderate: Reported sightings in surrounding region, or site is within the known range of the species and habitat on the site is a type occasionally used by the species.
Low: Site is within the known range of the species but habitat on the site is rarely used by the species.
Absent: A focused study failed to detect the species, or, no suitable habitat is present.

CDFW CNDDB rankings: Animals

S1 = Extremely endangered: <6 viable occurrences or <1,000 individuals, or < 2,000 acres of occupied habitat
S2 = Endangered: about 6-20 viable occurrences or 1,000 - 3,000 individuals, or 2,000 to 10,000 acres of occupied habitat
S3 = Restricted range, rare: about 21-100 viable occurrences, or 3,000 – 10,000 individuals, or 10,000 – 50,000 acres of occupied habitat
S4 = Apparently secure; some factors exist to cause some concern such as narrow habitat or continuing threats
S5 = Demonstrably secure; commonly found throughout its historic range
SH = all sites are historical, this species may be extinct, further field work is needed

CDFW CNDDB rankings: Plants and Vegetation Communities

S1 = Less than 6 viable viable occurrences OR less than 1,000 individuals OR less than 2,000 acres
S1.1 = very threatened
S1.2 = threatened
S1.3 = no current threats known
S2 = 6-20 viable occurrences OR 1,000-3,000 individuals OR 2,000-10,000 acres
S2.1 = very threatened
S2.2 = threatened
S2.3 = no current threats known
S3 = 21-80 viable occurrences or 3,000-10,000 individuals OR 10,000-50,000 acres
S3.1 = very threatened
S3.2 = threatened
S3.3 = no current threats known
S4 = Apparently secure within California; this rank is clearly lower than S3 but factors exist to cause some concern;
i.e. there is some threat, or somewhat narrow habitat.
S5 = Demonstrably secure to ineradicable in California.

Western Bat Working Group (WBWG) designations:

The Western Bat Working Group is comprised of agencies, organizations and individuals interested in bat research, management and conservation from the 13 western states and provinces. Its goals are (1) to facilitate communication among interested parties and reduce risks of species decline or extinction; (2) to provide a mechanism by which current information on bat ecology, distribution and research techniques can be readily accessed; and (3) to develop a forum to discuss conservation strategies, provide technical assistance and encourage education programs.

H: High: Species which are imperiled or are at high risk of imperilment based on available information on distribution, status, ecology and known threats.

M: Medium: Species which warrant a medium level of concern and need closer evaluation, more research, and conservation actions of both the species and possible threats. A lack of meaningful information is a major obstacle in adequately assessing these species' status and should be considered a threat.

L: Low: Species for which most of the existing data support stable populations, and for which the potential for major changes in status in the near future is considered unlikely. There may be localized concerns, but the overall status of the species is believed to be secure. Conservation actions would still apply for these bats, but limited resources are best used on High and Medium status species.

P: Periphery: This designation indicates a species on the edge of its range, for which no other designation has been determined.

Table 2 lists five sensitive plants known from the general project vicinity, and none of these species are expected to occur on the project site due to lack of habitat, incorrect elevational range, or because the site is out of the currently understood range of the species. These include: chaparral sand-verbena (*Abronia villosa* var. *aurita*), Coachella Valley milk-vetch (*Astragalus lentiginosus* var. *coachellae*), Lancaster milk-vetch (*Astragalus preussi* var. *laxiflorus*), gravel milk-vetch (*Astragalus sabulonum*), and glandular ditaxis (*Ditaxis claryana*). In the case of the Lancaster and gravel milk-vetches, the single CNDDB records for each of these species are both very old (1928 and 1906 respectively) and are both thought to represent "best guesses" concerning the locality data. According to the CNPS online Inventory of Rare and Endangered Plants – 7th edition interface: "Lancaster milk-vetch is known in CA only from near Lancaster and Edwards AFB, where extremely rare; only reported once in recent years" (CNPS 2014).

Concerning the three remaining sensitive plants, there is very limited potential habitat for Coachella Valley milk-vetch on the site, and much of what is present is degraded by a variety of human impacts. No *Astragalus* species were observed on the project site during the surveys, including dead remains from last year. The site is too low in elevation (apart from the northeast corner the entire site is below sea level, and much of the northeast corner is currently grapes) to support either chaparral sand-verbena or glandular ditaxis. No sand-verbena or ditaxis were observed on the site, including dead remains from a previous season. It is AMEC's opinion that none of the aforementioned sensitive plant species are likely to occur on the Vista Del Agua project site.

Table 3 lists two sensitive reptile species that have a low potential of occurring on the site: Coachella Valley fringe-toed lizard (*Uma inornata*) and flat-tailed horned lizard (*Phrynosoma mcallii*). Both of these species have been recorded within two miles of the project site. A search of the current CNDDB online database revealed that Coachella Valley fringe-toed lizard had been recorded from approximately 440 feet north of the northeast corner of the project site in 1975. Flat-tailed horned lizard has been recorded within ~2.0 miles northwest of the site in 1997 (CNDDB 2014). The current surveys of the project site did not result in observations of these species, although the timing of the surveys was during the season when these species become active. Temperatures during the surveys were favorable for lizard activity (other common lizards were observed active on the surface), although even warmer temperatures would have been preferable. It is AMEC's opinion that these species have a low probability of occurring on the site due to the poor quality of the majority of the remaining habitat, proximity to agricultural and residential development, and ongoing negative impacts such as trash deposition and a former history of agricultural use. Both of these reptiles are "covered species"

under the CVMSHCP, and potential impacts to these lizards would be mitigated through payment of the plan fee.

One of the five sensitive bird species listed in Table 4 was observed on the site. A single loggerhead shrike (*Lanius ludovicianus*) was observed on the project site on the second day of the survey. Loggerhead shrikes are not listed as threatened or endangered, and are not a covered species under the Coachella Valley MSHCP. They are considered a CDFW "California Special Concern Species" (CSC). Vermilion flycatcher (*Pyrocephalus rubinus*) is not expected to occur on the Vista Del Agua project site due to a lack of both foraging and nesting (desert riparian) habitat. This distinctive and unmistakable flycatcher was not observed on the site during the surveys. Both Le Conte's (*Toxostoma lecontei*) and crissal thrasher (*Toxostoma crissale*) are thought to have a low probability of occurring on the project site, although neither species was observed during the field surveys. The few mesquite thickets present on the site provide potential habitat for both thrashers, and Le Conte's thrasher is known to occur in akali scrub habitats. Both thrasher species are CDFW CSC's, and are "covered" species under the Coachella Valley MSHCP, meaning that potential impacts to these two species would be mitigated through payment of the MSHCP fee.

AMEC biologists observed several inactive bird nests on the project site. The verdin nest shown in Photograph 10 appeared to be currently active, although this species also constructs nests that are used specifically for overnight shelters. Therefore, it is not known if this nest was being used for sleeping or breeding. Nests of native birds are protected under the federal Migratory Bird Treaty Act. It should be noted that AMEC biologists also observed a pair of black-tailed gnatcatchers feeding two or three recently fledged young on the northern edge of Parcel 6; evidence that some native bird species breed on the Vista Del Agua project site.

Burrowing Owl:
Some areas of the project site provided potential habitat for burrowing owls *(Athene cunicularia)*. The majority of this potential habitat was located on the northwestern portion of the project site, on Parcels 7 and 10. Potential habitat was also present within the 500 foot buffer area north of Parcels 5 and 6. The habitat on these areas was more open with suitable soils for burrowing than the majority of the rest of the site. The native habitat on most of the rest of the site consisted of very dense saltbush scrub, and lacked enough open ground to provide habitat for burrowing owls (see Photo 1). The off-site improvement routes were located in existing well-used road beds (Avenues 47 and 48), and/or active agricultural lands. Some of these routes included or were adjacent to fallow fields or areas of cleared ground. However, the soils in these areas appeared far too sandy and loose for most potential Burrowing Owl occupation, as well as receiving high levels of disturbance from adjacent active agriculture. In California, burrowing owls often occur in association with colonies of the California ground squirrel or other ground squirrel species, where they often make use of the squirrel's burrows. In southern California, burrowing owls are not only found in undisturbed natural areas, but also fallow agricultural fields, margins of active agricultural areas, berms of flood control and creek channels, livestock farms, airports, and vacant lots. AMEC biologists conducted a CDFG protocol burrowing owl burrow search of the project site and where possible, within a 500 foot buffer around the site in accordance with the 1993 California Burrowing Owl Consortium and 2012 CDFG Memorandum guidelines. This included walking transects through areas of dense

saltbush scrub where there were enough openings to permit access. However, burrows and/or manmade structures capable of supporting burrowing owls were not observed on the project site or buffer area. Interestingly, very few burrows of any size were found on the site or buffer area, those few that were found were far too small to be used by burrowing owls. The Vista Del Agua project site is among the largest sites that AMEC biologists have surveyed without finding at least a few burrows and/or manmade structures capable of supporting burrowing owls. Similarly, no potential burrows were observed along any of the proposed off-site improvement routes.

Photograph 11. Surrounding land use: sod farm bordering the southern edge of the project site.

Photograph 12. Surrounding land use: citrus grove bordering east side of project site (east side of Parcel 5 grape vineyard).

No sensitive mammal species were observed on the project site during the surveys. All of the five mammals listed in Table 5 are thought to have a low probability of occurrence on the project site, although none were observed during the field surveys. The Palm Springs round-tailed ground squirrel (*Xerospermophilus tereticaudus chlorus*), western yellow bat (*Lasiurus xanthinus* or *L. ega*), and Palm Springs pocket mouse (*Perognathus longimembris bangsi*) are all "covered" species under the CVMSHCP, so any potential impacts to these species would be mitigated through payment of the CVMSHCP fee. None of these three mammals are listed as threatened or endangered, but are considered CDFW CSC's. The remaining two mammals listed on Table 5, western mastiff bat (*Eumops perotis californicus*) and American badger (*Taxidea taxus*) are not covered species under the CVMSHCP. These are also not listed as threatened or endangered, but considered CDFW CSC's. Western mastiff bat could potentially periodically forage over the site, but suitable roosting sites are not present. Similarly, American badgers are known to wander widely when foraging, and would have a low potential to wander onto the site (badgers are not common anywhere in the Coachella Valley).

Table 6 lists one species of sensitive insect known from the greater Coachella Valley area: Coachella giant sand treader cricket (*Macrobaenetes valgum*). The project site is located east of the currently known range of the Coachella giant sand treader cricket, and most of the habitat on the project site is not suitable for this species (very limited areas of "dune" habitat). The closest CNDDB record is from ~ 6 miles west of the Vista Del Agua project site, in an area that has since been developed. The Coachella giant sand treader cricket is not expected to inhabit the project site. This insect is not listed as threatened or endangered by the state and federal agencies, and is covered under the CVMSHCP.

In summary, no sensitive plants were observed on the project site. Only one sensitive bird species was observed on the project site during the surveys.

4.0 DISCUSSION

4.1 Potential Impacts of the Proposed Project

Large portions of the project site have been previously altered and/or degraded through a variety of anthropogenic activities. Therefore, the quality of the majority of the remaining native habitat on the site is moderately to highly degraded. Considering the current level of disturbance and lack of suitable habitat on the project site; including active agriculture on the eastern 80 acres of the site and on the lands immediately bordering the site; there is a low potential for the proposed Project to adversely impact most of the sensitive biological resources known from the project vicinity. However, AMEC biologists did find evidence that native birds are utilizing portions of the site for breeding. All native birds are protected while nesting by the Migratory Bird Treaty Act. AMEC biologists did not observe any burrowing owls or their sign, and did not find any burrows or manmade structures capable of supporting this species on the site, off-site improvement routes, or within a 500 foot buffer north of the site (the remainder of the 500 foot buffer area consisted of private property and active agriculture).

4.2 Suggested Mitigation Measures

Due to the lack of burrowing owl sign and/or potential burrows capable of supporting burrowing owls, AMEC does not recommend conducting focused burrowing owl surveys at this time. Prior to project initiation, CDFW will very likely require a Take Avoidance Survey ("Preconstruction Survey") to ensure no owls have occupied the site since the last field survey. CDFW usually prefers that any such Take Avoidance surveys be performed within 24 hours of initiation of ground disturbance.

Additionally, the CVMSHCP does not provide a means of compliance with the federal Migratory Bird Treaty Act (MBTA). To comply with the MBTA, any vegetation or tree removal, or grading or other site disturbance occurring between January 1 to August 31 and having the potential to impact nesting birds shall require a qualified biologist to conduct at least one nesting bird survey, and more if deemed necessary by the consulting biologist, ending no less than 3 days prior to grading. All trees and suitable nesting habitat (including open ground) on the project site, whether or not they will be removed or disturbed, shall be surveyed for nesting birds. If there are no nests present, this condition will be cleared. Conducting construction activities outside the breeding season (September 1 through December 31) can avoid having to implement these measures, although even non-occupied raptor nests are protected under *Section 3505.5 of the State Fish and Game Code* and permission must be granted by CDFW to remove them. If active nests of any native bird are found on the site, they must be avoided until after the young have fledged.

5.0 LITERATURE CITED AND REFERENCES

Baldwin, Bruce. 2012. The Jepson Manual, Vascular Plants of California, 2nd Edition (Online). University of California Press. Berkeley, California.

California Bird Records Committee. 2014. California bird list of the Western Field Ornithologists' California Bird Records Committee. Website available at http://www.wfo-cbrc.org/cbrc/ca_list.html.

California Department of Fish and Game. 1995. Staff report on Burrowing Owl mitigation. CDFG, Sacramento, CA.

California Department of Fish and Game. 2012. Staff report on Burrowing Owl mitigation. CDFG, Sacramento, CA.

California Department of Fish and Game. 2011. Special Animals (898 taxa). Biogeographic Data Branch, California Natural Diversity Database. CDFG, Sacramento, CA

California Department of Fish and Game. 2014. *Indio, Calif.* quadrangle, California Natural Diversity Data Base report.

California Native Plant Society. 2014. Online Inventory of Rare and Endangered Plants of California.

Holland, R.F. 1986. Preliminary descriptions of the terrestrial natural communities of California. Calif. Fish Game, Sacramento.

Jepson Flora Project (eds.). 2014. *Jepson eFlora*, http://ucjeps.berkeley.edu/IJM.html

Sawyer et al (2009). A Manual of California Vegetation, second edition. California Native Plant Society, Sacramento, CA.

Soil Survey Staff, Natural Resources Conservation Service, United States Department of Agriculture. Soil Survey Geographic (SSURGO) Database for Coachella Valley, CA. Available online at http://soildatamart.nrcs.usda.gov .

Stebbins, R.C. 2003. A Field Guide to Western Reptiles and Amphibians. Houghton Mifflin Company, Boston.

USDA, NRCS. 2012. The PLANTS Database (http://plants.usda.gov, 19 June 2012). National Plant Data Team, Greensboro, NC 27401-4901 USA.

Western Regional Climate Center. Desert Research Institute. Web. 23 January 2013. <http://www.wrcc.dri.edu/cgi-bin/cliMAIN.pl?caidyl+sca>.

APPENDIX 1

PLANTS AND VERTEBRATE ANIMALS OBSERVED ON THE VISTA DEL AGUA PROJECT SITE

Vascular Plants Observed on the Vista del Agua Project Site, Riverside County, California

April 2-3, 2014

ANGIOSPERMAE	
DICOTYLEDONEAE	**DICOT FLOWERING PLANTS**
Amaranthaceae	**Amaranth Family**
Tidestromia suffruticosa var. *oblongifolia*	honeysweet
Asteraceae	**Sunflower Family**
Ambrosia salsola	cheesebush
Bebbia juncea	sweetbush
Heterotheca grandiflora	telegraph weed
Isocoma acradenia	Alkali Goldenbush
Palafoxia arida	Spanish needles
Pluchea sericea	Arrow-Weed
Boraginaceae	**Borage Family**
Tiquilia palmeri	Palmer's Tiquilia
Tiquilia plicata	Fanleaf Crinklemat
Chenopodiaceae	**Goosefoot Family**
Atriplex canescens	Four-wing Saltbush
Atriplex lentiformis	Big Saltbush
Atriplex polycarpa	Allscale
**Salsola tragus*	Russian Thistle
Suaeda nigra	bush seepweed
Euphorbiaceae	**Spurge Family**
Euphorbia polycarpa	Smallseed Sandmat
Fabaceae	**Pea Family**
**Parkinsonia aculeata*	Mexican palo verde
Parkinsonia florida	blue palo verde
Prosopis glandulosa var. *torreyana*	honey mesquite
Psorothamnus emoryi	Emory indigo-bush
Myrtaceae	**Myrtle Family**
**Eucalyptus* sp.	Gum

Vascular Plants Observed on the Vista del Agua Project Site,
Riverside County, California
April 2-3, 2014
(Continued)

Solanaceae	**Nightshade Family**
Datura discolor	Desert Thorn-Apple
Lycium andersonii	Anderson box-thorn
Tamaricaceae	**Tamarisk Family**
**Tamarix ramosissima*	saltcedar
Viscaceae	**Mistletoe Family**
Phoradendron californicum	desert mistletoe
Zygophyllaceae	**Caltrop Family**
Larrea tridentata	creosote bush
MONOCOTYLEDONEAE	**MONOCOT FLOWERING PLANTS**
Poaceae	**Grass Family**
**Bromus tectorum*	Cheat Grass
**Cynodon dactylon*	Bermuda Grass
Phragmites australis	common reed
**Schismus* sp.	Mediterranean grass

* - denotes a non-native species

Vertebrates Observed or Detected on the Vista del Agua Project Site, Riverside County, California
April 2-3, October 29, 2014

AMPHIBIANS	**AMPHIBIA**
True Toads	**Bufonidae**
Woodhouse's Toad	*Anaxyrus woodhousii*
REPTILES	**REPTILIA**
Eyelid Geckos	**Eublepharidae**
Desert Banded Gecko	*Coleonyx variegatus variegatus*
Iguanids	**Iguanidae**
Desert Iguana	*Dipsosaurus dorsalis*
Spiny and Horned Lizards	**Phrynosomatidae**
Western Side-blotched Lizard	*Uta stansburiana elegans*
Long-tailed Brush Lizard	*Urosaurus graciosus*
Whiptails and Allies	**Teiidae**
Great Basin Whiptail	*Aspidoscelis tigris tigris*
BIRDS	**AVES**
Cormorants	**Phalacrocoracidae**
Double-crested Cormorant (flyover)	*Phalacrocorax auritus*
Herons, Bitterns, and Allies	**Ardeidae**
Great Egret (flyover)	*Ardea alba*
Cattle Egret (flyover)	*Bubulcus ibis*
New World Vultures	**Cathartidae**
Turkey Vulture	*Cathartes aura*
Hawks, Kites, and Eagles	**Accipitridae**
Northern Harrier	*Circus cyaneus*
Swainson's Hawk (migrant)	*Buteo swainsoni*
Lapwings and Plovers	**Charadriidae**
Killdeer	*Charadrius vociferus*

Vertebrates Observed or Detected on the Vista del Agua Project Site, Riverside County, California
April 2-3, October 29, 2014
(continued)

Pigeons and Doves	**Columbidae**
Rock Pigeon	*Columba livia*
Mourning Dove	*Zenaida macroura*
Eurasian Collared-Dove	*Streptopelia decaocto*
Common Ground-Dove	*Columbina passerina*
Cuckoos, Roadrunners, and Anis	**Cuculidae**
Greater Roadrunner	*Geococcyx californianus*
Goatsuckers	**Caprimulgidae**
Lesser Nighthawk	*Chordeiles acutipennis*
Swifts	**Apodidae**
White-throated Swift	*Aeronautes saxatalis*
Hummingbirds	**Trochilidae**
Anna's Hummingbird	*Calypte anna*
Woodpeckers	**Picidae**
Northern Flicker	*Colaptes auratus*
Caracaras and Falcons	**Falconidae**
American Kestrel	*Falco sparverius*
Tyrant Flycatchers	**Tyrannidae**
Black Phoebe	*Sayornis nigricans*
Say's Phoebe	*Sayornis saya*
Ash-throated Flycatcher	*Myiarchus cinerascens*
Western Kingbird	*Tyrannus verticalis*
Shrikes	**Laniidae**
Loggerhead Shrike	*Lanius ludovicianus*
Jays, Magpies, and Crows	**Corvidae**
Common Raven	*Corvus corax*
Swallows	**Hirundinidae**
Tree Swallow	*Tachycineta bicolor*

Vertebrates Observed or Detected on the Vista del Agua Project Site, Riverside County, California
April 2-3, October 29, 2014
(continued)

Violet-green Swallow	*Tachycineta thalassina*
Northern Rough-winged Swallow	*Stelgidopteryx serripennis*
Cliff Swallow	*Pterochelidon pyrrhonota*
Barn Swallow	*Hirundo rustica*
Penduline Tits and Verdin	**Remizidae**
Verdin	*Auriparus flaviceps*
Wrens	**Troglodytidae**
House Wren	*Troglodytes aedon*
Cactus Wren	*Campylorhynchus brunneicapillus*
Gnatcatchers	**Polioptilidae**
Blue-gray Gnatcatcher	*Polioptila caerulea*
Black-tailed Gnatcatcher	*Polioptila melanura*
Kinglets	**Regulidae**
Ruby-crowned Kinglet	*Regulus calendula*
Mockingbirds and Thrashers	**Mimidae**
Northern Mockingbird	*Mimus polyglottos*
Starlings	**Sturnidae**
*European starling	*Sturnus vulgaris*
Wagtails and Pipits	**Motacillidae**
American Pipit	*Anthus rubescens*
Wood Warblers	**Parulidae**
Orange-crowned Warbler	*Oreothlypis celata*
Nashville Warbler	*Oreothlypis ruficapilla*
MacGillivray's Warbler	*Geothlypis tolmiei*
Common Yellowthroat	*Geothlypis trichas*
Palm Warbler (vagrant)	*Setophaga palmarum*
Yellow-rumped Warbler	*Setophaga coronata*
Blackbirds	**Icteridae**
Western Meadowlark	*Sturnella neglecta*

Vertebrates Observed or Detected on the Vista del Agua Project Site, Riverside County, California
April 2-3, October 29, 2014
(continued)

Great-tailed Grackle	*Quiscalus mexicanus*
Brewer's Blackbird	*Euphagus cyanocephalus*
Emberizids	**Emberizidae**
Abert's Towhee	*Melozone aberti*
Brewer's Sparrow	*Spizella breweri*
Vesper Sparrow	*Pooecetes gramineus*
Lark Sparrow	*Chondestes grammacus*
Savannah Sparrow	*Passerculus sandwichensis*
White-crowned Sparrow	*Zonotrichia leucophrys*
Fringilline and Cardueline Finches	**Fringillidae**
House Finch	*Haemorhous mexicanus*
Old World Sparrows	**Passeridae**
House Sparrow	*Passer domesticus*
MAMMALS	**MAMMALIA**
Rabbits and Hares	**Leporidae**
Black-tailed Jackrabbit	*Lepus californicus*
Desert Cottontail (scat)	*Sylvilagus audubonii*
Foxes, Wolves, and Relatives	**Canidae**
*Domestic Dog (scat, diggings)	*Canis familiaris*
Coyote (scat)	*Canis latrans*

APPENDIX II

SITE PHOTOGRAPHS: VISTA DEL AGUA OFF-SITE IMPROVEMENTS

Photograph 3. Sandy fallow field on north side of Ave. 48, east of Tyler Street.

Photograph 4. Dirt extension of Ave. 48, west of Tyler Street, showing extensive cleared ground along the northern edge.

Photograph 5. View looking northwest from Ave. 48, cleared ground and agriculture.

Photograph 6. Completely disturbed condition of “habitat” along southern edge of Ave. 48.

Photograph 7. View of the west end of Ave. 48 off-site improvement route.

Photograph 8. View of the east end of the Ave. 47 off-site improvement route, surrounded by active agriculture.

Photograph 9. Ave. 47 off-site improvement route west of Tyler, surrounded by active agriculture and disturbed land.

Photograph 10. Fallow grassy field northwest of Ave. 47 off-site improvement route (west of Tyler). Generally too dense for potential Burrowing Owl use.

Photograph 11. Ave. 47 off-site improvement route (west of Tyler). Extensive agriculture and disturbance.

Photograph 12. West end of Ave. 47 off-site improvement route.

Photograph 1. Eastern end of Avenue 48 offsite improvement route, proposed to be located in the existing road bed.

Photograph 2. Turf/sod field on south side of Avenue 48, east of Tyler Street.

Photograph 13. Southern portion of 5,100 foot off-site improvement route that "ties in" to Dillon Road to the north, this area located entirely in an active okra field.

Photograph 14. Another portion of this route crossing active agriculture.

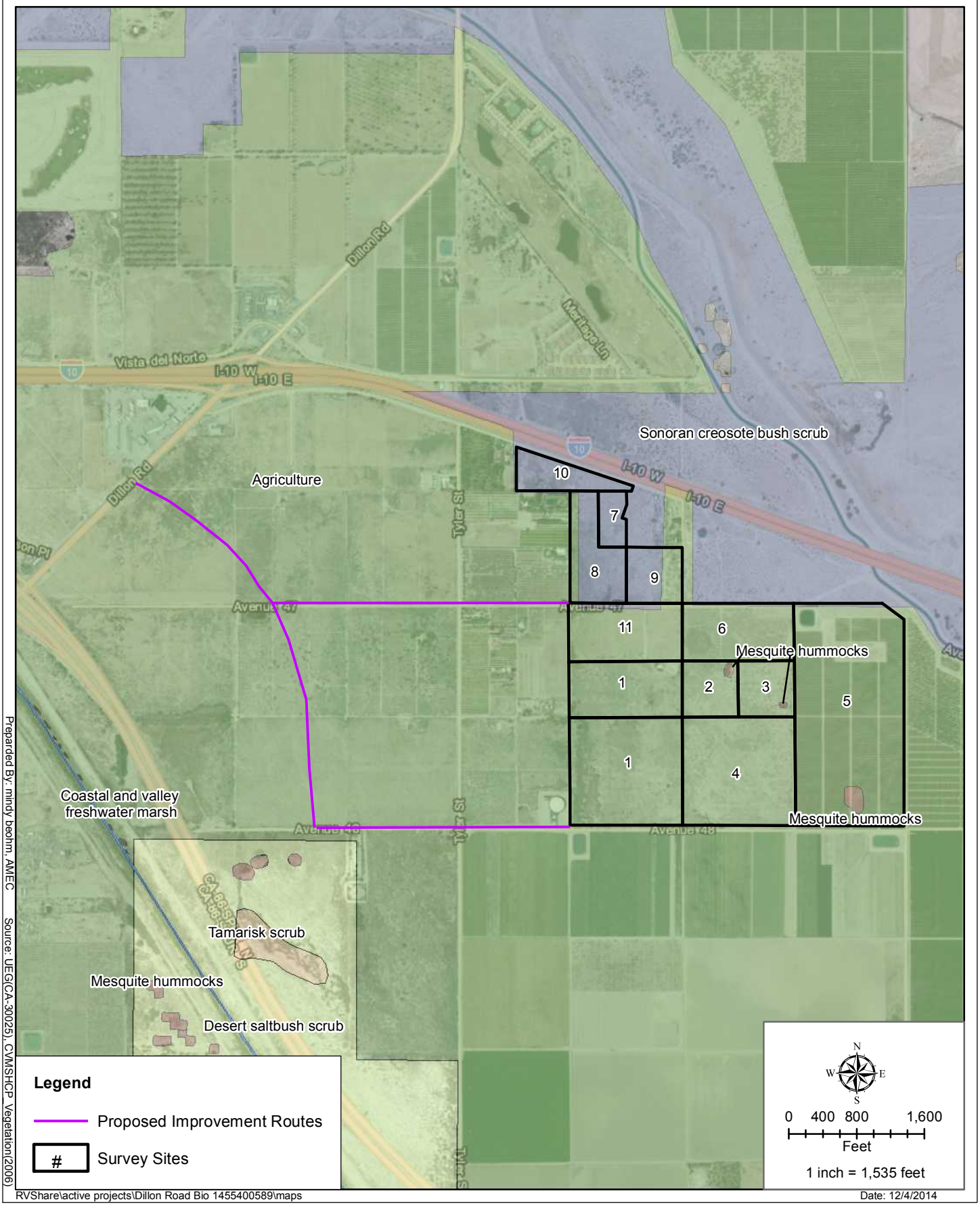
Photograph 15. Fallow field crossed by this route, with soils that were too sandy for preferred Burrowing Owl habitat.

Photograph 16. Northern portion of this route, again in okra field, Dillon Road truck stop in background.

Photograph 17. North end of this off-site improvement route, just before “tie in’ with Dillon Road. Extensive cleared and disturbed ground adjacent to active agriculture.

APPENDIX III

VISTA DEL AGUA OFF-SITE IMPROVEMENT ROUTES MAP



Off-Site Improvement Routes Map
Vista Del Agua Project

FIGURE
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